SCIENTIFIC PROGRAM OF 32ND WORLD CONGRESS OF ENDOUROLOGY & SWL PROGRAM BOOK

Thursday, September 4

Moderated Poster Session (MP01) 01:30 pm–03:30 pm

Basic Research 1

Room: RM 101 A

Moderator: Xin Gao, Mark Katz, Chaidir Mochtar

*Underlined name denotes the presenter.

MP01-01 METABOLIC SHIFT AND MTDNA COPY NUMBER CHANGE IN HUMAN RENAL CELL CARCINOMA

Chen-Sung Lin1,2,3, Siao-Cian Pan2,3, Yau-Huei Wei2,3, Allen Wen-Hsiang Chiu1,4

1Faculty of Medicine, National Yang-Ming University (Taiwan)
2Institute of Biochemistry and Molecular Biology, National Yang-Ming University (Taiwan)
3Division of Thoracic Surgery, Department of Surgery, Taipei Hospital, Ministry of Health and Welfare (Taiwan)
4Department of Urology, Taipei Veterans General Hospital (Taiwan)

MP01-02 TREATMENT OF RENAL CELL CARCINOMA WITH A NOVEL NANO PARTICLE: INITIAL IN VITRO RESULTS

Cameron Callaghan1, Michael Maddox1, Donna Peralta2, James Liu1, Sree Harsha Mandava1, Matthew Tarr2, Benjamin Lee1

1Tulane University School of Medicine (United States)
2University of New Orleans (United States)

MP01-03 EVALUATION OF SORAFENIB-LOADED PLGA NANOPARTICLES IN THE TREATMENT OF RENAL CELL CARCINOMA

James Liu1, Sree Harsha Mandava1, Benjawar Boonkaew2, Michael Maddox1, Srinivas Chava1, Cameron Callaghan1, Srikanta Dashi1, Vijay John1, Benjamin Lee1

1Tulane University School of Medicine (United States)
2Tulane University Department of Chemical & Biomolecular Engineering (United States)

MP01-04 TWO-PART SILICONE MOLD. A NEW TOOL FOR FLEXIBLE URETEROSCOPY SURGICAL TRAINING

Bruno Marroig1, Luciano Alves Favorito1, Marco Antônio Fortes1, Marco A. Pereira-Sampaio1, Francisco J.B. Sampaio1

1State University of Rio de Janeiro (Brazil)

MP01-05 A HIGH-THROUGHPUT MINIMALLY-INVASIVE, ULTRASOUND-GUIDED MODEL FOR THE STUDY OF CATHETER ASSOCIATED URINARY TRACT INFECTIONS AND DEVICE ENCRUSTATION IN MICE

Claudia Janssen2,6, Joey Lo2, Wolfgang Jäger2, Igor Moskalev2, Adrienne Law1, Ben H. Chew1, Dirk Lange1

1The Stone Centre at VGH, Department of Urologic Sciences, University of British Columbia (Canada)
2Vancouver Prostate Centre, Department of Urologic Sciences, University of British Columbia (Canada)

MP01-06 EVALUATION OF THE TENSILE STRENGTH OF THE HUMAN URETER - PRELIMINARY RESULTS

Yaniv Shilo1, Joseph E. Pichamuthu2,3, John C. Lynam1, Timothy D. Averch1, David A. Vorp2,3

1University of Pittsburgh Medical Center (United States)
2McGowan Institute for Regenerative Medicine (United States)
3Department of Bioengineering, University of Pittsburgh (United States)

MP01-07 INCIDENCE, CLINICAL CHARACTERISTICS, AND MAJOR LIFESTYLE FACTORS ASSOCIATED WITH UPPER TRACT UROTHELIAL CARCINOMA IN TWO PROSPECTIVELY FOLLOWED COHORTS OF MEN AND WOMEN.

Jed-Sian Cheng1, Seth Bechis1, Mark Preston1, Kathryn Wilson4, Glen Barrisford1, Alex Sanchez1, Dayron Rodriguez1, Adam Feldman1, Meir Stampfer2, Eunyoung Cho3

1Massachusetts General Hospital (United States)
2Harvard School of Public Health (United States)
3Brigham and Women’s Hospital (United States)

MP01-08 REFERRED PAIN IN KIDNEY STONE DISEASE: SENSORY AND TROPHIC CHANGES

Palle Joern Sloth Osther1, Katja Venborg Pedersen1, Asbjorn Mohr Drewes2,3, Ole Graumann1, Susanne Sloth Osther1, Anne Estrup Olesen2, Lars Arendt-Nielsen3

1Urological Research center, Lillebaelt Hospital, University of Southern Denmark (Denmark)
MP01-09 CO-TARGETING OF NFKB AND SURVIVIN BY YM155 RESULTS IN PROFOUND IN VITRO GROWTH INHIBITION OF RENAL CELL CARCINOMA (RCC)
John S Yuen1, Mei Y Sim1, Mei L Go2
1Singapore General Hospital (Singapore)
2National University of Singapore (Singapore)

MP01-10 OPTIMAL HOLMIUM LASER LITHOTRIPSY SETTINGS FOR THE INTRARENAL AND URETERIC CALCULI
Daniel Faaborg1, Roger Li1, Jonathan Maldonado1, Michelle Lightfoot1, Muhammad Alsyaof1, Alexander Yeo1, Gaudencio Olgin1, Javier L. Arenas1, D. Duane Baldwin1
1Loma Linda University Medical Center (United States)

MP01-11 RISK FACTORS OF UPPER TRACT CHANGES IN RECREATIONAL DRUG USERS PRESENTING WITH LUTS
Benjamin Tze Ying Lim1, Wai Loon Yam1, Sey Kiat Lim1, Foo Cheong Ng1, Kok Kit Ng1
1Changi General Hospital (Singapore)

MP01-12 CONCOMITANT RENAL CELL CARCINOMA AND HEMATOLOGIC MALIGNANCY, A CASE SERIES
Ramakrishna Venkatesh1, Jason Bylund1, Stephen Strup1, Dianne Howard1, Lewis Johnson1
1University of Kentucky (United States)

MP01-13 REMOTE ISCHEMIC PRECONDITIONING IS INEFFECTIVE IN PREVENTING RENAL INJURY IN A PORCINE SOLIDITY-KIDNEY MODEL
Aaron Lay1, Selahattin Bedir1, Yun-bo Ma1, Jeffrey Gahan1, Jeffrey Cadeddu1
1UT Southwestern Department of Urology (United States)

MP01-14 POST OPERATIVE INFECTION RATES IN PERCUTANEOUS NEPHROLITHOTOMY
Luke Arwynck1, Thomas Smith2, Nittin Shrotri1
1Kent and Canterbury Hospital (United Kingdom)

MP01-15 THE EFFECT OF TRACT NUMBER AND NEPHROSCOPE TYPE UPON RENAL INTRAPELVIC PRESSURES DURING PERCUTANEOUS NEPHROLITHOTOMY
Muhammad Alsyaof1, Roger Li1, Michelle Lightfoot1, Daniel Faaborg1, Michael Lee1, Herbert Hodgson1, Jacob Martin1, Janna Vassantachart1, Alexander Yeo1, Javier Arenas1, Nazih Khater1, D. Duane Baldwin1
1Loma Linda University Medical Center (United States)

MP01-16 LOWER POLE ANATOMY APPLIED TO FLEXIBLE URETEROSCOPY: EXPERIMENTAL STUDY USING HUMAN THREE-DIMENSIONAL ENDOCASTS
Bruno Marroig1, Marco A. Fortes1, Francisco J.B. Sampaio1, Luciano A. Favorito1
1University of Sao Paulo (Brazil)

MP01-17 BIOMECHANICS OF UPPER URINARY TRACT PAIN
Palle Jørgen Sloth Oster1, Katja Venborg Pedersen1, Donghua Liao2, Susanne Sloth Oster3, Elena Steffensen2, Hans Gregersen2, Asbjørn Mohr Drewes2
1Department of Urology, Rigshospitalet, University of Copenhagen (Denmark)

MP01-18 NOVEL MECHANISM OF ANDROGEN IN MODULATING EPITHELIAL-TO-MESENCHYMAL TRANSITION IN PROSTATE CANCER CELLS
Lin Yang1, Preethi Ravindranathan2, J.T. Hsieh2, Ganesh Raj2, Xalan He1
1The First Affiliated Hospital of Medical College of Xi’an Jiaotong University (China)
2University of Texas Southwestern Medical Center at Dallas (United States)

MP01-19 HIGHER LEVELS OF SECRETED S100 A8/A9 LEVELS FROM PERITUMOR PERIRENAL ADIPOSE TISSUES ARE ASSOCIATED WITH RENAL CELL CARCINOMA (RCC)
Zhamshid Okhunov1, Christopher Blair1, Farrahnaz Rahmatpanah1, Shujuan Shao1, Vien Nguyen1, Victor Huynh1, Dan Mercola1, Xiaolin Zi1, James Landman1
1University of California, Irvine (United States)

MP01-20 CRMP4 METHYLATION AS A SIGNATURE FOR PREDICTION OF BIOCHEMICAL RECURRENCE AFTER RADICAL PROSTATECTOMY OF CLINICALLY LOCALIZED PROSTATE CANCER
Zheng Chen1, Li Lu1, Yunhua Mao1, Liao Yuan Li1, Xin Gao1
1The Third Affiliated Hospital, Sun Yat-sen University (China)

MP01-21 DILITAZEM EFFECTS ON FUNCTION OF TRANSPLANTED KIDNEY AND CYCLOSPORINE A BLOOD LEVEL
Amir Abbas Asadpour1, Mohamad Azeizare1, Mahmoud Tavakoli1, Alireza Ghoreif1
1Mashhad University of Medical Sciences (Iran)

MP01-22 HIGH CORRELATION BETWEEN URINE CRYSTAL COMPONENT AND STONE COMPOSITIONS AFTER URSFL USING MICRO-RAMAN SPECTROSCOPIC ANALYSIS
Yichun Chiu1,2,3, Cheng-Yang Hsu4, Allen W. Chiu4, Huihua Kenny Chiang4,5
1Division of Urology, Department of Surgery, Zhongxiao Branch, Taipei City Hospital (Taiwan)
Thursday, September 4

Laparoscopic Surgery Upper Tract 1

Moderated Poster Session (MP02) Time: 01:30 pm–03:30 pm

Moderator: David Duchene, Jason Lee, Nur Rasyid

MP02-01 LAPAROSCOPIC HERNIORRHAPHY OF A RECURRENT INGUINAL HERNIA WITH INCARCERATED URINARY BLADDER: A CASE REPORT
Huey-Sheng Jeng1, Zhi-Wei Guo2, Wen-Kai Lee1, Ming-Chung Ko1, Chih-Kuang Liu1
1Division of Urology, Department of Surgery, Taipei City Hospital Zhongxing Branch (Taiwan)
2Division of Surgery, Department of Surgery, Taipei City Hospital Zhongxing Branch (Taiwan)

MP02-02 ACUTE BLEEDING REQUIRING REOPERATION IN MINIMALLY INVASIVE UROLOGIC SURGERY
Jessica Kreshover1, Lee Richstone1, Louis Kavoussi1
1Arthur Smith Institute of Urology (United States)

MP02-03 PRESERVATION OF RENAL FUNCTION IN CHRONIC KIDNEY DISEASE PATIENTS AFTER PARTIAL NEPHRECTOMY
Nazih Khater1, Roger L1, Phillip Stokes1, Michelle Lightfoot1, David Culpepper1,
MP02-04 THE OUTCOME OF SOFT SILICONE DRAINS IN REDUCING THE SHOULDER TIP PAIN AFTER LAPAROSCOPIC ADRENALECTOMY
Wisa Anegmachalin1, Kamol Panumaturrassamee1, Manint Usawachintoshit1, Apirak Santi-ngamkun1
1Chulalongkorn University (Thailand)

MP02-05 THE SAFETY AND EFfICACY OF LAPAROSCOPIC LIVE DONOR NEPHRECTOMY WITH MULTIPLE RENAL ARTERIES
Ryoichi Imamura1, Kazuaki Yamanaka1, Taigo Kato1, Toyozumi Abe1, Yoichi Kukuda1, Naotsuguro Ichimura1, Hiroshi Kikuchi1, Yasushi Miyagawa1, Seiji Yamaguchi1, Shiro Takahara1, Norio Nonomura1
1Department of Urology, Osaka University Graduate School of Medicine (Japan)

MP02-06 NATIVE NEPHRECTOMY DECREASES ANTIHYPERTENSVIVE MEDICATION REQUIREMENTS IN AUTOSOMAL DOMINANT POLycystic Kidney Disease
Clinton D Bahler1, Ashley Shumate1, Asif Sharfuddin1, William Goggins1, Chandru P Sundaram1
1Indiana University School of Medicine (United States)

MP02-07 DIRECT ZERO DEGREE TELESCOPE DISSECTION OF RETROPERITONEAL SPACE FOR RENAL CYST UNROOTING-TAIPEI CITY HOSPITAL EXPERIENCE
Chieh-Hao Cheng1,2, Yu-Wei Lai1,2,3, Thomas Y. Hsueh1,2,3, Andy C. Huang1,2,3, Yi-Chun Chiu1,2,3, Shiu-Sheng Chen1,2,3, Allen W. Chiu1,2,3
1Divisions of Family Medicine, Department of Community Medicine, Taipei City Hospital (Taiwan)
2Divisions of Urology, Department of Surgery, Taipei City Hospital (Taiwan)
3National Yang-Ming University, School of Medicine (Taiwan)

MP02-08 REOPERITONEOSCOPIC NEPHRECTOMY FOR UPPER URINARY TRACT TUMOR WITH A HAND-ASSISTED APPROACH - AN COMMUNITY HOSPITAL EXPERIENCE REPORT
Yu-Li Lee1, Yu-Wei Lai1, Thomas Y. Hsueh1, Andy C. Huang1, Yi-Chun Chiu1, Shiu-Sheng Chen1, Allen W. Chiu1
1Divisions of Urology, Department of Surgery, Taipei City Hospital (Taiwan)

MP02-09 IDENTIFYING FACTORS AFFECTING RENAL FUNCTION IN PATIENTS WITH PT1B RENAL CELL CARCINOMA WHO UNDERWENT RADICAL OR PARTIAL NEPHRECTOMY
Qi Hui Chen1, Xiao Qing Wang1, Yuan Yuan Hao1
1The First Hospital of Jilin University (China)

MP02-10 NEPHRON-SPARING SURGERY (NSS) IN PATIENTS WITH RENAL FUNCTION AND PROGNOSIS
Qi Hui Chen1, Xiao Qing Wang1, Zhi Hua Lu1
1The First Hospital of Jilin University (China)

MP02-11 LAPAROSCOPIC RENAL PELVIS AND URETER ANGIOPLASTY: SURGICAL TECHNIQUE
Qi Hui Chen1, Xiao Qing Wang1, Zhi Hua Lu1
1The First Hospital of Jilin University (China)

MP02-12 CLINICAL ANALYSIS OF LAPAROSCOPIC RENAL PELVIS AND URETER CANCER RESECTION COMBINED WITH REGIONAL LYMPH NODE DISSECTION
Qi Hui Chen1, Xiao Qing Wang1, Hong Li Shan1
1The First Hospital of Jilin University (China)

MP02-13 ADVANCED MULTICENTRIC BILATERAL RENAL CELL CARCINOMA IN A PATIENT WITH DE NOVO VON HIPPEL-LINDAU DISEASE: CASE REPORT AND LITERATURE REVIEW
Lei Zhang1, Bin Xu1, Shuqiu Chen1, Yiduo Wang1, Kai Lu1, Chunhui Liu1, Ning Liu1, Xiaowen Zhang1, Yu Yang1, Weidong Zhu1, Ming Chen1
1Dept. of Urology, Zhongda Hospital, Southeast University (China)

MP02-14 HOW A DONOR NEPHRECTOMY POPULATION CAN HELP CLARIFY WARM RENAL ISCHEMIA EFFECTS DURING PARTIAL NEPHRECTOMY
Daniel Faaborg1, Roger Li1, Herbert C. Ruckle1, Jared Schober1, Michelle Lightfoot1, Muhammad Alsyourf1, Phillip Stokes1, David Culpepper1, David Tryon1, Gene O. Huang1, Javier Arenas1, D. Duane Baldwin1
1Loma Linda University Medical Center (United States)

MP02-15 PRE-OPERATIVE MEDICAL MANAGEMENT FOR PHEOCHROMOCYTOMA RESECTION: A COMPARISON BETWEEN PHENOXYBENZAMINE AND SELECTIVE ALPHA-1 RECEPTOR BLOCKERS
Clinton D Bahler1, Ryan W Zipper1, David Y Yang1, Matthew J Mellon1, Chandru P Sundaram1
1Indiana University School of Medicine (United States)

MP02-16 LAPAROENDOSCOPIC SINGLE SITE PERITONEAL DIALYSIS CATHETER INSERTION IN CIRRHOTIC PATIENTS REQUIRING DIALYSIS THERAPY
Chang-Chi Chang1,2, Thomas Y. Hsueh1,2,3, Yi-Shen Lin1, Yi-Chun Chiu1, Allen W. Chiu2,3
1Division of Urology, Department of Surgery, Taipei city Hospital Zhongxiao branch (Taiwan)
2National Yang-Ming University, School of Medicine (Taiwan)
MP02-17 LEARNING CURVE OF LAPAROSCOPIC PYELOPLASTY FOR RESIDENT OF UROLOGY
Eduardo Yukio Tanaka1, Mauro Miguel de Lima Sousa Barbosa1, Vitor Bonadia Buonfiglio1, Hugo Quevedo1, Cassio Andreoni1
1Federal University of Sao Paulo (Brazil)

MP02-18 EXPERIENCES OF REDUCED PORT SURGERY USING TRANSUMBILICAL PORT IN UROLOGICAL SURGERY
Shingo Takada1, Go Tsujimura1, Sayaka Horii1, Daichi Nonomura1, Yoshiyuki Yamamoto1, Hiroshi Nomura1, Iwao Yoshioka1, Kiyomi Matsumiya2
1Osaka Police Hospital (Japan)
2Saitama University Hospital (Japan)

MP02-19 LAPAROSCOPIC SCARLESS PYELOPLASTY IN ADULTS. COMPARISON OF SINGLE SITE AND MINI-LAPAROSCOPY TECHNIQUES
Alexander Seregin1,2, Maria Karida2, Natalia Vinarova2, Alexander V. Seregin1,2, Igor Seregin1, and Oleg Loran1,2
1S.P. Botkin Clinical Hospital (Russia)
2Russian Medical Academy of Postgraduate Education (Russia)

MP02-20 DOES THE METHOD OF DISTAL URETER EXCISION IN ASIANS AFFECT ONCOLOGIC OUTCOMES AFTER RADICAL NEPHROURETERECTOMY FOR UPPER URINARY TRACT TRANSITIONAL CELL CARCINOMA?
Kian-Tai Chong1, Zhenbang Liu1, Siying Yeow1, Sing-Joo Chia1
1Division of Urology, Department of Surgery, Taipei city Hospital Ren-Ai branch (Taiwan)

MP02-21 SIMULTANEOUS RETROPERITONEOSCOPIC BILATERAL RADICAL NEPHRECTOMY FOR THE MANAGEMENT OF BILATERAL POLYCYSTIC KIDNEY DISEASE
Huey-Sheng Jeng1, Thomas Y. Hsueh2,4,5, Yi-Shen Lin1, Shih-Yung Chen2,4,5, Allen W. Chi1,2,4,5
1Division of Urology, Department of Surgery, Taipei city Hospital Zhongxiao branch (Taiwan)
2Division of Urology, Department of Surgery, Taipei city Hospital Ren-Ai branch (Taiwan)
3Division of Nephrology, Department of Internal Medicine, Taipei city Hospital Zhongxia branch (Taiwan)
4Department of Urology, School of Medicine, National Yang-Ming University (Taiwan)
5Institute of Traditional Chinese Medicine, School of Medicine, National Yang-Ming University (Taiwan)

MP02-22 SIMULTANEOUS ENDOSCOPIC HOLMIUM LASER NEPHROURETERECTOMY AND BLADDER ROSETTE EXCISION IN RENAL PELVIS AND URETER CARCINOMA
Jan Kasheck1, Maciej Kapajski1, Michal Tkocz1, Henryk Augustyniak1, Andrzej Nowak1, Wojciech Pawlowski1, Konrad Majcherzyk1, Pawel Budczarcz1
1Prof. E. Michalowski Hospital (Poland)

MP02-23 MANAGEMENT OF SEVERE IATROGENIC URETERAL INJURIES BASED ON URETERAL ANASTOMOSIS TECHNIQUE
Amir Abbas Asadpour1, Mohamad Astszare1, Mahmoud Tavakoli1, Mohamad Hosami1
1 Mashhad University of Medical Sciences (Iran)

MP02-24 PRELIMINARY EXPERIENCE OF LAPAROSCOPIC NEPHRECTOMY IN SAUDI ARABIA
Abdulrahman Al-Aown1
1 Armed Forces Hospital Southern Region (Saudi Arabia)

MP02-25 OFF-CLAMP LAPAROSCOPIC PARTIAL NEPHRECTOMY FOR A LOW RENAL NEPHROMETRY SCORED PATIENTS.
Cenk Gurbar1, Asaf Yildirm1, Erem Kaan Basok2, Mert Kılıç1, Gokhan Atis1, Özgür Efiloğlu1, Onur Danacoglu1, Turhan Caskurlu1
1Istanbul Medeniyet University Goztepe Training Hospital (Turkey)
2Bahcesehir University Medikal Park Hospital (Turkey)

MP02-26 CLINICAL EFFECTIVENESS OF RENAL NEPHROMETRY SCORE IN PATIENTS UNDERGOING LAPAROSCOPIC PARTIAL NEPHRECTOMY
Yanagida Tomohiko1, Hata Junya1, Yabe Michihito1, Satou Yuichi1, Akihata Hidenori1, Kataoka Masao1, Ishibashi Kei1, Aikawa Ken1, Kojima Yoshiyuki1
1Fukushima Medical University School of Medicine (Japan)

MP02-27 MID-TERM OUTCOMES OF LAPAROSCOPIC RADICAL NEPHRECTOMY IN PATIENTS WITH LOCALIZED RENAL TUMOR.
Eric Barret1, Luca Lanel1, Youness Achallal1, Laurent Mascle1, Petru Maccek1, François Rozel1, Marc Galliano1, Rafael Sanchez-Salas1, Xavier Cathelineau1
1Department of Urology, Institut Montsouris-Paris-Des cartes University, Paris (France)

MP02-28 RARE SMALL CELL CARCINOMA IN GENITOUREINARY TRACT: AN EXPERIENCE FROM TERTIARY MEDICAL CENTER
Kuo Wei-Ting1, Lin Victor C.1, Wang Hua-Pin1, Jiang Chao-Yang1, Lu Kevin1
1E-Da hospital (Taiwan)

MP02-29 RETROPERITONEAL LAPAROSCOPIC RADICAL NEPHRETORECTOMY WITH VARIOUS FORMS OF BLADDER CUFF CONTROL: COMPARATIVE OUTCOMES WITH 256 CASES.
Jianfei Ye1, Lin Ma1
1Peking University Third Hospital (China)
MP03-01 CHANGE IN RENAL FUNCTION AFTER NEPHRECTOMY IN PATIENTS WITH LONG STANDING HYPERTENSION AND DIABETES
Sree Harsha Mandava¹, James Liu¹, Michael Maddox², Cameron Callaghan¹, Benjamin Lee¹
¹Tulane University School of Medicine Department of Urology (United States)

MP03-02 OPEN, LAPAROSCOPIC, AND ROBOT-ASSISTED RENAL SURGERY PRACTICE PATTERNS: THE IMPACT OF TECHNOLOGY ON ADOPTION CURVES FOR MINIMALLY INVASIVE PARTIAL NEPHRECTOMY – 12 YEAR EXPERIENCE
Jordan Hernandez¹,², Samual Aly¹,², Leonard Glickman¹,²,³, Gregory Lovaletto¹,²,³, Michael Degen¹, Bhur Sawcuki¹,²,³, Ravi Munver¹,²,³
¹Hackensack University Medical Center (United States)
²Rutgers-New Jersey Medical School (United States)
³John Theurer Cancer Center (United States)

MP03-03 ROBOTIC LOWER POLE HEMINEPHRECTOMY FOR NON-FUNCTIONING SEGMENT CAUSING RECURRENT PYELONEPHRITIS
Jayram Krishnan¹, Riccardo Autorino¹, Homayoun Zargar², Oktay Akca², Humberto Laydner³, Dinesh Samarasekera¹, Luis Felipe Brandao², Jihad Kaouk³, George-Pascal Haber¹, Robert Stein¹
¹Cleveland Clinic (United States)

MP03-04 EFFECT OF SURGEON EXPERIENCE ON PERIOPERATIVE AND RENAL FUNCTIONAL OUTCOMES OF ROBOT ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY
Li-Ming Su¹, Russell Terry¹, J.B. Mason¹, Matthew Sorenson¹
¹University of Florida Department of Urology (United States)

MP03-05 INCIDENCE AND RISKS OF Rhabdomyolysis FOLLOWING ROBOTIC RENAL SURGERY
Li-Ming Su¹, Russell Terry¹, J.B. Mason¹, Matthew Sorenson¹
¹University of Florida Department of Urology (United States)

MP03-06 CAN R.E.N.A.L. NEOPLASTIC SCORING PREDICT PERIOPERATIVE OUTCOMES OF ROBOT-ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY?
Li-Ming Su¹, J.B. Mason¹, Matthew Sorenson¹
¹University of Florida Department of Urology (United States)

MP03-07 DURABILITY OF ROBOTIC PYELOPLASTY: LONG-TERM OUTCOMES OF >10 YEAR EXPERIENCE AT A SINGLE INSTITUTION
Michael Maddox¹, Allison Feibus¹, James Liu¹, Sree Mandava¹, Julie Wang¹, Raju Thomas¹
¹Tulane University School of Medicine Department of Urology (United States)

MP03-08 EFFECT OF BODY MASS INDEX ON PERIOPERATIVE OUTCOMES OF ROBOT ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY
Li-Ming Su¹, Russell Terry¹, J.B. Mason¹, Matthew Sorenson¹
¹University of Florida Department of Urology (United States)

MP03-09 CONTEMPORARY NATIONAL SURGICAL OUTCOMES IN THE TREATMENT OF URETEROPELVIC JUNCTION OBSTRUCTION
Barry McGuire¹, Daniel Oberlin¹, Matthew Pike², Aksharamanda Rambachan¹, Kent Perry¹, Robert Nadler¹
¹Northwestern University Feinberg School of Medicine (United States)

MP03-10 INCIDENCE OF MAJOR COMPLICATIONS FOR LAPAROSCOPIC RADICAL AND ROBOTIC PARTIAL NEPHRECTOMY: A MATCH-PAIRED ANALYSIS
Oliver Ko¹, Homayoun Zargar², Luis Felipe Brandao², Oktay Akca², Georges-Pascal Haber², Brian Lane³, Jihad Kaouk², Robert Stein²
¹Case Western Reserve University School of Medicine (United States)
²Glickman Urological & Kidney Institute of Cleveland Clinic (United States)
³Urology Dept. of Spectrum Health Medical Group (United States)

MP03-11 ROBOTIC PARTIAL NEPHRECTOMY IS COST NEUTRAL DURING A PERIOD OF INCREASING UTILIZATION
Clinton D Bahler¹, M Francesca Monn¹, Alec R Gramm¹, Chandra Flack¹, Chandra P Sundaram¹
¹Indiana University School of Medicine (United States)

MP03-12 DOES ANGIOEMOLIZATION FOR RENAL VASCULAR LESIONS FOLLOWING PARTIAL NEPHRECTOMY AFFECT CLINICAL AND RENAL FUNCTION OUTCOMES: A MATCHED SERIES COMPARISON
Aaron Lay¹, Asim Ozayar¹, Monica Morgan¹, Jeffrey Cadeddu¹, Jeffrey Gahan¹
¹UT Southwestern Department of Urology (United States)
MP03-13 REDUCING OPERATING ROOM MARGINAL COSTS THROUGH INFORMATION AND REAL-TIME COST FEEDBACK
Clinton D Bahler1, Christian H Tabib1, Thomas J Hardacker1, Kevin M Ball1, Chandru P Sundaram1
1Indiana University School of Medicine (United States)

MP03-14 DO STATIN MEDICATIONS IMPACT RENAL FUNCTIONAL OR ONCOLOGIC OUTCOMES FOR ROBOTIC PARTIAL NEPHRECTOMY?
Louis S Krane1, Jason M Sandberg1, James T Rague1, Ashok K Hemal1
1Wake Forest Baptist Health (United States)

MP03-15 RENAL FUNCTIONAL OUTCOME COMPARISON BETWEEN RADICAL NEPHRECTOMY AND PARTIAL NEPHRECTOMY WITH EXTENDED WARM ISCHEMIA TIME FOR T1A AND T1B RENAL TUMORS
L Spencer Krane1, James T Rague1, Ted B Manny1, Ashok K Hemal1
1Wake Forest Baptist Health (United States)

MP03-16 COMPARISONS OF ONCOLOGICAL AND FUNCTIONAL OUTCOMES AFTER PARTIAL NEPHRECTOMY FOR RENAL CELL CARCINOMA: OPEN VERSUS ROBOT-ASSISTED LAPAROSCOPIC
Min Soo Choo1, Jun Hyun Han1, Seong Ho Lee1, Cheol Kwak1, Hyeon Hoe Kim2
1Dongtan Sacred Heart Hospital (South Korea)
2Seoul National University Hospital (South Korea)

MP03-17 ROBOTIC RADICAL NEPHRECTOMY FOR T3 RENAL CELL CARCINOMA: TRENDS IN APPLICATION AND MIDTERM COMPARATIVE OUTCOMES IN 118 PATIENTS
Ted Manny1,2, L Spencer Krane1, Julia Manny1, Ashok Hemal1
1Wake Forest University (United States)
2Alliance Urology Specialists (United States)

MP03-18 ROBOTIC ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY (RPN) FOR CLINICAL TIB RENAL MASSES: A RETROSPECTIVE COHORT REVIEW
Andrew Leone1, Timothy Tran1, George Turini1, Joseph Renczulli1, Gyan Pareek1, Dragan Golijanin1
1Alpert Medical School at Brown University, Division of Minimally Invasive Urology (United States)

MP03-19 SURGICAL TREATMENT OF 4-10CM RENAL CELL CARCINOMA (RCC): IS THERE A CONSENSUS AMONG ENDOUROLOGISTS AND UROLOGIC ONCOLOGISTS?
Sara Best1, Brian Lane2, E. Jason Abel1
1University of Wisconsin School of Medicine and Public Health (United States)
2Spectrum Health, Michigan State University (United States)

MP03-20 ROBOTIC PARTIAL NEPHRECTOMY FOR BENIGN INDICATION
Oktay Aker1, Homayoun Zarгар1, Luis Felipe Brandao1, Humberto Laydner1, Riccardo Autorino1, Jayram Krishnan1

Dinesh Samarasekera1, Oliver Ko1, George-Pascal Haber1, Jihad H. Kaouk1, Robert J. Stein1
1Glickman Urological and Kidney Institute, Cleveland Clinic (United States)

MP03-21 BODY MASS INDEX (BMI) HAS NO EFFECT ON PERIOPERATIVE PARAMETERS IN ROBOT ASSISTED PARTIAL NEPHRECTOMY PATIENTS
Ilter Tufek1, Omer Burak Argun2, Mehmet Selcuk Keskin1, Esin Rauf Coskuner1, Ahmet Sahin1, Ali Raza Kural1
1Acibadem University, Department of Urology, Istanbul (Turkey)
2Acibadem Maslak Hospital, Department of Urology, Istanbul (Turkey)

MP03-22 ROBOTIC PARTIAL NEPHRECTOMY IN PATIENTS WITH CHRONIC KIDNEY DISEASE
Young Eun Yoon1, Kwang Suk Lee1, Dae Keun Kim1, Kyung Hwa Choi2, Kwang Hyun Kim1, Koon Ho Rha1, Young Deuk Choi1, Woong Kyu Han1
1Department of urology, Urological Science Institute, Yonsei University College of Medicine (South Korea)
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MP03-23 ONCOLOGIC OUTCOMES AFTER OPEN AND MINIMAL INVASIVE PARTIAL NEPHRECTOMY WITHOUT HILAR CLAMPING
Rocco Papalid1, Mariaconsiglia Ferriero1, Salvatore Guaglianone1, Giuseppe Simone1, Riccardo Mastroianni1, Michele Gallucci1
1Regina Elena National Cancer Institute (Italy)
2University Campus BioMedico (Italy)

MP03-24 ROBOTIC PARTIAL NEPHRECTOMY: THE LEARNING CURVE
Alexandrina Roman1, Lewis Roberts1, Ahalya Kadirvelarasam1, Oliver Cawley1, Matthew Brown2, Marco Puglisi2, Ben Challacombe2
1King’s College London (United Kingdom)
2Urology Department, Guy’s and St Thomas’ NHS Foundation Trust (United Kingdom)

MP03-25 ROBOTIC OPERATION PREDICAMENT: MISSING NEEDLES CASES REPORT
Ching wei Huang1, CT Wu1
1Department of Urology, Chang-Gung Memorial hospital, Linkou (Taiwan)
2Department of Urology, Chang-Gung Memorial hospital, Keelung (Taiwan)

MP03-26 INITIAL EXPERIENCES ON ROBOT-ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY FOR ENDOPHYTIC RENAL TUMOR
Zhoujun Shen1, Wei He1, Xingyong Wang1
1Department of Urology, Ruijin Hospital, Shanghai Jiaotong University, School of Medicine, Shanghai, P.R.China. (China)
MP03-27  ROBOT-ASSISTED LAPAROSCOPIC RESECTION OF LARGE PHEOCHROMOCYTOMA/PARAGANGLIOMA: INITIAL EXPERIENCES FROM CHINA
Zhoujun Shen¹, Wei He¹, Xiaojing Wang¹
¹Department of Urology, Ruijin Hospital, Shanghai Jiaotong University, School of Medicine, Shanghai, P.R.China. (China)

MP03-28  THE EVALUATION OF RENAL FUNCTION FOLLOWING ROBOT-ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY FOR SMALL RENAL MASS
Hyung Suk Kim¹, Chang Wook Jeong¹, Cheol Kwak¹, Hyeon Hoe Kim¹
¹Seoul National University Hospital (South Korea)

MP03-29  EARLY UNCLAMPING TECHNIQUE MAY REDUCE THE RISK OF PSEUDOANEURYSM FORMATION DETECTED BY COMPUTED TOMOGRAPHY ANGIOGRAPHY IN THE EARLY POSTOPERATIVE PERIOD AFTER ROBOT-ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY
Tsunenori Kondo¹, Kenji Omae¹, Toshio Takagi¹, Satoru Morita¹, Yasunobu Hashimoto¹, Hirohito Kobayashi¹, Junpei Izuka¹, Kazuhiko Yoshida¹, Kazunari Tanabe¹
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MP03-30  MULTI-INSTITUTIONAL REVIEW OF OUTCOMES OF ROBOTIC ASSISTED EXTRAVESICAL URETERAL RE-IMPLANTATION
Patricia Gargollo³, Gwen Grimsby¹, Moira Dwyer², Michael O’St², Francis Schneck², Glenn Cannon²
¹University of Texas Southwestern Medical Center/Children’s Medical Center (United States)
²Children’s Hospital of Pittsburgh of the University of Pittsburgh Medical Center (United States)
³Texas Children’s Hospital / Baylor College of Medicine (United States)

MP03-31  SURGERY-RELATED OUTCOMES AND POSTOPERATIVE SPLIT RENAL FUNCTION BY SCINTIGRAPHY EVALUATION IN ROBOTIC ASSISTED PARTIAL NEPHRECTOMY IN COMPLEX RENAL TUMORS: AN INITIAL CASE SERIES
Kazushi Tanaka¹, Junya Furukawa¹, Katsumi Shigemura¹, Nobuyuki Hinata¹, Takeshi Ishimura¹, Mototsugu Muramaki¹, Hideaki Miyake¹, Masato Fujisawa¹
¹Kobe University (Japan)
MP04-06 PHYSICAL 3-D KIDNEY TUMOR MODELS CONSTRUCTED FROM 3-D PRINTERS IMPROVE TRAINEE PERFORMANCE
Margaret Knoedler, Andrew Lange, Allison Feibus, Raju Thomas, Jonathan Silberstein
1Tulane University School of Medicine Department of Urology (United States)

MP04-07 THE BIOPROTECT BALLOON FOR RECTAL PROTECTION IN EXTERNAL BEAM RADIATION THERAPY FOR LOCALIZED PROSTATE CANCER: IMPLANTATION-RELATED MORBIDITY AND VOIDING ASSESSMENT
Stephan Hruby, Thomas Kuntl, Tobias Schaez, Josef Holzinger, Andrea Gavazzi, Gerhard Kameritsch, Heinrich Deutschmann, Ann Kathrin Koch, Rosemarie Forstner, Guenter Janetschek, Felix Sedlmayer
1Department of Urology, Paracelsus Medical University (Austria)
2Department of Radiation Oncology, Paracelsus Medical University (Austria)
3Department of Radiology, Paracelsus Medical University (Austria)
4Department of Surgical Endoscopy, Paracelsus Medical University (Austria)

MP04-08 DEVELOPMENT OF CONVECTIVE WATER VAPOR THERAPY (STEAM) FOR FOCAL THERAPY OF PROSTATE CANCER. HUMAN EXTRIPATED PROSTATE AND CADAVERIC STUDIES
Christopher Dixon, Thayne Larson, Cesar Cabanas, Edwin Rijo, Christian Huidobro, Randolf Beahrs
1Lenox Hill Hospital (United States)
2Clinica La Canela (Dominican Republic)
3Institute of Medical Research (United States)
4Asuncion Hospital (Paraguay)
5University of Chile (Chile)
6Metro Urology (United States)

MP04-09 DEVELOPMENT OF CONVECTIVE WATER VAPOR THERAPY (STEAM) FOR FOCAL THERAPY OF PROSTATE CANCER. IN VIVO TREATMENT AND IMMEDIATE RADICAL PROSTATECTOMY
Christopher Dixon, Cesar Cabanas, Edwin Rijo, Christian Huidobro, Thayne Larson
1Lenox Hill Hospital (United States)
2Institute of Medical Research (United States)
3Hospital Central del IPS (Paraguay)
4Clinica La Canela (Dominican Republic)
5University of Chile (Chile)

MP04-10 EVALUATION OF IN VIVO HEMORRHAGIC KIDNEY INJURY CAUSED BY BURST WAVE LITHOTRIPSY
Mathew Sorensen, Wayne Kreider, Adam Maxwell, Bryan Cuntz, Yak-Nam Wang, Ryan Hsi, Franklin Lee, Vera Khokhlova
1University of Washington Department of Urology (United States)
2Applied Physics Laboratory; University of Washington (United States)
3Indiana University Department of Anatomy and Cell Biology (United States)

MP04-11 IN VITRO EVALUATION OF THE LITHAS-SIST: OPTIMIZING LASER LITHOTRIPSY DURING PERCUTANEOUS STONE SURGERY
Shubha De, Mohamed Omar, Manoj Monga, Sri Sivailsan
1Cleveland Clinic (United States)

MP04-12 TABLET BASED IMAGE GUIDED ROBOTIC SURGERY - FIRST IN MAN
Andrea Gavazzi, Arben Belba, Stefano Tazzioli, Bobby Willis, Aaron Grogan, Dan Wallace, IS Gill, S Chew, S Madhawan, C Allen, Peter Amoroso, Prokar Dasgupta
1Centro Oncologico Fiorentino (Italy)
2Guy’s Hospital, King’s College (United Kingdom)
3The London Clinic (United Kingdom)
4Translucent Medical (United States)
5USC (United States)

MP04-13 APPLYING MICRO-RAMAN SPECTROSCOPY TO IMPROVE THE DIAGNOSIS OF URETERORENOSCOPIC (URS) FLUSHING URINE CYTOLOGY
Meng-Po Cheng, Yi-Chun Chiu, Zhe-Wei Chang, Shing-Hwu Lu, Allen W. Chiu, Huihua Kenny Chiang
1Division of Urology, Department of Surgery, Zhongxiaob Branch, Taipei City Hospital (Taiwan)
2Institute of Biomedical Engineering, National Yang-Ming University (Taiwan)
3Department of Urology, School of Medicine, National Yang-Ming University (Taiwan)
4Biophotonics and Molecular Imaging Research Center, National Yang-Ming University (Taiwan)

MP04-14 EVALUATION OF KIDNEY FUNCTION POST-IRREVERSIBLE ELECTROPORA-TION IN COMPARISON TO PARTIAL NEPHRECTOMY AND RADIOFREQUENCY ABLATION IN A PORCINE SOLITARY KIDNEY MODEL
Monica S.C. Morgan, Asim Ozayar, Elena Lucas, Justin I. Friedlander, Nabeel Shaker, Neil Gupta, Jeffrey A. Cadeddu
1University of Texas Southwestern, Department of Urology (United States)
2University of Texas Southwestern, Department of Pathology (United States)
3University of Texas Southwestern Medical Center (United States)
4University of Texas Arlington (United States)

MP04-15 PERCSAC: A NOVEL DEVICE TO PREVENT STONE FRAGMENT MIGRATION DURING PERCUTANEOUS LITHOTRIPSY
Justin Friedlander, Jodi Antonelli, Heather Beardsley, Stephen Faddegon, Monica Morgan, Jeffrey Gahan, Margaret Pearle, Jeffrey Cadeddu
1University of Texas Southwestern Medical Center (United States)
2University of Texas Arlington (United States)
MP04-16 INITIAL CLINICAL EXPERIENCE WITH PERCUTANEOUS IRREVERSIBLE ELECTROPORATION OF KIDNEY TUMORS
Monica S.C. Morgan¹, Asim Ozayar¹, Jeffrey C. Gahan², Aaron Lay³, Clayton Trimmer², Jeffrey A. Cadeddu¹
¹University of Texas Southwestern, Department of Urology (United States)
²University of Texas Southwestern, Department of Radiology (United States)

MP04-17 CALIBRATION OF A NOVEL HIGH INTENSITY FOCUSED ULTRASOUND PROBE FOR RENAL ABLATION
Clinton D Bahler¹, Jason C Sea¹, Joshua D Ring¹, Sable Amstutz¹, Naren Sanghvi¹, Liang Cheng¹, Chandru P Sundaram¹
¹Indiana University School of Medicine (United States)
²SonaCare Medical, LLC (United States)

MP04-18 RADIOFREQUENCY ABLATION OUTCOMES BASED ON RENAL CELL CARCINOMA HISTOLOGIC SUBTYPES
Jeffrey Gahan¹, Aaron Lay¹, Gideon Lober², Raymond Leveillee³, Jeffrey Cadeddu³
¹UT Southwestern Department of Urology (United States)
²University of Miami (United States)

MP04-19 THE USE OF A ROBOTIC REMOTELY OPERATED SUCTION/IRRIGATION (ROSI) SYSTEM MAY LEAD TO LESS POST-OPERATIVE BLOOD LOSS AFTER ROBOTIC PYELOPLASTY
Alon Y. Mass, MD¹, Michael Stifelman, MD¹
¹New York University School of Medicine (United States)

MP04-20 TRANSVAGINAL VESICOVAGINAL FISTULA REPAIR WITH TRANSURETHRAL RESECTION OF FISTULA
Soodong Kim¹, Wonyeol Cho¹, Gyung Tak Sung¹
¹Dong-A University Hospital (South Korea)

MP04-21 PILOT STUDY OF INTRARENAL DOC-ETAXEL FOR UPPER TRACT CARCINOMA-IN-SITU (UT-CIS) IN PATIENTS WITH PRIOR BCG-REFRACTORY CARCINOMA
Justin Matulay¹, Gina Badalato¹, Ruslan Korets¹, Mantu Gupta¹
¹Columbia University Medical Center (United States)

MP04-22 ABSORBABLE CLIPS HAVE A LOW MISFIRE RATE AND ARE SAFE FOR HEMOSTASIS AND LYMPHOSTASIS DURING ROBOTIC RADICAL PROSTATECTOMY
Ted Mummy¹, Manish Patel¹, Ashok Hemal¹
¹Wake Forest University (United States)
²Alliance Urology Specialists (United States)

MP04-23 THE FIRST NATIONAL EXPERIENCE OF TRACEIT™ TISSUE MARKER PLACED CYSTOSCOPICALLY UNDER LOCAL ANESTHESIA FOR IMAGING VISUALIZATION OF MUSCLE- INVASIVE UROTHELIAL CELL CARCINOMA FOR TARGETED IMRT
David Albala¹, Joel Bass¹, Herbert James¹, Christopher Pieczonka¹, Bashar Omrashba¹, Patrick Campbell², Vladimir Mouraviev³, Neil Mariados³
¹Associated Medical Professionals of NY, PLLC (United States)
²Augmenix (United States)

MP04-24 QUANTIFICATION OF RENAL CELL OPTICAL BIOMARKERS USING SECOND HARMONIC GENERATION IMAGING
Sara Best¹, Terra Timmis¹, Yuming Liu¹, Matthew Houlihan¹, Jeremy Bredfeldt¹, Kevin Eliceiri²
¹University of Wisconsin School of Medicine and Public Health (United States)
²University of Wisconsin-Madison (United States)

MP04-25 THE USE OF SOCIAL MEDIA IN ENDOUROLOGY: AN ANALYSIS OF THE 2013 WORLD CONGRESS OF ENDOUROLOGY MEETING
Khurshid Ghani¹, Noah Canvasser¹, Christina Ramo¹, John Hollingsworth¹, Todd Morgan¹, John Wei¹, Brent Hollenbeck¹
¹Department of Urology, University of Michigan (United States)

MP04-26 IN VITRO EVALUATION OF LITHASSIST: A NOVEL COMBINED HOLMIUM LASER AND SUCTION DEVICE
Zhamshid Okhunov¹, Michael del Junco¹, Renai Yoon¹, Kevin Labadie¹, Michael Ordon²
¹Department of Urology, University of California, Irvine (United States)
²Division of Urology, Department of Surgery, University of Toronto (Canada)

MP04-27 A NOVEL DIFFUSE OPTICAL SPECTROSCOPY LAPAROSCOPIC PROBE TO EVALUATE ADIPOSE TISSUE CONTENT AND METABOLISM
Zhamshid Okhunov¹, Michael del Junco¹, Garen Abedi¹, Jesse Lam², Soroush Zarandi², Albert Cerussi², Jaime Landman¹
¹Department of Urology, University of California, Irvine (United States)
²Beckman Laser Institute, University of California, Irvine (United States)

MP04-28 NOVEL AUTOMATED STONE DETECTION SYSTEM TO MEASURE RENAL CALCULI WITH ULTRASOUND
Franklin Lee¹, Bryan Cunitz², Barbrina Dunmire², Mathew Sorensen¹, Ziyue Liu², Ryan Hsi³, Michael Bailey¹, Jonathan Harper³
¹University of Washington Department of Urology (United States)
²Applied Physics Laboratory (United States)
³Indiana University Department of Biostatistics (United States)
MP05-01 ADDITIONAL PAIN CONTROL DURING EXTRACORPOREAL SHOCKWAVE LITHOTRIPSY (ESWL) USING ETORICOXIB, RANDOMIZED-CONTROL TRIAL
Manint Usawachintachiti, Piyawat Tantanatip
Chulalongkorn University (Thailand)

MP05-02 MONOTHERAPY WITH A SINGLE SESSION OF ESWL FOR KIDNEY STONES IN THE COMMUNITY SETTING
Po Lam, Brittany Paul, Christopher Pieczonka, Bashar Omarbasha, Joel Bass, Jeffrey Sekula, Elian Salzhauer, Richard Kronhaus, Andres Madissoo, Sasha Pavlov-Shapiro, Vladimir Mouraviev
1Associated Medical Professionals of NY, PLLC (United States)

MP05-03 ULTRA LOW DOSE CT-KUB TO DETECT KIDNEY STONES WITH 50% LESS RADIATION: IS THE PLAIN RADIOGRAPH OBSOLETE?
Ben H. Chew, Patrick D. McLaughlin, Ryan F. Paterson, Elspeth M. McDougall
1The Stone Centre at Vancouver General Hospital, University of British Columbia (Canada)
2Department of Radiology, University of British Columbia (Canada)

MP05-04 A NOVEL WET COUPLING DESIGN FOR CONTEMPORARY ELECTROMAGNETIC LITHOTRIPTERS: ELIMINATION OF COUPLING DEFECTS AND IMPROVEMENT OF COMMUNION EFFICIENCY
Richard Shin, Daniel Concha, Jaclyn Lautz, Georgy Sankin, Fernando Cabrera, Ramy Yousef, Charles Scales, Michael Lipkin, Glenn Preminger, Hadley Cocks, Walter Simmons, Pei Zhong
1Division of Urologic Surgery, Duke University (United States)
2Department of Mechanical Engineering and Materials Science, Duke University (United States)
3Department of Urologic Surgery, University of California, Irvine (United States)
4Duke Clinical Research Institute, Duke University (United States)

MP05-05 URETERAL WALL THICKNESS AT THE IMPACTED URETERAL STONE SITE: A CRITICAL PREDICTOR FOR SUCCESS RATES AFTER SWL
Kemal Sarica, Alper Kafkasli, Ozgur Yazici, Cihiangir Cetinel, Cahit Sahin, Mehmet K. Demirkol, Murat Tuner, Bilal Eyridirim
1Dr. Lutfi KIRDAR research and training Hospital (Turkey)

MP05-06 IS ANTIBIOTIC PROPHYLAXIS NECESSARY PRIOR TO SWL TREATMENT IN PATIENTS WITH A NEPHrostomy TUBE AS RECOMMENDED
Emrah Yuruk, Murat Tukan, Aykut Colaker, Ahmet Muslemoglu, Murat Binbay
1Bagcılar Training and Research Hospital (Turkey)

MP05-07 DOES PREVIOUS STONE TREATMENT INTERVENTION AFFECT THE OUTCOMES AND COMPLICATIONS OF THE SWL TREATMENT IN ADULTS?
Bulent Onal, Mehmet Hazan Guletken, Beril Tulu, Gamze Gul Gulec, Fethi Ahmet Turegun, Nejat Tansu, Nur Ahmet Erozcen
1University of Istanbul, Cerrahpasa School of Medicine, Department of Urology (Turkey)

MP05-08 THE USING OF STENT ACCORDING TO STONE BURDEN IN PELVIS RENALIS CALCULI TREATED WITH SWL: USE IT OR LOSE IT?
Bulent Onal, Çağatay Doğan, Burak Ožkan, Gülce Ecem Can, Nejat Tansu, Ahmet Erozcen
1Istanbul University Cerrahpasa School of Medicine Department of Urology (Turkey)

MP05-09 EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY IS A RISK FACTOR FOR CHRONIC KIDNEY DISEASE: A POPULATION-BASED STUDY
Thomas Y. Hsueh, Yi-Shen Lin, Hsiao-Yun Hsu, Shiou-Sheng Chen, Allen W. Chiu
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2Division of Nephrology, Department of Internal Medicine, Taipei city Hospital zhongxiao branch (Taiwan)
3Department of Education and Research, Taipei city Hospital (Taiwan)
4Department of Urology, School of Medicine, National Yang-Ming University (Taiwan)
5Institute of Traditional Chinese Medicine, School of Medicine, National Yang-Ming University (Taiwan)
6Department of Public Health, Institute of Public Health, National Yang-Ming University (Taiwan)

MP05-10 CHANGING PATIENT POSITION CAN ELIMINATE ARRHYTHMIAS DEVELOPING DURING SHOCK WAVE LITHOTRIPSY (SWL)
Tarek Alzahrani, Daniela Ghiculete, Kenneth R. Pace, R.J. D’A Honey
1St. Michael’s Hospital (Canada)
2University of Toronto (Canada)
MP05-11 THE EFFECTS OF DIFFERENT TREATMENT PROTOCOLS ON PREVENTION OF RENAL FIBROSIS IN PATIENTS WITH RENAL STONES RECEIVING SHOCKWAVE LITHOTRIPSY
Chi-Fai Ng1, Sylvia Luke1, Wai-Man Yuen2, Danny Gohel2
1Division of Urology, Department of Surgery, The Chinese University of Hong Kong (Hong Kong)
2Department of Health Technology and Informatics (Hong Kong)

MP05-12 THE EFFECTS OF DIFFERENT TREATMENT PROTOCOLS ON PREVENTION OF ACUTE RENAL INJURY IN PATIENTS WITH RENAL STONES RECEIVING SHOCKWAVE LITHOTRIPSY
Chi-Fai Ng1, Sylvia Luke1, Wai-Man Yuen2, Danny Gohel2
1Division of Urology, Department of Surgery, The Chinese University of Hong Kong (Hong Kong)
2Department of Health Technology and Informatics, Hong Kong Polytechnic University (Hong Kong)

MP05-13 NON-CONTRAST COMPUTED TOMOGRAPHY–BASED PREDICTION MODEL FOR EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY OUTCOME OF RENAL STONES
Hsiang-ying Lee1, Yi-Hsin Yang2, Yi-Lun Lee3, Jung-Tsung Shen2, Mei-Yu Jang4, Paul Ming-Chen Shih5, Yi-her Chou1,6, Yung-Shun Juan1,4,6
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3Department of Urology, Cishan Hospital, Ministry of Health and Welfare (Taiwan)
4Department of Urology, Kaohsiung Municipal Hsiao-Kang Hospital (Taiwan)
5Department of Radiology, Kaohsiung Municipal Hsiao-Kang Hospital (Taiwan)
6Department of Urology, College of Medicine, Kaohsiung Medical University (Taiwan)

MP05-14 SHOCKWAVE LITHOTRIPSY WITH RENOPROTECTIVE PAUSE IS ASSOCIATED WITH RENOVASCULAR VASOCONSTRICION IN HUMANS
Franklin Lee1, Ryan Hsi1, Mathew Sorensen1, Marla Paun1, Barbirina Dumme12, Ziyue Liu1, Michael Bailey1,2, Jonathan Harper1
1University of Washington Department of Urology (United States)
2Applied Physics Laboratory (United States)

MP05-15 RADIODENSITY OF URETERAL STONE ON KUB CAN BE A PROGNOSTICATOR OF SHOCK WAVE LITHOTRIPSY OUTCOMES.
Jungbum Bae1, Ki Hong Lim1, Chang Ahn1, Jae Yong Jeon1, Min Chul Cho1, Hae Won Lee1, Kwang Soo Lee1
1Dongguk University Ilsan Hospital (South Korea)

MP05-16 PREDICTIVE FACTORS OF SUCCESSFUL OUTCOME OF EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY FOR THE PATIENTS WITH URETERIC CALCULI
Hyeong Jun Kim1, Woo Jin Bang2, Cheol Young Oh3, Jin Seon Cho3, Changhee Yoo2
1Konyang University College of Medicine (South Korea)
2Hallym University College of Medicine (South Korea)

MP05-17 PREDISPOSING FACTORS ASSOCIATED WITH SUBCAPSULAR HEMATOMA AFTER EXTRACORPOREAL SHOCKWAVE LITHOTRIPSY
Kai-Yi Tzou1, Wei-Tang Kao1, Yi-Te Chiang1, Chia-Hung Liu1, Chia-Chang Wu1, Kuan-Chou Chen1
1Department of Urology, Taipei Medical University – Shuang Ho Hospital (Taiwan)

MP05-18 URINARY STONE CHARACTERISTICS OF PATIENTS TREATED WITH EXTRA-CORPOREAL SHOCK WAVE LITHOTRIPSY (ESWL) IN CIPTO MANGUNKUSUMO HOSPITAL, JAKARTA, 2008–2013: A GENDER ANALYSIS
Ponco Birowo1, Nur Rasyid1, Agus Rizal Hamid1, Endika Noviandri1, Maruto Harjanggi1
1Division of Urology – Department of Surgery, Cipto Mangunkusumo Hospital, Faculty of Medicine Universitas Indonesia (Indonesia)

MP05-19 THE CORRELATION BETWEEN BODY-MASS-INDEX, URIC ACID SERUM, RANDOM GLUCOSE SERUM, AND BLOOD PRESSURE TOWARD STONE OPACITY IN URINARY TRACT STONE PATIENTS
Nur Rasyid1, Ponco Birowo1, Ikhias Arief Bramono1
1Department of Urology, Cipto Mangunkusumo Hospital / Faculty of Medicine, Universitas Indonesia (Indonesia)

MP05-20 IMPACT OF RENAL ANATOMY AND STONE CHARACTERISTICS ON SHOCK WAVE LITHOTRIPSY OUTCOMES FOR LOWER POLE CALCULI: RESULTS FROM A PROSPECTIVE TRIAL
Giovanni Scala Marchini1, Fabio Torricelli1,2, Fernando Yamauchi1, Alexandre Donilovic1, Fabio Vicentini1, Miguel Srougi1, Manoj Monga2, Eduardo Mazzucchi1
1University of Sao Paulo Medical School (Brazil)
2The Cleveland Clinic (United States)

MP05-21 HOW DO THE RESIDUAL FRAGMENTS AFTER SWL AFFECT THE HEALTH-RELATED QUALITY OF LIFE? A CRITICAL ANALYSIS IN A SIZE BASED MANNER
Cahit Sahin1, Alper Kaftaslı1, Cihangir A. Cetinel1, Felmi Narter1, Erkin Sağlam1, Kemal Sarica1
1Dr. Lutfi Kirdar Training and Research Hospital, Urology Clinic (Turkey)
MP05-22 DO THE RESIDUAL FRAGMENTS AFTER SWL AFFECT THE QUALITY OF LIFE?
Cahit Sahin1, Murat Tuncer1, Ozgur Yazici1, Rahim Horca2, Cihangir A. Cetinel1, Bilal Eryildirim1, Fatih Tarhan1,2, Kemal Sarica1
1Dr. Lutfi Kirdar Training and Research Hospital, Urology Clinic (Turkey)
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MP05-23 STONE SIZE AND QUALITY OF LIFE: A CRITICAL EVALUATION AFTER EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY
Cahit Sahin1, Ozgur Yazici1, Alper Kafkasli1, Murat Tuncer1, Cihangir A. Cetinel1, Fehmi Narter1, Kemal Sarica1
1Dr. Lutfi Kirdar Training and Research Hospital, Urology Clinic (Turkey)

MP05-24 10 YEARS FOLLOW-UP AFTER ELECTROMAGNETIC ESWL OF RENAL STONES: OUR EXPERIENCE
Territo Angelo1, Rani Matteo1, Nyek Ntep Nicolas1, Morselli Simone1, Sighinolfi Maria Chiara1, Micali Salvatore1, Bianchi Giampaolo1
1University of Modena and Reggio Emilia (Italy)

MP05-25 INCIDENCE OF AND FACTORS ASSOCIATED WITH IMMEDIATE COMPLICATIONS AFTER EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY
Mingchung Ko1
1Taipei city hospital (Taiwan)

MP05-26 SINGLE CENTER, SINGLE OPERATOR COMPARATIVE STUDY OF EFFICACY AND OUTCOMES OF ELECTROHYDRAULIC AND ELECTROMAGNETIC EXTRACORPOREAL SHOCK WAVE LITHOTRIPTORS
Chih-Chiao Lee1
1Department of Urology, Mackay Memorial Hospital (Taiwan)

MP05-27 NEW IS SILVER AND OLD IS GOLD – NOT TRUE FOR SIEMENS THIRD GENERATION ELECTROMAGNETIC LITHOTRIPTERS
Zhen Wei Choo1, Zhenbang Liu1, Yung Khan Tan1, Yee Mun Lee1
1Department of Urology, Tan Tock Seng Hospital (Singapore)

MP05-28 PAIN IS A SIGNIFICANT FACTOR FOR PREDICTING THE SUCCESS RATE OF ONE-SESSION SHOCK WAVE LITHOTRIPSY FOR TREATING URETER STONES
Doo Yong Chung1, Kang Su Cho1, Dae Hun Lee1, Seong Uk Jeh1, Jong Kyou Kwond1, Ho Won Kang1, Won Sik Ham1, Young Seok Cho1, Joo Yong Lee1
1Department of Urology, Severance Hospital, Urological Science Institute, Yonsei University College of Medicine (South Korea)
2Department of Urology, Gangnam Severance Hospital, Urological Science Institute, Yonsei University College of Medicine (South Korea)
3Department of Urology, Severance Check-Up, Yonsei University Health System, (South Korea)

MP05-29 PATIENT CONTROL ANESTHESIA IN EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY FOR UROLITHIASIS
Hueih-Shing Hsu1, Ching-Chung Shu1, Shyh-Chyi Chang1
1Lotung Pohai Hospital (Taiwan)

MP05-30 IMPACT OF SHOCK WAVE LITHOTRIPSY ON RENAL FUNCTION
Stephanie Tam1,2, Daniela Ghiuculete1,2, Tarek Alzahrani1,2, R.J. D’A Honey1,2, Kenneth T. Pace1,2
1St. Michael’s Hospital (Canada)
2University of Toronto (Canada)

MP05-31 INTERIM RESULTS OF A RANDOMIZED TRIAL COMPARING NARROW VERSUS WIDE FOCAL ZONES FOR SHOCK WAVE LITHOTRIPSY OF RENAL CALCULI
R.J. D’A Honey1,2, Tarek Alzahrani1,2, Daniela Ghiuculete1,2, Kenneth T. Pace1,2
1St. Michael’s Hospital (Canada)
2University of Toronto (Canada)

Thursday, September 4
Endourology: Ureteroscopy
Moderated Poster Session (MP06)
03:45 pm–05:45 pm
Room: RM 101 A
Moderator: Tianxin Lin, Brian Matalaga, Huai-Chin Tai

MP06-01 DEFINING THE RATE OF ENCOUNTERING THE DIFFICULT URETER IN PATIENTS UNDERGOING FLEXIBLE URETEROSCOPY
Ryuta Tanimoto1, Scott Hubosky1, Kelly Healy1, Demetrius Bagley1
1Thomas Jefferson University (United States)

MP06-02 CRITICAL ANALYSIS OF MECHANICAL URETERAL STENT COMPLICATIONS: A SINGLE INSTITUTION EXPERIENCE
Chirag Gordan1,2, Athena Christakos1,2, Leonard Glickman1, Michael Dejen1, Ravi Munver1,2,3
1Hackensack University Medical Center (United States)
2Rutgers-New Jersey Medical School (United States)
3John Theurer Cancer Center (United States)

MP06-03 PATIENTS UNDERGOING URETEROSCOPIC LITHOTRIPSY MAY BE EXCELLENT SINGLE SESSION SWL CANDIDATES BASED UPON TRIPLE D SCORE
Timothy Tran1, Andrew Leone1, Simone Thavaseelan1, Gyan Pareek1
MP06-04 ACCURACY OF URETEROSCOPIC BIOPSY COMPARED TO RADICAL NEPHROURETERECTOMY PATHOLOGY
Ryuta Tanimoto, Kelly Healy, Marluce Bibbo, Ruth Birbe, Scott Hubosky, Demetrius Bagley
1Department of Urology, Thomas Jefferson University (United States)
2Department of Pathology, Thomas Jefferson University (United States)

MP06-05 PERCUFLEX HELICAL URETERAL STENT PROVIDES EXCELLENT PATIENT COMFORT AND UPPER TRACT DRAINAGE
Ben H. Chew, Olga Arsovska, Dirk Lange, Elspeth McDougall, Ryan F. Paterson
1The Stone Centre at Vancouver General Hospital, University of British Columbia (Canada)

MP06-06 INCREASED RADIATION EXPOSURE DURING URETEROSCOPY IN THE OBESE PATIENT
Fernando Cabrera, Richard Shin, Giao Nguyen, Chu Wang, Ned Chung, Ramy Taacoub, Charles Scales, Michael Ferrandino, Glenn Preminger, Terry Yoshizumi, Michael Lipkin
1Duke University Medical Center (United States)
2Duke Clinical Research Institute, Duke University (United States)

MP06-07 ENDOSCOPIC MANAGEMENT OF UPPER TRACT UROTHELIAL TUMOUR: IS IT SAFE?
David Ellis, Nimalan Arumainayagam, Niro Rajaretnam, Altaf Shamsuddin, Norma Gibbons, David Hrouda, Ranan DasGupta
1Charing Cross Hospital, Imperial College NHS Trust (United Kingdom)

MP06-08 THE EFFECT OF REPAIR COSTS ON THE PROFITABILITY OF A URETEROSCOPY PROGRAM
Jeffrey Mullins, Jeffrey Tossonian, Wesley Ludwig, William Carruth, Brian Matlaga
1Johns Hopkins Medical Institutions (United States)

MP06-09 ACCURACY OF RETROGRADE PYELOGRAPHY IN THE EVALUATION OF THE RENAL COLLECTING SYSTEM
Leonard Edokpolo, Fotima Asqarova, Mantu Gupta
1Columbia University Medical Center (United States)
2Mount Sinai University (United States)

MP06-10 DIAGNOSIS AND MANAGEMENT OF URETERAL FIBROEPITHELIAL POLYPS IN CHILDREN: A NEW TREATMENT ALGORITHM
Daniel Faaborg, Roger Li, Michelle Lightfoot, Muhammad Alsyouf, Lesli Nicolay, D. Duane Baldwin, David Chamberlin
1Loma Linda University Medical Center (United States)
2Loma Linda University Children’s Hospital (United States)

MP06-12 INTRODUCTION OF THE K.U.B GRADING SYSTEM FOR ENTOMBED STENTS
Javier L. Arenas, Philip Stokes, Albert Lee, Eric Bjorn Harboldt, Roger Li, Muhammad Alsyouf, Michelle Lightfoot, Gaudencio Olgin, D. Duane Baldwin
1Loma Linda University Children’s Hospital (United States)

MP06-13 FLEXIBLE URETERORENOSCOPY IS SAFE AND EFFECTIVE FOR THE TREATMENT OF KIDNEY STONES IN PATIENTS WITH CHRONIC KIDNEY DISEASE
Emrah Yuruk, Murat Binbay, Faruk Ozgor, Akif Erbin, Yalcin Berberoglu, Ahmet Muslumanoglu
1Bagcilar Training and Research Hospital (Turkey)
2Haseki Training and Research Hospital (Turkey)

MP06-14 COMPARISON OF SHOCKWAVE LITHOTRIPSY AND FLEXIBLE URETEROSCOPY FOR THE TREATMENT OF KIDNEY STONES IN PATIENTS WITH SOLITARY KIDNEY
Emrah Yuruk, Murat Binbay, Akif Erbin, Levent Sekerel, Yalcin Berberoglu, Ahmet Muslumanoglu
1Bagcilar Training and Research Hospital (Turkey)
2Haseki Training and Research Hospital (Turkey)

MP06-15 EFFICACY OF URETEROSCOPIC LITHOTRIPSY FOR THE ELDERLY PATIENTS
Ryoji Takazawa, Sachi Kitayama, Toshihiko Tsujii
1Tokyo Metropolitan Ohtsuka Hospital (Japan)

MP06-16 LOW POWER, HIGH FREQUENCY HOLMIUM LASER SETTINGS FACILITATE STONE “DUSTING” AND MINIMIZE STONE RETROPULSION
Chirag Gordhan, Athena Christakos, Mina Fatt, Christina Carpenter, Leonard Glickman, Ravi Munver
1Hackensack University Medical Center (United States)
2Rutgers-New Jersey Medical School (United States)
3John Theurer Cancer Center (United States)

MP06-17 OUTCOMES OF SEMI-RIGID URETEROSCOPY FOR PROXIMAL URETERAL STONES
Ehud Gnessin, Ofer Z Shenfeld
1Shaare Zedek Medical Center (Israel)

MP06-18 A SOLUTION FOR MEDICAL AND LEGAL PROBLEMS ARISING FROM FORGOTTEN URETERAL STENTS
Qi Hui Chen, Xiao Qing Wang, Jing Hai Hu
1The First Hospital of Jilin University (China)
MP06-19 INTERNATIONAL COLLABORATION IN ENDOUTROLOGY (UROICE): MULTI-CENTER EVALUATION OF PRESTENTING IN URETERORENOSCOPY
Jan Peter Jessen1, Alberto Breda2, Marianne Brehmer3, Evangelos Liatsikos4, Felix Millan Rodriguez2, Palle Osther2, Cesare Scoffone6, Thomas Knoll1
1Department of Urology, Klinikum Sindelfingen, University of Tuebingen (Germany)
2Department of Urology, Fundacio Puigvert, Autonoma University of Barcelona (Spain)
3Department of Urology, Aarhus University Hospital (Denmark)
4Department of Urology, University of Patras (Greece)
5Department of Urology, Lillebaelt Hospital, University of Southern Denmark, Fredericia (Denmark)
6Department of Urology, Cottolengo Hospital, Torino (Italy)

MP06-20 APPLICATION OF FLEXIBLE URETEROSCOPY WITH HOLMIUM LASER IN UPPER URINARY TRACT CALCULI WITH ABNORMAL ANATOMY
LieKui Fang
ShenZhen People’s Hospital (China)

MP06-21 EFFECT OF OPERATING ROOM TIME ON SAFETY AND OUTCOMES IN URETEROSCOPY WITH LASER LITHOTRIPSY
Nannan Thirumavalavan1, Melody Chen1, Mark Katz1, Richard Babayan1, David Wang1
1Boston University School of Medicine (United States)

MP06-22 NO DIFFERENCE IN OUTCOMES WITH AND WITHOUT A URETERAL ACCESS SHEATH FOR FLEXIBLE URETEROSCOPY WITH LASER LITHOTRIPSY
David Wang1, Melody Chen1, Mark Katz1, Richard Babayan1, Nannan Thirumavalavan1
1Boston University School of Medicine (United States)

MP06-23 URETEROSCOPY WITH LASER LITHOTRIPSY IN OBESE AND DIABETIC PATIENTS IS ASSOCIATED WITH AN INCREASED RISK OF COMPLICATIONS
Nannan Thirumavalavan1, Melody Chen1, Mark Katz1, Richard Babayan1, David Wang1
1Boston University School of Medicine (United States)

MP06-24 THE EFFECTS OF LASER FIBER CLEAVAGE TECHNIQUES ON POWER OUTPUT AND TIP MORPHOLOGY
Muhammad Alsyouf1, Janna M. Vassantachart1, Michelle Lightfoot1, Alexander Yeo1, Jonathan Maldonado1, Roger Li1, Javier Arenas1, D. Duane Baldwin1
1Loma Linda University Medical Center (United States)

MP06-25 PRECISION OF URETEROSCOPIC VISUAL ESTIMATION OF STONE FRAGMENT SIZE
Jennifer Yates1, Andrew Leone1, Timothy Tran2, Chirag Gordan4, Simone Thavaseelan7, Gyan Pareek2, Ravi Munver3, Achankeng Afadato1
1University of Massachusetts Medical School (United States)
2Brown University/ Kidney Stone Center (United States)
3Hackensack University Medical Center (United States)

MP06-26 SINGLE-CENTER ANALYSIS OF PREDICTABILITY OF CLEARING RENAL STONE FRAGMENTS FOLLOWING FLEXIBLE URETEROSCOPY
Hiroki Itol, Shinnosuke Kurada1
1Ohguchi East General Hospital (Japan)

MP06-27 RETROSPECTIVE STUDY OF URETEROSCOPY WITH HOLMIUM LASER FOR NEPRHOLITHIASIS AT RUSH UNIVERSITY MEDICAL CENTER
John Richgels5, Michael Hoeh6, Kalyan Latchamsetty1, Jerome Hoeksema1, Christopher Coogan1
1Rush University Medical Center (United States)

MP06-28 TRENDS AND TREATMENT OUTCOMES OF FLEXIBLE URETEROSCOPY (FURS) FOR LOWER POLE STONES
Christopher Netsch1, Sophie Knipper1, Ann Kathryn Orywal1, Christian Tiburtius1, Andreas J Gross1
1Asklepios Klinik Barmbek (Germany)

MP06-29 RETROGRADE URETEROSCOPIC MANAGEMENT OF CALICEAL STONES
Christopher Netsch1, Sophie Knipper1, Ann Kathryn Orywal1, Christian Tiburtius1, Andreas J Gross1
1Asklepios Klinik Barmbek (Germany)

MP06-30 COMPARISON OF OUTCOMES OF URETEROSCOPY FOR URETERAL CALCULI: ANALYSIS OF SIX-YEAR OUTCOME OF A HIGH-VOLUME STONE CENTRE
Christopher Netsch1, Sophie Knipper1, Ann Kathryn Orywal1, Christian Tiburtius1, Andreas J Gross1
1Asklepios Klinik Barmbek (Germany)

MP06-31 PRACTICE PATTERNS FOR SURGICAL DECOMPRESSION IN PATIENTS WITH OBSTRUCTING URINARY STONES AND SEPSIS
Khurshid Ghanai, Maggie Bierlein1, Abdul Alrawi1, Ted Skolarus1, John Hollingsworth1
1Department of Urology, University of Michigan (United States)
Thursday, September 4
Moderated Poster Session (MP07) 03:45 pm–05:45 pm
Laparoscopic Surgery Upper Tract 2
Room: RM 101 B
Moderator: Thomas Chi, Hsiao-Jen Chung, Manickam Ramalingam

MP07-01 RETROPERITONEAL LAPAROSCOPIC NEPHROURETERECTOMY OF Duplicated Kidney in Adult Patients: A REPORT OF TWO CASES AND REVIEW OF LITERATURE
Yuchuan Hou1, Lingbo Yang1, Erpeng Liu1, Yanbo Wang1, Chuanxi Wang1
1The First Hospital of Jilin University (China)

MP07-02 THE COMPARISON OF RETROPERITONEAL LAPAROSCOPIC PARTIAL AND TOTAL ADRENALECTOMY FOR ADRENAL NON-FUNCTIONAL ADENOMAS
Qi Hui Chen1, Xiao Qing Wang1, Yuan Yuan Hao1
1The First Hospital of Jilin University (China)

MP07-03 COMPARISON OF RETROPERITONEAL LAPAROSCOPIC DECORTICATION AND ADRENALECTOMY FOR THE THERAPY OF ADRENAL CYSTS
Qi Hui Chen1, Xiao Qing Wang1, Zhi Hua Lu1
1The First Hospital of Jilin University (China)

MP07-04 COMPARISON OF OPEN PARTIAL NEPHRECTOMY AND RETROPERITONEAL LAPAROSCOPIC NEPHRECTOMY IN SMALL RENAL CELL CARCINOMA
Qi Hui Chen1, Xiao Qing Wang1, Zhi Hua Lu1
1The First Hospital of Jilin University (China)

MP07-05 THE CLINIC ANALYSIS OF RETROPERITONEAL LAPAROSCOPIC RADICAL NEPHRECTOMY (87 CASES REPORTS)
Qi Hui Chen1, Xiao Qing Wang1
1The First Hospital of Jilin University (China)

MP07-06 RETROPERITONEAL LAPAROSCOPIC AND LAPAROSCOPIC RESECTION OF RETROPERITONEAL PARAGANGLIOMA
Weifeng Xu1, Hanzhong Li1, Yushi Zhang1, Zhigang Ji1, Weigang Yan1
1Department of Urology, Peking Union Medical College Hospital (China)

MP07-07 RETRO-LAPAROSCOPIC RESECTION OF RETROPERITONEAL GANGLIONEUROMA:
REPORT OF 4 CASES
Yuchuan Hou1, Tao Yang1, Lingbo Yang1, Hui Guo1, Erpeng Liu1
1The First Hospital of Jilin University (China)

MP07-08 HAND-ASSISTED RETROPERITONEAL LAPAROSCOPIC NEPHROURETERECTOMY (HARNU) WITH BLADDER CUFFING AFTER PREPERITONEAL AND RETROPERITONEAL PERIVESICAL BALLOONING
Kwang Taek Kim1, Hahn-Ey Lee1, Chang Hee Kim1, Khae Hawn Kim1, Jeung Jin Chung1, Jin Kyu Oh1, Tae Beom Kim1, Han Jung1, Sang Jin Yoon1
1Gachon University Gil Medical Center (South Korea)

MP07-09 RISK FACTORS FOR INTRAVESICAL RECURRENCE AFTER RADICAL NEPHROURETERECTOMY OF UPPER TRACT UROTHELIAL CARCINOMA
Xiao Qing Wang1, Hong Li Shan1, Jing Hui Hu1, Yuan Yuan Hao1
1The First Hospital of Jilin University (China)

MP07-10 LAPAROSCOPIC URETERAL RECONSTRUCTION WITH APPENDIX
Boris Komyakov1, Bakhman Guliev1, Victor Ochelenko1
1Medical University (Russia)

MP07-11 RISK FACTORS RELATED WITH CONVERSION TO OPEN SURGERY DURING LAPAROSCOPIC NEPHRECTOMY OF NONFUNCTIONING RENAL TUBERCULOSIS
Xiao Qing Wang1, Hong Li Shan1, Qi Hui Chen1, Yuan Yuan Hao1
1The First Hospital of Jilin University (China)

MP07-12 IMPACT OF RIGHT NEPHRECTOMY ON LONG-TERM OUTCOMES IN RETROPERITONEOSCOPIC LIVE DONOR NEPHRECTOMY
Kazuya Omoto1, Taiji Nozaki1, Masashi Inui1, Masayoshi Okami1, Tomokazu Shimizu1, Daisuke Toki1, Hideki Ishida1, Kazunari Tanabe1
1Department of Urology, Tokyo Women’s Medical University (Japan)

MP07-13 RENAL SURGERY IN THE ELDERLY - VALIDATION OF PERIOPERATIVE OUTCOMES AND POSTOPERATIVE complications IN 160 CONSECUTIVE PATIENTS UNDERGOING RETROPERITONEOSCOPIC PARTIAL NEPHRECTOMY
Christian Wulffing1, Johannes Göckschul1, Niclas Flechtenmacher1, David Marghawal1
1Asklepios Klinik Altona, Department of Urology (Germany)

MP07-14 TRIFECTA OUTCOMES IN RETROPERITONEOSCOPIC PARTIAL NEPHRECTOMY - A SINGLE SURGEON SERIES OF 180 CONSECUTIVE CASES
Christian Wulffing1, Niclas Flechtenmacher1, Serkan Filiz1, Johannes Göckschul1, Kai Torben Helbronn1, David Marghawal1
1Asklepios Klinik Altona, Department of Urology (Germany)
MP07-15 RISK FACTORS OF BLADDER RECURRENT AFTER HAND ASSISTED RETROPERITONEOSCOPIC NEPHROURETERECTOMY FOR PRIMARY UPPER TRACT UROTHELIAL CANCER
Kuan-Hsun Huang¹, Chien-Hui Ou¹, Wen-Horng Yang¹
¹Department of Urology, Medical College and Hospital, National Cheng-Kung University (Taiwan)

MP07-16 RETROPERITONEAL LAPAROSCOPIC LIVING DONOR NEPHRECTOMY: REPORT OF 180 CASES
Zhang Hongxian¹, Zhao Lei¹, Ma Lulin¹, Hou Xiaofei¹, Wang Guoliang¹, Liu Lei¹
¹Peking University 3rd Hospital (China)

MP07-17 MINIMALLY INVASIVE PYELOPLASTY IN CHILDREN: THE OPTIMAL APPROACH?
Akbar Ashrafi¹,², Sam Raffery¹, Peter Borzi¹, David Winkle¹,²
¹Mater Children’s Hospital (Australia)
²University of Queensland (Australia)

MP07-18 LAPAROSCOPIC LIVING DONOR NEPHRECTOMY IN INDONESIA: REPORT OF OUR INITIAL EXPERIENCE
Bagas Baskoro¹, Chaidir Arif Mochtar¹, Tefan Wahyudi¹, Agus Rizal A.H. Hamid¹
¹Department of Urology, Cipto Mangunkusumo Hospital/Faculty of Medicine Universitas Indonesia (Indonesia)

MP07-19 FEASIBILITY OF LAPAROSCOPIC PYELOPLASTY IN CHILDREN; COMPARISON BETWEEN CHILDREN AND ADULTS WITH SYMPTOMATIC URETEROPELVIC JUNCTION OBSTRUCTION
Kimmihiko Moriya¹, Ken Morita¹, Takahiko Mitsui¹, Takeya Kitta¹, Yukiko Kanno¹, Yoko Nishimura¹, Nobuo Shinohara¹
¹Department of Renal and Genitourinary Surgery, Hokkaido University (Japan)

MP07-20 HAND ASSISTED RETROPERITONEOSCOPIC LIVE DONOR NEPHRECTOMY: A CONSECUTIVE EXPERIENCE OF 80 CASES IN SINGLE INSTITUTION
Hirovuki Tsumenori¹,Mari Yamaseki¹, Yuuki Kitamura¹, Yuushi Hayashida¹, Yuuna Sakaeda¹, Hiroshi Gouda¹, Nobuharu Ueda¹, Mikio Sugimoto¹, Yoshifumi Kakehi¹
¹Kagawa University Faculty of Medicine (Japan)

MP07-21 A RETROSPECTIVE ANALYSIS OF LAPAROSCOPIC PARTIAL NEPHRECTOMY WITH SEGMENTAL RENAL ARTERY CLAMPING AND THE COMPARISON OF THE DIFFERENT PARAMETERS IN ESTIMATING RENAL FUNCTION AFTER PARTIAL NEPHRECTOMY
Changjun Yin¹, Pu Li¹, Pengfei Shao¹, Xiaobing Ju¹, Chao Qin¹
¹The first affiliated hospital of Nanjing Medical University (China)

MP07-22 RETROPERITONEAL LAPAROSCOPIC RESECTON OF PRIMARY RETROPERITONEAL TUMOR
Jun Zhou¹, Chaozhao Liang¹, Xiangsheng Zhang¹, Haoqiang Shi¹, Zongyao Hao¹, Yifei Zhang¹, Song Fan¹
¹Department of Urology, The First Affiliated Hospital of Anhui Medical University (China)

MP07-23 RETROPERITONEOSCOPIC NEPHROURETERECTOMY OF DUPLEX KIDNEY (REPORT OF 8 CASES)
Jun Zhou¹, Chaozhao Liang¹, Yuanping Ye¹, Xiansheng Zhang¹, Haoqiang Shi¹, Zongyao Hao¹, Yifei Zhang¹, Song Fan¹
¹the First Affiliated Hospital of Anhui Medical University (China)

MP07-24 THE TREATMENT OF NEPHROGENIC CHYLURIA IN RETROPERITONEOSCOPIC PERINEPHRIC LYMPHATIC LIGATION
Jun Zhou¹, Chaozhao Liang¹, Yuanping Ye¹, Xiansheng Zhang¹, Haoqiang Shi¹, Zongyao Hao¹, Yifei Zhang¹, Song Fan¹
¹the First Affiliated Hospital of Anhui Medical University (China)

MP07-25 COMPARISON OF CONVENTIONAL LAPAROSCOPIC AND HAND-ASSISTED LAPAROSCOPIC DONOR NEPHRECTOMY BY A SINGLE SURGEON
Dalsan You¹, Chunwoo Lee¹, Duck Jong Han¹, In Gab Jeong¹, Bumsik Hong¹
¹Asan Medical Center (South Korea)

MP07-26 LOCALLY ADVANCED RENAL CELL CARCINOMA TREATED BY PRESURGICAL TARGETED THERAPY AND LAPAROSCOPIC RADICAL NEPHRECTOMY–TWO CASE REPORTS.
Hiroshi Kameoka¹, Hiroshi Nitta¹, Yuich Sato², Masao Kataoka¹, Yoshiyuki Kojima¹
¹Hoshi General Hospital (Japan)
²Medical University of Fukushima (Japan)

MP07-27 LAPAROSCOPIC RADICAL ADRENLECTOMY FOR MALIGNANCY IN 14 PATIENTS
Bakhman Guliev¹, Boris Komyakov¹, Dmitriy Semenov¹
¹Mechnikov’s Medical University (Russia)
²City Oncology Hospital (Russia)

MP07-28 LAPAROSCOPIC-ASSISTED URETEROUREROSTOMY FOR DUPLICATION ANOMALIES IN CHILDREN
Patricio Gargollo¹, Gwen Grimsby¹,², Zahra Merchant², Micah Jacobs¹,²
¹Children’s Medical Center (United States)
²University of Texas Southwestern Medical Center (United States)
³Texas Children’s Hospital/Baylor College of Medicine (United States)
MP07-29 UNILATERAL ADRENALECTOMY FOLLOWED BY CONTRALATERAL LAPAROSCOPIC PARTIAL ADRENALECTOMY FOR MEN 2A: A REPORT OF TWO CASES
Yoshiyuki Miyaji1, Hiroyasu Takasaki1, Seietsu Kin1, Shin Ohi1, Kazuhiko Fukumoto1, Shohei Tsukimori1, Mikako Kaifu1, Ryoei Harai, Tomohiro Fujii1, Yoshimasa Jo1, Atsushi Nagai1, Tomaatsu Mune2
1Department of Urology, Kawasaki Medical School (Japan) 2Department of Endocrinology, Kawasaki Medical School (Japan)

MP07-30 LAPAROSCOPIC ADRENALECTOMY: 15-YEARS EXPERIENCES OF A SINGLE SURGEON IN KOREA
Minyong Kang1, Chang Wook Jeong1, Ja Hyeon Ka1, Cheol Kwak1, Hyeon Hoe Kim1
1Seoul National University Hospital (South Korea)

MP07-31 PURE LAPAROSCOPIC LIVE DONOR NEPHRECTOMY WITH FLANK INCISION HAS COSMETIC BENEFIT COMPARED WITH HAND-ASSISTED TECHNIQUE
Hye Jin Byun1, Chae-Han Jeon1, Wonho Jung1, Ji Yong Ha1, Choal Hee Park1, Chun Il Kim1, Byung Hoon Kim1
1Dongsan Medical Center, Keimyung University School of Medicine (South Korea)

Thursday, September 4
Moderated Poster Session (MP08) 03:45 pm–05:45 pm
Robotic Surgery Lower Tract
Room: RM 101 C
Moderator: Rodrigo Frota, Thomas Y. Hsueh, Soodong Kim, Yoshiyuki Kojima

MP08-01 IS TUMOR UPGRADING AND/OR UPSTAGING SIGNIFICANT FOR PATIENTS WITH CLINICAL LOW RISK PROSTATE CANCER?
Thomas E. Ahlering1, Blanca Morales1, Douglas Skarecky2, Kara N Babaian1
1University of California Irvine (United States)

MP08-02 NEW INSIGHT INTO POST-ROBOTIC PROSTATECTOMY BLADDER NECK CONTRACTION: THE ROLE OF EXTRUDED HEM-O-LOCK CLIPS
Sanjay Razdan1, Shirin Razdan2
1Herbert Wertheim FIU College of Medicine (United States) 2University of Miami (United States)

MP08-03 COMPARATIVE ANALYSIS OF OVER 100 MINIMALLY INVASIVE URETERONEOCYSTOTOMIES
Sammy Elsamra1, Bradley Garden1, David Leavitt2, Manaf Alom1, Louis Kavoussi1, Lee Richstone1
1Smith Institute for Urology (United States)

MP08-04 EVALUATION OF SUBJECTIVE ASSESSMENT OF NERVE-SPARING QUALITY ON POSTOPERATIVE ERECTILE FUNCTION IN PATIENTS UNDERGOING ROBOT-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY
Samuel Aly1,2, Jordan Hernandez1,2, Christopher Wright1,2, Leonard Glickman1, Ravi Munver1,2,3
1Hackensack University Medical Center (United States) 2Rutgers-New Jersey Medical School (United States) 3John Theurer Cancer Center (United States)

MP08-05 SOLifenacIN succinate versus placebo on Urinary Continence after robotic prostatectomy: effect of dose escalation
David Alahda1, Fernando Bianco2, Laurence Belkoff3, Brian Miles4, James Peabody5, Wizhong He6, Jason Brandt6, Gabriel Haas6, Thomas Ahlering7
1Associated Medical Professionals of NY, PLLC (United States) 2Columbia University (United States) 3Philadelphia College of Osteopathic Medicine (United States) 4Baylor College of Medicine (United States) 5Henry Ford Institute (United States) 6Astellas (United States) 7University of California, Irvine (United States)

MP08-06 PRELIMINARY EXPERIENCE OF ROBOTIC ASSISTED RADICAL CYSTECTOMY WITH TOTAL INTRACORPOREAL URINARY DIVERSION IN VGHTC, TAIWAN
Cheng-Kuang Yang1, Yen-Chuan Ou1, Chi-Feng Huang1
1Veterans General Hospital Taichung (Taiwan)

MP08-07 THE IMPACT OF ANATOMIC EXTENT OF PELVIC LYMPH NODE DISSECTION ON SEXUAL FUNCTION RECOVERY AFTER NERVE-SPARING ROBOT-ASSISTED LAPAROSCOPIC PROSTATECTOMY
Min Soo Choo1, Jun Hyun Han1, Seong Ho Lee1, Cheol Kwak1, Hyeon Hoe Kim1
1Seoul National University Hospital (South Korea) 2Seoul National University Hospital (South Korea)
MP08-08 THE EFFICACY AND SAFETY OF TADALAFIL 5MG ONCE DAILY IN THE TREATMENT OF ERECTILE DYSFUNCTION AFTER ROBOT-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY: 1 YEAR FOLLOW-UP
Soodong Kim1, Gyung Tak Sung1
1Dong-A University Hospital (South Korea)

MP08-09 A WELL-DESIGNED TRAINING PROGRAM: THE REPORT OF INITIAL 100 CASES OF ROBOTIC PROSTATECTOMY IN RIO DE JANEIRO
Raphael Rocha1, Kenneth Palmer2, Gilberto Buu1, Rogerio Mattos1, Rodrigo Frota1, Mauricio Rubinstein1, Vipal Patel1
1Hospital Samaritano (Brazil) 2Global Robotics Institute (United States)

MP08-10 ANALYSIS OF PROSTATE CANCER PATIENTS WITH INVOLVEMENT OF PROSTATIC ANTERIOR FAT PAD
Wei-Chun Weng1, Min-Che Tung1, Yen-Chuan Ou2
1Tungs' Taichung MetroHarbor Hospital (Taiwan) 2Taichung Veterans General Hospital (Taiwan)

MP08-11 OPEN VERSUS TOTALLY INTRACORPOREAL ROBOT-ASSISTED RADICAL CYSTECTOMY, BILATERAL EXTENDED PELVIC LYMPH NODE DISSECTION AND STUDY URINARY DIVERSION FOR BLADDER CANCER
Mevlana Derya Balbay3, Abdullah Erdem Canda1, Bahri Gok1, Ziya Akbulut1, Serkan Altinova2, Ali Fuat Atmaca1
1Yildirim Beyazit University, School of Medicine, Ankara Ataturk Training and Research Hospital, Department of Urology (Turkey) 2Ankara Ataturk Training and Research Hospital, Department of Urology (Turkey) 3Memorial Sisli Hospital, Department of Urology (Turkey)

MP08-12 ROBOTIC ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY: 190 GRAM WEIGHTED CANCER PROSTATE
Serdar Yalcin1, I. Yasar Ozgok1
1Department of Urology, Gulhane Military Medical Academy (Turkey)

MP08-13 EARLY DISCHARGE FOLLOWING ROBOT ASSISTED RADICAL PROSTATECTOMY: AN ANALYSIS FROM THE NATIONAL SURGICAL QUALITY IMPROVEMENT PROJECT (ACS-NSQIP)
Aaron Weinberg1, Solomon Woldu1, Timothy Wein2, Christopher Deibert1, Ruslan Korets1, Ketan Badani1
1Department of Urology, Columbia University College of Physicians and Surgeons (United States) 2Keck School of Medicine of the University of Southern California (United States) 3Mount Sinai Medical Center (United States)

MP08-14 ROBOTIC-ASSISTED TECHNIQUE FOR BOARI FLAP URETERAL REIMPLANTATION: IS THE ROBOTIC-ASSISTANCE BENEFICIAL?
Panagiotis Kallidonis1,2, Jens-Uwe Stolzenburg2, Minh Do3, Roman Ganzner3, Anja Dietel2, Iason Kyriazis1, Marinos Vasillas1, Vasilis Panagopoulos1, Mehmet Ozsoy3, Evangelos Liatiskos1,2
1University of Patras (Greece) 2University of Leipzig (Germany) 3Medical University of Vienna (Austria)

MP08-15 EXTRAPERITONEAL APPROACH FOR ROBOT-ASSISTED SIMPLE PROSTATECTOMY
Panagiotis Kallidonis1,2, Iason Kyriazis1, Minh Do3, Anja Dietel2, Jens-Uwe Stolzenburg2, Marinos Vasillas1, Vasilis Panagopoulos1, Mehmet Ozsoy3, Evangelos Liatiskos1,2
1University of Patras (Greece) 2University of Leipzig (Germany) 3Medical University of Vienna (Austria)

MP08-16 ONCOLOGICAL OUTCOMES AFTER RADICAL PROSTATECTOMY FOR HIGH RISK PROSTATE CANCER
Peter Ka-Fung Chi1, Kim W.M. Lee1, Simon S.M. Hou1, Chi-Fai Ng1
1Division of Urology, Department of Surgery, Prince of Wales Hospital, The Chinese University of Hong Kong (Hong Kong)

MP08-17 PSA RECURRENCE IN PATIENTS TREATED WITH ROBOT ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY AND EXTENDED PELVIC LYMPH NODE DISSECTION
Mehmet Selcuk Keskin1, Ilter Tufek1, Burak Argun2, Hakan Ozeri2, Ali Riza Kural1
1Acibadem University (Turkey) 2Acibadem Maslak Hospital (Turkey)

MP08-18 UTILIZATION AND TIMING OF BLOOD TRANSFUSIONS FOLLOWING OPEN AND ROBOT ASSISTED RADICAL PROSTATECTOMY
Ruslan Korets3, Aaron C. Weinberg1, Blake D. Alberts1, Solomon L. Woldu1, Mark J. Mann1, Ketan K. Badani2
1Columbia University Medical Center (United States) 2Mount Sinai Medical Center (United States)

MP08-19 TRANSITIONING TO ROBOTIC ASSISTED LAPAROSCOPIC PROSTATECTOMY (RALP): AN ANALYSIS OF TWO SURGEONS’ EXPERIENCE AND LEARNING CURVES
David Wetheralla1, Nathan Papa1, Yee Chan1, Greg Jack1, David Webb1, Lawrence Harewood2, Nathan Lawrentschak1, Damien Bolton1
1Austin Hospital Department of Surgery, University of Melbourne Department of Surgery (Australia) 2Epworth Eastern Hospital Box Hill (Australia)
MP08-20 EFFECT OF SINGLE-STEP POSTERIOR RECONSTRUCTION METHOD ON RECOVERY OF CONTINENCE AFTER ROBOT-ASSISTED LAPAROSCOPIC PROSTATECTOMY: RESULTS FROM A PROSPECTIVE, SINGLE-BLIND, RANDOMIZED CONTROLLED
Chang Wook Jeong1,2, Jung Keun Lee2,3, Hyung Suk Kim1,2, Jong Jin Oh1,2, Sangchul Lee1,2, Seong Jeong1,2, Sung Kye Hong1,2, Seok-So So Byun1,2, Sang Eun Lee1,2
1Seoul National University Hospital (South Korea)
2Seoul National University Bundang Hospital (South Korea)
3College of Medicine, Seoul National University (South Korea)

MP08-21 PREDICTOR FOR SUFFICIENT ERECTION WITH PHOSPHODIESTERASE-TYPE 5 INHIBITOR FOLLOWING ROBOT ASSISTED RADICAL PROSTATECTOMY
Shin-ichi Hisasue1, Toshiyuki China1, Kosuke Kitamura2, Masato Shirai1, Amr Abdelhamed Ali1, Fumitaka Shimizu1, Hisamitsu Ide2, Satoru Muto2, Raizo Yamaguchi2, Yoshiaki Wakamoto3, Shigeo Horie1
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MP08-22 WHAT SHOULD WE DO IF POSITIVE SURGICAL MARGINS AFTER ROBOTIC-ASSISTED RADICAL PROSTATECTOMY
Chung-Yi Liu1, Cheng-Keng Chuang1, Ying-Hsu Chang1, Kai-Jie Yu1, Po-Hung Lin1, See-Tong Pang1
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MP08-23 OBTURATOR NERVE INJURY IN ROBOTIC-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY: EXPERIENCE FOR PREVENTION AND MANAGEMENT IN RARE COMPLICATION
Che-Jui Yang1, Yen-chuan Ou1, Chun-Kuang Yang1
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MP08-24 ROBOT-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY: ONCOLOGIC AND FUNCTIONAL OUTCOMES OF INITIAL 97 CASES IN THE LOW VOLUME INSTITUTE
Shinya Uehara1, Takashi Yoshika2, Takahiro Shimagu1, Wataru Murao1, Koji Fujio1, Toyohiko Watanabe2, Koi Fujio1, Takashiki Saita1, Hirokatsu Ikuchi1, Yusuoste Nakamishi1
1Abiko Toho Hospital (Japan)
2Okayama University (Japan)
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MP08-25 EVALUATING PATIENTS ELIGIBLE FOR ACTIVE SURVEILLANCE WHO CHOSE TO UNDERGO PROSTATECTOMY: THE DIFFERENCES BETWEEN PROSTATE CANCER FEATURES ON BIOPSY AND FINAL PATHOLOGIC REPORT
Elton Llukani1, Andrew Lightfoot1, Benjamin F. Katz1, Ilir Agalliu4, Robert Kindle1, Blake Moore2, Ziloo Lee2, Kelly Monahan1, Alice McGill1, Daniel Eun1, David Lee1
1University of Pennsylvania School of Medicine (United States)
2Temple University School of Medicine (United States)
3Albert Einstein College of Medicine (United States)

MP08-26 LOW LEVELS OF TESTOSTERONE IN MIDDLE AGED MALES (AGE 45-64) MAY HAVE AN IMPACT ON PATHOLOGIC FEATURES OF PROSTATE CANCER
Elton Llukani1, Andrew Lightfoot1, Ilir Agalliu4, Benjamin F. Katz1, Martin Kathrins1, Blake Moore2, Ziloo Lee2, Kelly Monahan1, Alice McGill1, Daniel Eun1, David Lee1
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MP08-27 ROBOTIC ASSISTED RADICAL CYSTECTOMY: INITIAL EXPERIENCE IN 9 CASES AND PROBLEMS WE MET
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1China Medical University Hospital, Urology department (Taiwan)
2Tainan Municipal An-Nan Hospital-China Medical University (Taiwan)

MP08-28 IT'S THERE ANY BENEFIT OF ROBOTIC ASSISTED RADICAL PROSTATECTOMY IN METASTATIC PROSTATE CANCER? A SINGLE CENTER CASE SERIES
Shen-Chun Hung1, Yeu-Chuan Ou1, Cheng-Kuang Yang1
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MP08-29 CONTINENCE OUTCOMES FOLLOWING ROBOTIC RADICAL PROSTATECTOMY: OUR EXPERIENCE FROM 150 CONSECUTIVE INDIAN PATIENTS
Narmada P Gupta1, Rajiv Yadav1, Åkpo Emmanuel2
1Institute of Kidney & Urology, Medanta-The Medicity (India)
MP08-30 DELAYED DORSAL VEIN COMPLEX LIGATION TECHNIQUE DURING ROBOTIC ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY CAN SHORTEN OPERATIVE TIME COMPARED WITH STANDARD LIGATION TECHNIQUE
Norikata Takada1, Hiroshi Harada2, Ikumi Mayama3, Toshiki Koyama3, Akira Kashiwagi3, Akira Kumagai3
1Teine Keijinkai Hospital (Japan)
2Sapporo City General Hospital (Japan)

MP08-31 ROBOTIC PROSTATE MODEL EVALUATION OF ENDOSCOPIC RETRIEVAL BAGS
Giovanni Greaves1, Sue-Jean Yu1, Andrew J. Lightfoot1, Benjamin F. Katz1, David I. Lee1
1University of Pennsylvania (United States)

Thursday, September 4 Moderated Poster Session (MP09) 03:45 pm–05:45 pm
Endourology: PCNL 1
Room: RM 101 D
Moderator: Hiroomi Kanayama, Jen-Tai Lin, Ömer Tuncay

MP09-01 TO SEE IS TO BELIEVE, DIRECT DILATATION OF FASCIA WITH ENDOSCOPIC STANDARD-TRACT CREATION IN PERCUTANEOUS NEPHROLITHOTOMY FOR RENAL STONE IN OUR HOSPITAL EXPERIENCE
Yu-Wei Lai1,2, Thomas Y. Hsueh1,2, Yi-Chun Chu1,2, Andy C. Huang1,2, Shiou-Sheng Chen1,2, Allen W. Chiu1,2
1Divisions of Urology, Department of Surgery (Taiwan)
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MP09-02 SINGLE-TRACT, LOWER POLE ACCESS TECHNIQUE TO MANAGE STAGHORN CALCULI PROVIDES SUPERIOR PERCUTANEOUS NEPHROLITHOTOMY OPERATIVE OUTCOMES
Michael B. Rothberg1, Fotima Asgarova1, Edan Y. Shapiro1, Piruz Montamedinia1, Ruslan Korets1, Ketan K. Badani1, Mantu Gupta1
1Columbia University Medical Center (United States)

MP09-03 RANDOMIZED, DOUBLE-BLIND AND SHAM-CONTROLLED PILOT STUDY OF ACUPUNCTURE FOR THE TREATMENT OF POST-OPERATIVE PAIN FOLLOWING PERCUTANEOUS NEPHROLITHOTOMY
Fotima Asgarova1, Ruslan Korets1, Jillian Capodice1, Richard Raker1, Mantu Gupta2
1Columbia University Medical Center (United States)
2Mount Sinai Medical Center (United States)

MP09-04 WHAT DETERMINES STONE DURILITY DURING PCNL: A QUALITATIVE AND QUANTITATIVE ANALYSIS
Fotima Asgarova1, Rao Mandalapu1, Ruslan Korets2, Mantu Gupta1
1Columbia University Medical Center (United States)
2Mount Sinai Medical Center (United States)

MP09-05 THE MODERN ERA STRUVITE STONE: PATTERNS OF URINARY INFECTION AND COLONIZATION
Adam De Fazio1, Piruz Montamedinia1, Ruslan Korets2, Michael Rothberg1, Mantu Gupta1
1Department of Urology, Columbia University Medical Center (United States)

MP09-06 FEASIBILITY OF PERCUTANEOUS NEPHROLITHOTOMY IN PATIENTS WITH HEPATIC INSUFFICIENCY
Carrie Stewart1, Julie Wang1, Michael Maddox1, Jonathan Silberstein1, Benjamin Lee2, Raju Thomas1
1University of Michigan Medical School (United States)
2Harvard Medical School (United States)

MP09-07 STATIN USE AND RATES OF SEPSIS FOLLOWING PERCUTANEOUS NEPHROLITHOTOMY
Abdulrahman Alrawaily1, Brian Eisner2, Maggie Bierlein1, Khurshid Ghani1, J Stuart Wolf1, Brent Hollenbeck1, John Hollingsworth1
1University of Michigan Medical School (United States)
2Harvard Medical School (United States)

MP09-08 COMPARISON OF STERILE WATER AND NORMAL SALINE AS IRRIGATING FLUID DURING IN PERCUTANEOUS NEPHROLITHOTOMY (PCNL)
Sadrollah Mehrabi1
1Social Determinant of Health Research center, Yasuj University of Medical Sciences, Yasuj (Iran)

MP09-09 CHANGING STONE COMPOSITION IN PATIENTS UNDERGOING PERCUTANEOUS NEPHROLITHOTOMY
Kyle Wood1, Marc Colaco1, Ilya Gorbachinsky1, Majid Mirzazadeh1, Jayadev Metta1, Dean Assimos2, Jorge Gutierrez-Aceves1
1Wake Forest Baptist Health (United States)
2University of Alabama at Birmingham School of Medicine (United States)

MP09-10 THE CHARACTERIZATION OF STONE COMPOSITION IN RECURRENT STONE-FORMERS UNDERGOING PERCUTANEOUS NEPHROLITHOTOMY
Kyle Wood1, Marc Colaco1, Ilya Gorbachinsky1, Jayadev Metta1, Majid Mirzazadeh1, Dean Assimos2, Jorge Gutierrez-Aceves1
1Wake Forest Baptist Health (United States)
MP09-11 PREDICTORS OF NARCOTIC USE AFTER PERCUTANEOUS NEPHROSTOLITHOTOMY
Daniel Faaborg¹, Michelle Lightfoot¹, Eric Bjorn Harboldt¹, Muhammad Alsyouf¹, Roger Li¹, Brandon Peplinski¹, Nazih Khater¹, Javier L. Arenas², D. Duane Baldwin¹
¹Loma Linda University Medical Center (United States)

MP09-12 INTRAOPERATIVE NOISE POLLUTION AND ITS EFFECT UPON COMMUNICATION
Nazih Khater¹, Hayley Mowery¹, Muhammad Alsyouf¹, Roger Li¹, Michelle Lightfoot¹, David Tryon¹, Herbert Hodgson¹, Carol Conceicao¹, Gaudencio Olgin¹, Daniel Faaborg¹, Javier L. Arenas², D. Duane Baldwin¹
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MP09-13 THE SEVERE HEMORRHAGIC COMPLICATIONS AFTER PERCUTANEOUS NEPHROLITHOTOMY
Yusuf Ozelulerden¹, Ahmet Baki Yagci², Fahri Tercan³, Ali Erdin Zamrutbas³, Omer Levent Tuncay³
¹Pamukkale University School of Medicine Department of Urology (Turkey)
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MP09-14 IMPLEMENTATION OF ULTRA-MINI PERCUTANEOUS NEPHROLITHOTOMY FOR TREATMENT OF 2–3CM KIDNEY STONE: A PRELIMINARY REPORT
Kewei Xu¹, Arvind Kumar Shah¹, Jian Huang¹, Liang Kuan Bi¹, Hao Liu¹
¹Sun Yat-sen Memorial Hospital, Sun Yat-sen University (China)

MP09-15 SOLO SONOGRAPHICALLY GUIDED PCNL
Hamid Pakmanesh¹,², Akbar Nouralizadeh¹,², Mohammad Ayanifar², Mohammad Hosein Soltani¹,²,³, Abas Basiri¹,²,³, Ali Tabibi¹,²,³, Farzaneh Sharifiaghdas²,³, Seyed Amirmohsen Zaeèa²,³, Naser Shakhssalim²,³, Mohammadhadi Radfar¹,²,³
¹Shahid Labbafinejad Medical Center (Iran)
²Shahid Beheshti University of Medical Sciences (SBMU) (Iran)
³Urology And Nephrology Research Center(UNRC) (Iran)

MP09-16 ANTIMICROBIAL UTILIZATION PRIOR TO ENDOUROLOGICAL SURGERY FOR UROLITHIASIS: ENDOUROLOGICAL SOCIETY SURVEY RESULTS
Ramy Youssel¹,², Richard Shin³, Fernando Cabrera¹, Adam Kaplan¹, Andreas Neiss¹, Charles Scales¹,⁶, Roger Sur¹, Anika Ackerman¹, Michael Ferrandino³, Brien Eitner⁴, Glenn Freminger⁴, Michael Lipkin¹
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³UC San Diego Health System (United States)
⁴University of California, Irvine (United States)
⁵Universitätsmedizin Mainz (Germany)
⁶Duke Clinical Research Institute (United States)

MP09-17 DIRECT ENDOSCOPIC VISUALIZATION COMBINED WITH ULTRASOUND GUIDED ACCESS DURING PERCUTANEOUS NEPHROLITHOTOMY
Muhammad Alsyouf¹, Roger Li¹, Michelle Lightfoot¹, Edda Mia⁷, Albert Lee¹, Jason Smith¹, Evan Lehrman¹, Kristene Myklak¹, Javier Arenas¹, Gaudencio Olgin¹, Nazih Khater¹, D. Duane Baldwin¹
¹Loma Linda University Medical Center (United States)

MP09-18 AN EVALUATION OF THE LITHOCLAST MASTER COMBINED PNEUMATIC/ULTRASONIC PROBE IN THE PERCUTANEOUS THERAPY OF STAGHORN KIDNEY STONES
Razvan Bardan¹, Mirece Botoca¹, Petra Boiborean², Adrian Muresan³, Livius Daminescu⁴, Alin Cumpasan⁵, Radu Minciu⁶, Viorel Bucuras⁷
¹Victor Babes University of Medicine and Pharmacy Timisoara (Romania)
²Clinical Emergency Hospital Timisoara (Romania)

MP09-19 DECREASED RENAL FUNCTION IN PATIENTS UNDERGOING MULTI-ACCESS PERCUTANEOUS NEPHROLITHOTOMY
Ilya Gorbachinsky¹, Kyle Wood¹, Marc Calaco¹, Jayadev Mettu¹, Dean Assimos², Jorge Gutierrez-Aceves³
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²University of Alabama at Birmingham School of Medicine (United States)

MP09-20 PERCUTANEOUS NEPHROLITHOTOMY IN KIDNEYS WITH A FUSION ANOMALY: A SINGLE CENTER EXPERIENCE
I. Atilla Aridogan¹, Volkan Izol¹, Mutlu Deger¹, Zühtü Tansu², Şinan Zeren¹
¹Department of Urology, Faculty of Medicine, University of Çukurova (Turkey)
²University of Alabama at Birmingham School of Medicine (United States)

MP09-21 RESULTS OF THE SEVENTEEN YEARS OF EXPERIENCE IN PERCUTANEOUS NEPHROLITHOTOMY IN PEDIATRIC PATIENTS
Volkan Izol¹, I. Atilla Aridogan¹, Fatih Gokalp¹, Yıldırım Bayazı¹, Nihat Satar¹
¹University of Çukurova, Department of Urology (Turkey)

MP09-22 SEVENTEEN YEARS OF EXPERIENCE IN PERCUTANEOUS NEPHROLITHOTOMY FROM A SINGLE CENTER
I. Atilla Aridogan¹, Volkan Izol¹, Yıldırım Bayazı¹, Nihat Satar¹, Zühtü Tansu¹,
MP09-23 TRACT CLOSURE WITH GELATIN-THROMBIN MATRIX AFTER TUBELESS MINI-PERCUTANEOUS NEPHROLITHOTOMY: IS IT NECESSARY?
Jan Peter Jessen¹, Patrick Honeck¹, Gunnar Wendi-Nordahl¹, Thomas Knoll¹
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MP09-24 INFLUENCE OF PELVICALICEAL ANATOMY ON MINI-PERCUTANEOUS NEPHROLITHOTOMY
Jan Peter Jessen¹, Patrick Honeck¹, Thomas Knoll¹, Gunnar Wendi-Nordahl¹
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MP09-25 ULTRA MINI PCNL: A MINIMALLY INVASIVE PERCUANEOUS APPROACH
Madhu S Agrawal¹,², Ketan Agarwal³, Manoj Sharma², Anurag Gupta²
¹S N Medical College (India) ²Global Rainbow Hospital (India) ³Liverpool Medical School (United Kingdom)

MP09-26 A RANDOMIZED TRIAL OF TWO DIFFERENT OPIOIDS FOR PAIN MANAGEMENT AFTER PERCUTANEOUS NEPHROLITHOTOMY
Palle Jørn Sloth Østerg¹, Anne E. Olesen², Astrid Mohr Drewes³, Katja Venborg Pedersen³
¹Urological Research Center, Lillebaelt Hospital, University of Southern Denmark (Denmark) ²Mech-Sense, Aalborg University Hospital (Denmark)

MP09-27 PERCUTANEOUS NEPHROLITHOTOMY IN PEDIATRIC PATIENTS WITH SOLITARY KIDNEY
Volkan Ito¹, I. Atilla Aridogan¹, Fatih Gokalp¹, Yıldırım Bayazıt¹, Nihat Satar¹
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MP09-28 CONTEMPORARY PRACTICE PATTERNS ASSOCIATED WITH PERCUTANEOUS NEPHROLITHOTOMY AMONG CERTIFYING UROLOGISTS
Jeffrey K. Mullins¹, Gautam Jayram¹, Brian R. Matlaga¹
¹John Hopkins Hospitals (United States)

MP09-29 S.T.O.N.E. NEPHROLITHOMETRY IS ASSOCIATED WITH COMPLICATIONS AFTER PERCUTANEOUS NEPHROLITHOTOMY: A MULTI-INSTITUTIONAL ANALYSIS
Zhamshid Okhunov¹, Vincent Bird², Arash Akhavein², Daniel M. Moreira², Arvin K. George², Sammy Elsamra², Brian Duty⁶, Michael del Junco¹, Fotima K. Asgarova², Michael Rothe⁵, Mantu Gupta¹, Chad Tracy⁸, Mark R. Newton⁸, Kevan Stemberg⁴, Benjamin King⁴, Edan Shapiro, Jorge Moreno⁹, Juan Carlos Rosales¹³, Arvin Srivinvasan⁸, Yasser Nourredin, Sero Andonian¹⁰, Nazih Khater¹², Duane Baldwin¹², Khurshid Ghani¹¹, Maksim Shlykov¹¹, Brian Shinsky¹⁴, Justin Friedlander¹¹, Steven Nakada¹¹, Stuart Wolf Jr¹¹, Arthur D. Smith¹⁵, Jaime Landman¹, Zeph Okeke¹
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MP09-30 DEGREE OF HYDRONEPHROSIS DOES NOT AFFECT PERIOPERATIVE OUTCOMES OF PCNL
Wai Loon Yam¹, Sey Kiat Lim¹, Foo Cheong Ng¹, Kok Kit Ng¹
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MP10-01 A COMPLETE ENDOSCOPIC TREATMENT AT FIRST URETEROSCOPY REDUCES THE RISK OF UNDERGOING A RADICAL NEPHROURETERECTOMY OVER TIME IN PATIENTS DIAGNOSED WITH UPPER TRACT UROTHELIAL CARCINOMA (UTUC)
Luca Villa1, Jonathan Cloutier1, Julien Letendre1, Steeve Doizi1, Achilles Ploumidis2, Olivier Traxer3
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2Department of Urology, Athens Medical Center Hospital (Greece)

MP10-02 A SHORT LEARNING CURVE OF ROBOTIC ASISTED FLEXIBLE URETEROSCOPY MAY HELP THE TRAINEES
Murat Binbay1, Ilker Gokce2, Zafer Tokatli3, Oner O. Cakir4, Omer S. Kabakci4, Remzi Saglam2, Glenn M. Preminger6
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2Ankara University Medical School (Turkey)
3Uromed Urology Group (Turkey)
4Oncology Training and Research Hospital (Turkey)
5Hacettepe Uni. Dept. of Bioengineering (Turkey)
6Duke University Hospital (United States)

MP10-03 THE INVESTIGATION ABOUT THE CAUSE OF THE FAILURE DURING URETEROSCOPIC LITHOTRIPSY FOR THE UPPER URETER STONES
Ho Won Lee1, Jung Hoon Cho1, Sang Jin Kim2, Won Sik Ham3, Yong Tae Kim1, Tchun Yong Lee1, Sung Yul Park1
1Hanyang University (South Korea)
2Myongji Hospital (South Korea)
3Yonsei University (South Korea)

MP10-04 SAFETY AND EFFECTIVITY OF ROBOFLEX AVICENNA, THE NEW ROBOT FOR FLEXIBLE URETEROSCOPY
Jens Rassweiler1, Remzi Saglam2, Olivier Traxer3, Glenn Preminger4, David Hoenig1, Zafer Tokatli2, Abdullah Armagan8, Kemal Sarica1, Ahmet Yaser Muslumanoglu6, Arthur Smith5
1Heidelberg University SLK Kliniken (Germany)
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4Duke University (United States)
5Smith’s Urology Clinic (United States)
6Bagcilar Training Hospital (Turkey)
7Kartal Training Hospital (Turkey)
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MP10-05 THE CLINIC EXPERIENCE OF SEPTIC SHOCK AFTER URETEROSCOPIC LITHOTRIPSY IN THE TREATMENT OF URETERAL CACULI
Qi Hui Chen1
1The First Hospital of Jilin University (China)

MP10-06 CLINICAL EXPERIENCE OF URETEROSCOPIC LITHOTRIPSY WITH HOLMIUM LASER IN TREATING DISTAL URETERAL CACULI
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MP10-07 TRANSCORNETRAL URETEROSCOPIC CATHETERIZATION IN THE TREATMENT FOR ACUTE URETHRAL INJURY
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MP10-08 DIFFERENT OUTCOMES OF UVENTATM METALLIC STENT FOR BENIGN AND MALIGNANT URETERAL OBSTRUCTIONS
Jung Jun Kim1, Hyeon Jun Jung2, Hyeon Hwan Sung1, Byong Chang Jeong3, Seong Soo Jeon4, Seong Il Seo5, Seol Ho Choo2, Hyung Joon Kim1, Kyung Jin Chung2, Deok Hyun Han1
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MP10-09 ANALYSIS OF THERAPEUTIC EFFECTS BETWEEN RETROPERITONEAL LAPAROSCOPIC URETEROLITHOTOMY AND URETEROSCOPIC LITHOTRIPSY FOR UPPER URETERAL CALCIULI
Qi Hui Chen1, Xiao Qing Wang1, Zhi Hua Lu1, Yuan Yuan Hao1, Yuan Yuan Hao1
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MP10-10 RETROGRADE INTRARENAL SURGERY WITH COMBINED SPINAL-EPIDURAL VS. GENERAL ANESTHESIA: A PROSPECTIVE RANDOMIZED CONTROLLED TRIAL
Guohua Zeng1, Zhijian Zhao1, Pengquan Yang1, Weni Qi Wu2, Hongling Chen3, Jian Yuan1, Yongda Liu1
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MP10-11 RETROGRADE INTRARENAL SURGERY: ANALYSIS OF 493 CASES IN A SINGLE INSTITUTION FROM CHINA
Guohua Zeng1, Zhijian Zhao1, Wen Zhong1, Weni Qi Wu2, Hongling Sun3, Jian Yuan1
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MP10-12 THE DIAGNOSTIC ASSESSMENT OF UPPER TRACT UROTHELIAL CARCINOMAS
Stephanie Poo1, Harveer Dev1, James Armitage1, Oliver Wiseman1, Nimish Shah1, Sami Hayek1
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MP10-13 A RARE LONG-TERM COMPLICATION OF PYELOLITOTOMY COMBINED WITH VERY RARE ANOMALY OF URETERY: STONE FORMATION ENCRUSTED ON NON-ABSORBABLE SUTURE AND URETERY CYST
Turgay Ebiloglu1, Sercan Yilmaz1, Engin Kaya1, Ali Garagac2
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MP10-14 PRELIMINARY RESULTS OF AN EARLY SECOND LOOK WITHIN 6-8 WEEKS AFTER A PRIMARY ENDOSCOPIC TREATMENT FOR PATIENTS WITH UPPER TRACT UROTHELIAL CARCINOMA (UTUC)
Luca Villa1, Jonathan Cloutier1, Julien Letendre1, Steeve Doizi1, Achilles Ploumidis1, Olivier Traxer1
1Department of Urology, Tenon Hospital, Pierre and Marie Curie University (France)
2Department of Urology, Athens Medical Center Hospital (Greece)

MP10-15 RISK FACTORS FOR URETERAL STRICTURES FOLLOWING SEMI-RIGID URETEROSCOPIC HOLIUM LITHOTRIPSY: A SINGLE CENTER’S EXPERIENCE IN CHINA
Xiao Qing Wang1, Hong Li Shan1, Yuan Yuan Hao1, Zhi Hua Lu1, Chun Xi Wang1
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MP10-16 USE OF THE HEMOSTATIC MATRIX FLOSEAL® TO MANAGE UPPER URINARY TRACT BLEEDING DURING URETEROSCOPIC SURGERY
Vittorio Imperatore1, Sergio Di Meo1, Roberto Buonopane2, Massimiliano Creta2
1Buon Consiglio Fatebenefratelli Hospital (Italy)

MP10-17 RESULTS OF URETEROSCOPY (URS) FOR PAEDIATRIC STONE DISEASE – OUTCOMES FROM A UNIVERSITY TEACHING HOSPITAL
Edmund Chedgy1, Stephen Griffin1, Jonathan Dyer1, Bhaskar K Somani1
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MP10-18 RIRS FOR STONE SIZE<1CENTIMETER
Amit Bhattu1, Darshan Shah1, Shashikant Mishra1, Jitendra Jagtap1, Arvind Ganpule1, Ravindra Subnis1, Mahesh Desai1
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MP10-19 COMPARISON OF FLEXIBLE URETEROSCOPE AND SEMIRIGID URETEROSCOPE IN TREATING UPPER URETERAL STONES
Gokhan Atis1, Cenk Garbus2, Asf Yildirim3, Bulent Erol4, Metin Culpan4, Ozgur Efiloglu4, Onur Danaciloglu4, Turhan Caskurlu4
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MP10-20 LEARNING CURVE IN RETROGRADE SEMIRIGID URETEROSCOPY
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MP10-21 MANAGEMENT OF URETERAL STRICTURE AFTER URETEROSCOPIC LASER LITHOTRIPSY
Yukimasa Matsusaw1,2, Hiroaki Nishimatsu1, Takamasa Horii1, Yoshimitsu Komemushi1, Takashi Murata1, Shiheiko Inoue1, Yoshihiro Kakizawa1, Yoshikazu Hirano1, Yukio Homma2
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MP10-22 THE REASON ANALYSIS AND COUNTER-MEASURE OF URETEROSCOPIC HOLMIUM: YAG LASER LITHOTRIPSY FAILURE
Yuqing Liu1, Chunlei Xiao1, Jian Lu1, Lulin Ma1
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MP10-23 TREATMENT OF PARAPELVIC CYST BY INTERNAL DRAINAGE TECHNOLOGY USING FLEXIBLE URETEROSCOPE AND HOLMIUM LASER
Yuqing Liu1, Chunlei Xiao1, Jian Lu1, Lulin Ma1
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MP10-24 TWO WIRE SHEATHLESS FIBEROPTIC URETERORENOSCOPY AND DOUBLE PULSE WIDTH LASER: A WINNING DUO FOR SUCCESSFUL COST EFFECTIVE INTRA-RENAL LITHOTRIPSY
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MP10-25 COMPARISON OF EFFICACY OF URETEROSCOPIC LITHOTRIPSY BETWEEN LITHOCLAST AND HOLMIUM LASER IN MANAGEMENT OF UPPER URETER STONE
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MP10-26 CLINICAL OUTCOMES AFTER URETEROSCOPIC LITHOTRIPSY IN PATIENTS WHO INITIALLY PRESENTED WITH UROSEPSIS: MATCHED PAIR COMPARISON TO ELECTIVE URETEROSCOPY
Ramy Youssef1,3, Andreas Neissius2, Zachariah Goldsmith1, Momin Ghaffar1, Matvey Tsivian1, Richard Shin1, Fernando Cabrera1, Adam Kaplan1,2, Michael Ferrandino1, Charles Scales1,4, Glenn Preminger1, Michael Lipkin1
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2Universitätsmedizin Mainz (Germany)
3University of California, Irvine (United States)
4Duke Clinical Research Institute (United States)
**MP10-27** THE FEASIBILITY OF FLEXIBLE URETEROSCOPY WITH HOLMIUM LASER LITHOTRIPSY IN THE TREATMENT OF LARGE UPPER URINARY SYSTEM STONES: A SINGLE CENTER EXPERIENCE

*Derya Balbay*¹, *Erdal Alkan*¹, *Alpaslan Yuksel*², *Ahmet Ozkanli*¹, *Murat Basar*¹, *Oguz Acar*¹

¹Memorial Sisli Hospital, Department of Urology (Turkey)
²Uskudar State Hospital, Department of Urology (Turkey)
³Memorial Sisli Hospital, Department of Anesthesiology (Turkey)

**MP10-28** RIRS IS EQUALLY EFFICIENT IN PATIENTS WITH DIFFERENT BMI SCORES

*Derya Balbay*¹, *Erdal Alkan*¹, *Emre Arpali*¹, *Ahmet Ozkanli*², *Murat Basar*¹, *Oguz Acar*¹

¹Memorial Sisli Hospital, Department of Urology (Turkey)
²Memorial Sisli Hospital, Department of Anesthesiology (Turkey)

**MP10-29** SHOULD RIGID URETEROSCOPE BE USED IN THE TREATMENT OF UNILATERAL PROXIMAL URETERAL STONES IN THE ERA OF FLEXIBLE URETEROSCOPE?

*Derya Balbay*¹, *Erdal Alkan*¹, *Ali Saribacak*², *Ahmet Ozkanli*¹, *Murat Basar*¹, *Oguz Acar*¹

¹Memorial Sisli Hospital, Department of Urology (Turkey)
²Konak Hospital, Department of Urology (Turkey)
³Memorial Sisli Hospital, Department of Anesthesiology (Turkey)

**MP10-30** BALL-TIP HOLMIUM LASER FIBER: IN VITRO STONE COMMUNITION AND FIBER TIP DEGRADATION


¹Division of Urologic Surgery, Duke University (United States)
²Department of Mechanical Engineering and Materials Science, Duke University (United States)
³Department of Urologic Surgery, University of California, Irvine (United States)
⁴Department of Urology, University Medical Center Mainz (Germany)
⁵Duke Clinical Research Institute, Duke University (United States)

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**Friday, September 5**

Moderated Poster Session (MP11) 01:30 pm–03:30 pm

**Basic Research 2**

Room: RM 101 A

**Moderator:** Hsiao-Jen Chung, Akihiro Kawauchi, Chia-Cheng Yu

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**MP11-01** SCREENING AND IDENTIFICATION OF ANTI-SENSE ACCESSIBLE SITES OF THE HUMAN TELOMERASE REVERSE TRANSCRIPTASE GENE IN PROSTATE CANCER CELL LINES

*Fangmin Chen*¹, *Bo Yan*¹, *Jiaqi Shi*¹, *Dengbao Li*², *Deshuai Ren*², *Yu Chen*¹, *Quliang Zhong*¹, *Hao Yang*¹, *Cheng Chen*¹, *Peng Zhang*¹

¹Department of Urology, Affiliated Hospital to Guiyang Medical College, (China)
²Department of Urology, the third affiliated Hospital of QiqiHa'er Medical College (China)

**MP11-02** THE USE OF EXOME ARRAYS TO PREDICT BIOCHEMICAL RECURRENCE AMONG PROSTATE CANCER PATIENTS WHO UNDERWENT RADICAL PROSTATECTOMY

*Jung Keun Lee*¹, *Jong In Choi*¹, *Young Ik Lee*¹, *Hak Min Lee*¹, *Jong In Choi*¹, *Young Ik Lee*¹, *Jung Ki Jo*¹, *Sangchul Lee*¹, *Sung Kyu Hong*¹, *Sung Jin Jeong*¹, *Sang Eun Lee*¹, *Sungroh Yoon*¹, *Seoksoo Byun*¹

¹Department of Urology, Seoul National University Bundang Hospital (South Korea)
²Department of Electrical and Computer Engineering, Seoul National University (South Korea)

**MP11-03** THE USE OF EXOME GENOTYPING TO PREDICT PATHOLOGICAL GLEASON SCORE UPGRADE AFTER RADICAL PROSTATECTOMY IN LOW-RISK PROSTATE CANCER PATIENTS

*Jong Jin Oh*¹, *Ohsung Kwon*¹, *Hak Min Lee*¹, *Jong In Choi*¹, *Young Ik Lee*¹, *Jung Ki Jo*¹, *Sangchul Lee*¹, *Sung Kyu Hong*¹, *Sung Jin Jeong*¹, *Sang Eun Lee*¹, *Sungroh Yoon*¹, *Seoksoo Byun*¹

¹Department of Urology, Seoul National University Bundang Hospital (South Korea)
²Department of Electrical and Computer Engineering, Seoul National University (South Korea)

**MP11-04** PERFUSED BLADDER MODEL FOR SIMULATION OF HEMOSTASIS CONTROL USING HOLMIUM LASER

*Yehudit Kraizer*¹, *Shadie Badaan*², *Moshe Elazar*¹, *Haim Epstein*¹, *Uri Shpolansky*³

¹Lumenis (Israel)
²Rambam Medical Center (Israel)
³Physiometrics (Israel)

**MP11-05** HIGH ENERGY HOLMIUM LASER RETROPULSION – A UNIQUE MODEL

*Haim Epstein*¹, *Arkady Khachaturov*¹, *Idan Shtegelowski*¹

¹Lumenis (Israel)
MP11-06 INFLUENCE OF HIGH ENERGY PER PULSE HOLMIUM LASER PARAMETERS AND APPLIED FIBER DIAMETER ON PHANTOM CALCULI ABLATION
Haim Epshtein, Idan Stshegowski, Arkady Khachaturov
Lumenis (Israel)

MP11-07 A NOVEL GRADIENT BIODEGRADABLE URETERAL STENT IN A PORCINE MODEL
Xiao Qing Wang, Hong Li Shan, Qi Hui Chen, Yuan Yuan Hao, Chun Xi Wang
First Hospital of Jilin University (China)

MP11-08 FLEXIBLE URETEROSCOPY AND LASERTRIPSY (FURSL) FOR PAEDIATRIC RENAL CALCULI: RESULTS FROM A SYSTEMATIC REVIEW
Hiro Ishii, Stephen Griffin, Bhaskar Kumar Somani
University Hospital Southampton NHS Trust (United Kingdom)

MP11-09 ROLE OF SERUM C-REACTIVE PROTEIN IN PREDICTING SPONTANEOUS PASSAGE OF URETERAL STONES
Anil Shrestha
National Academy of Medical Sciences (Nepal)

MP11-10 FACTORS DETERMINING RENAL IMPAIRMENT IN UNILATERAL OBSTRUCTION WITH A NORMAL CONTRALATERAL KIDNEY: A PROSPECTIVE STUDY
Ammar Al Ani, Khalid Al Jalham, Tarek Amin, Ahmad Majzoub, Ahmed Hayati
Hamad Medical Corporation (Qatar)

MP11-11 DRUG-ELUTING BIODEGRADABLE PLA STENT CONTAINING PPAR AGONIST: DRUG RELEASING AND ANTI-INFLAMMATORY PROPERTIES
Taina Isotalo, Erja-Leena Paukkeri, Mari Häimiläinen, Martti Taljärvi, Andres Kotsar, Ilkka Uurto, Teuvo Tammela, Minna Kellomäki, Eeva Moiniainen
Department of Surgery, Paeriajä Central Hospital (Finland)

MP11-12 HYDROXYPROLINE METABOLISM IN MOUSE MODELS OF PRIMARY HYPEROXALURIA
Dean Assimos, Xingsheng Li, John Knight, Ross Holmes
UAB (United States)

MP11-13 ANALYSIS OF A COMMERCIAL KIDNEY STONE PROBIOTIC SUPPLEMENT
Dean G Assimos, Ross P Holmes, John Knight
UAB (United States)

MP11-14 ACTIVATION OF OPIOID MU-2-RECEPTORS TO PROSTATIC RELAXATION BY LOPEROMIDE IN VITRO
Chih-Cheng Lu, Hsien-Hui Chung, Juei-Tang Cheng
Chi Me Medical Center, Liouying (Taiwan)

MP11-15 ARE CURRENT ANTIBIOTIC REGIMES EFFECTIVE AT PREVENTING INFECTION POST TRANSRECTAL ULTRASOUND PROSTATE BIOPSY?
Thomas Smith, Govind Oliver, Mohit Tiwari, Edward Streeter, Benjamin Eddy, Nitin Shrotri
Kent and Canterbury Hospital (United Kingdom)

MP11-16 IMPACTS OF CA9 GENE POLYMORPHISMS ON UROTHELIAL CELL CARCINOMA SUSCEPTIBILITY AND CLINICOPATHOLOGIC CHARACTERISTICS IN TAIWAN
Shian-Shiang Wang, Shun-Fa Yang, Yu-Fan Liau, Yen-Chuan Ou, Chuan-Shu Chen, Jian-Ri Li, Kun-Yuan Chiu, Chung-Kuang Yang, Hao-Chung Ho
Division of Urology, Department of Surgery, Taichung Veterans General Hospital (Taiwan)

MP11-17 PATHOLOGICAL OUTCOMES IN MEN WITH PROSTATE CANCER WHO ARE ELIGIBLE FOR ACTIVE SURVEILLANCE
Cheng-Che Chen, Yen-Chuan Ou, Cheng-Kuang Yang, Chen-Li Cheng, Hao-Chung Ho, Kun-Yuan Chiu, Chung-Kuang Su, Shian-Shiang Wang, Chuan-Shu Chen, Jian-Ri Lee
Division of Urology, Department of Surgery, Taichung Veterans General Hospital (Taiwan)

MP11-18 NOVEL MULTI-SENSOR UMBRELLA PROBE FOR A MORE ACCURATE TEMPERATURE MONITORING DURING LOCOREGIONAL CHEMO-HYPERTHERMIA IN BLADDER CANCER
Matias Westendarp, Akke Bakker, Hans Creze, Debbie Geijzen, Gerben Schooneveldt, Jean de la Rosette, Theo de Reijke
Amsterdam Medical Center (Netherlands)

MP11-19 MULTIPLE RENAL ARTERIES WITH AN ASCENDING UPWARD RENAL VEIN OF THE RIGHT KIDNEY - A CASE REPORT
Saad Alshibli
International Islamic University Malaysia (Malaysia)
MP11-20 NECESSITY AND COMPLIANCE WITH VENOUS THROMBOEMBOLISM (VTE) PROPHYLAXIS FOR PATIENTS ADMITTED WITH RENAL COLIC’S: THE SOUTHAMPTON MODEL
Mathew Chan¹, Bhaskar K Somani¹
¹University Hospital Southampton NHS Trust (United Kingdom)

MP11-21 INCIDENCE OF MULTIPLE HISTOLOGIES FOUND IN MASSES EXCISED FOR RENAL CELL CARCINOMA: A MULTI-INSTITUTIONAL ANALYSIS
David Fumo¹, Khaled Shahrour¹,²,³, Ravi Munver⁴,⁵, Samay Jain¹,²,³
¹The University of Toledo College of Medicine and Life Sciences (United States)
²University of Toledo Medical Center (United States)
³Eleanor N. Dana Cancer Center (United States)
⁴Hackensack University Medical Center (United States)
⁵John Theurer Cancer Center (United States)

MP11-22 A NOVEL INTRACEREBRAL HEMORRHAGE-INDUCED RAT MODEL OF NEUROGENIC VOIDING DYSFUNCTION: ANALYSIS OF LOWER URINARY TRACT FUNCTION
Young Sam Cho¹, Kwan Joong Joo¹, Heung Jae Park¹, Chil Hun Kwon¹, Khae Hawn Kim²
¹Department of Urology, Kangbuk Samsung Hospital, Sungkyunkwan University School of Medicine (South Korea)
²Department of Urology, Gachon University Gil Hospital (South Korea)

MP11-23 IS MICROSCOPIC HEMATURIA A RELIABLE WITNESS IN DIAGNOSIS OF RENAL COLIC?
Mahmoud Abdel-Gawad¹, Ravi Kadasne¹, Emad Elsobky¹
¹Emirates International Hospital (United Arab Emirates)
²Alnoor Hospital (United Arab Emirates)

MP11-24 VALUE OF SERUM CYSTATIN C AND MICROALBUMINURIA IN EVALUATION OF ACUTE KIDNEY INJURY AFTER SHOCK WAVE LITHOTRIPSY
Mahmoud Abdel-Gawad¹, Emad Elsobky²
¹Emirates International Hospital (United Arab Emirates)
²Alnoor Hospital (United Arab Emirates)

MP11-25 CT DENSITY, BIOCHEMICAL MACROCOMPOSITION AND ELEMENTAL MICROANALYSIS OF POUCH STONES
Mahmoud Abdel-Gawad¹, Emad Elsobky², Ahmed Al-Shal², Bedeer Ali-El-Dein³
¹Emirates International Hospital (United Arab Emirates)
²Alnoor Hospital (United Arab Emirates)
³Mansoura Urology and Nephrology Center (Egypt)
⁴Mansoura Urology and Nephrology Center (Egypt)

MP11-26 SYSTEMATIC REVIEW OF PROSTATE CANCER RISK AND ASSOCIATION WITH CONSUMPTION OF FISH AND FISH- OILS: ANALYSIS OF 495,321 PARTICIPANTS
Catherine Lovegrove¹, Ben Challacombe¹, M Shamim Khan¹, Rick Popert¹, Prokar Dasgupta¹
¹Guy’s Hospital (United Kingdom)

MP11-27 A SYSTEMATIC REVIEW OF HEALTH-RELATED QUALITY OF LIFE AND PATIENT PREFERENCES IN PATIENTS WITH URINARY STONE DISEASE
Aditya Raja¹,², Zara Hekamati², Sam Salek², Hrishi Joshi¹,²
¹University Hospital of Wales (United Kingdom)
²Cardiff University (United Kingdom)

MP11-28 AN EX VIVO INVESTIGATION INTO THE BLADDER WALL DISTRIBUTION OF THE ANTIMUSCARINIC OXYBUTYNIN
Aditya Raja¹, Nicholas Williams², Chris Allender², Jenna Bowen², Mark Gumbleton³, Kay Lee³, Tim Harrah³, Hrishi Joshi¹
¹Department of Urology, University Hospital of Wales (United Kingdom)
²School of Pharmacy and Pharmaceutical Sciences, Cardiff University (United Kingdom)
³Department of Research and Development in Urology and Gynaecology, Boston Scientific (United States)
MP12-03 A COMPARATIVE STUDY OF INTRAFACIAL VS TRANSVESICAL NERVE-SPARING LAPAROSCOPIC RADICAL PROSTATECTOMY FOR LOW-RISK PROSTATE CANCER
Guo-Liang Hou¹, Li Lu¹, Xin Gao¹, Dong-Geng Jiang¹, Jun Pang¹
¹The third Affiliated Hospital, Sun Yat-sen University (China)

MP12-04 A NOVEL PRACTICAL TROCAR PLACEMENT TECHNIQUE FOR EXTRA-PERITONEAL LAPAROSCOPIC AND ROBOTIC ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY IN PATIENTS WITH LOWER MIDLINE ABDOMINAL INCISIONS
Ali Serdar Gozen¹, Yigit AKIN¹, Murat Akgul², Cenk Yazici³, Jan Klein⁴, Jens Rassweiler⁴
¹SLK-Kliniken, University of Heidelberg (Germany)
²Marmara University School of Medicine (Turkey)
³Namik Kemal University School of Medicine (Turkey)

MP12-05 THE IMPACT OF BODY MASS INDEX ON OUTCOMES OF LAPAROSCOPIC RADICAL PROSTATECTOMY WITH LONG TERM FOLLOW-UP
Ali Serdar Gozen¹, Yigit AKIN¹, Ender Ozden³, Mutlu ATES¹, Michael Hruza¹, Jens Rassweiler⁴
¹SLK Kliniken, University of Heidelberg (Germany)
³Ondokuz Mayis University, Samsun (Turkey)
⁴Ondokuz Mayis University, Antalya (Turkey)

MP12-06 USEFULNESS OF THREE-DIMENSIONAL IMAGING SYSTEMS IN LAPAROSCOPIC RADICAL PROSTATECTOMY
Kazutoshi Okubo¹, Jin Kohno¹, Takayuki Sumiyoshi¹, Atsushi Maeno¹, Takeshi Takahashi¹, Kenji Mitsumori¹, Kazuo Nishimura¹
¹Osaka Red Cross Hospital (Japan)

MP12-07 ENCOURAGING LONG-TERM ONCOLOGICAL OUTCOMES OF RADICAL PROSTATECTOMY FOR HIGH-RISK PROSTATE CANCER MANAGEMENT
Eric Barret¹, Youness Atahall¹, Rafael Sanchez-Salas¹, Fernando Secin², Laurent Mascle², Petr Macik³, Luca Lumelli¹, Camilo Giedelman¹, Marc Galiano¹, Francois Rozet¹, Xavier Cathelineau¹
¹Department of Urology, Institut Montsouris-Paris-Descartes University, Paris (France)
²Department of Urology, San Lazaro Foundation and CEMIC, Buenos Aires (Argentina)

MP12-08 IMPACT OF NEOADJUVANT CHEMOTHERAPY ON COMPLICATIONS OF MINIMALLY INVASIVE RADICAL CYSTECTOMY
Eric Barret¹, Daphne Lizee¹, Rafael Sanchez-Salas¹, Francois Audenet¹, Francois Rozet¹, Marc Galiano¹, Xavier Cathelineau¹
¹Department of Urology, Institut Montsouris-Paris-Descartes University, Paris (France)

MP12-09 LAPAROSCOPIC APPROACH FOR PERSISTENT MULLERIAN DUCT SYNDROME
Ali Gurugac¹, Zafer Demirer², Bahadır Topuz³, Bilal Firat Alp⁴, Hasan Cem Erkilata³, Ibrahim Yildirim³
¹Gulhane Military Medical Faculty Dept. of Urology (Turkey)
³Eskisehir Military Hospital Dept. of Urology (Turkey)

MP12-10 COMPARATIVE OUTCOMES OF STUDYER ILEAL NEOBLADDER AND BRICKER ILEAL CONDUIT URINARY DIVERSION AFTER LAPAROSCOPIC RADICAL CYSTECTOMY: SEVEN-YEAR FOLLOW-UP OF 65 CASES
Jianfei Ye¹, Lulin Ma¹
¹Peking University Third Hospital (China)

MP12-11 KNOTLESS LAPAROSCOPIC RADICAL PROSTATECTOMY: A PRELIMINARY EXPERIENCE
Jianfei Ye¹, Lulin Ma¹
¹Peking University Third Hospital (China)

MP12-12 ENDOGIA STAPLER IN DORSAL VEIN COMPLEX DECREASED POSITIVE MARGIN RATE AT THE APEX IN LAPAROSCOPIC RADICAL PROSTATECTOMY
Yasunobu Hashimoto¹, Jyunpei Iizuka², Norifumi Oomae², Toshio Takagi², Yoshiko Maeda¹, Tsunenori Kondo², Kazunari Tanabe²
¹Tokyo Women’s Medical University Aoyama Hospital (Japan)
²Tokyo Women’s Medical University (Japan)

MP12-13 COMPARISON OF SURGICAL AND ONCOLOGICAL OUTCOMES BETWEEN LAPAROSCOPIC AND OPEN RADICAL CYSTECTOMY FOR BLADDER CANCER: SAPPORO CITY GENERAL HOSPITAL EXPERIENCE
Toshimori Seki¹, Nobuyuki Fukuizawa², Taichi Murai¹, Naoya Iwashara¹, Hitotaka Suzuki¹, Ai Kawaguchi¹, Michiko Nakamura¹, Tomoshige Akino¹, Hiroshi Harada²
¹Department of Urology, Sapporo City General Hospital (Japan)
²Department of Kidney Transplantation, Sapporo City General Hospital (Japan)

MP12-14 THE EXPERIENCE IN DEFINITIVE TREATMENT OF LOCALIZED PROSTATE CANCER IN THE ELDERLY
Henry Y. Lin¹, Yu-Chi Chen¹, Victor C. Lin¹,²
¹Department of Urology, E-Da Hospital (Taiwan)
²Department of Medicine for International Students, I-Shou University (Taiwan)

MP12-15 CLINICAL OUTCOME OF LAPAROSCOPIC RADICAL PROSTATECTOMY AT KUMAMOTO UNIVERSITY HOSPITAL
Wataru Takahashi¹, Yoshiaki Kawano¹, Hiroshi Sakakida¹, Takahiro Yamaguchi¹, Yoshihiro Maeda¹, Youshi Murakami¹,
MP12-16 URETHROVESICAL ANASTOMOSIS DURING LAPAROSCOPIC RADICAL PROSTATECTOMY: SINGLE CENTER EXPERIENCE WITH THE FILBLOC® SUTURE  
Junji Yatsuda¹, Kenichiro Tanoue¹, Yutaka Sugiyama¹, Masatoshi Eto¹ ¹Kumamoto University Hospital (Japan)

MP12-17 EFFECT OF PROSTATE VOLUME ON HISTOPATHOLOGICAL OUTCOMES IN PATIENTS AFTER LAPAROSCOPIC RADICAL PROSTATECTOMY  
Zhang Fan¹, Huang Yi¹ ¹Peking University Third Hospital (China)

MP12-18 RELATIONSHIP BETWEEN RECOVERY OF URINARY CONTINENCE AFTER LAPAROSCOPIC RADICAL PROSTATECTOMY AND PREOPERATIVE MEMBRANOUS URETHRAL LENGTH  
Zhang Fan¹, Ma Lulin¹ ¹Peking University Third Hospital (China)

MP12-19 PRE-PERITONEAL LAPAROSCOPIC PARTIEL CYSTECTOMY WITH CYSTOSCOPY GUIDE FOR THE TREATMENT OF BENIGN BLADDER TUMOR  
Huang Yi¹, Zhang Fan¹ ¹Peking University Third Hospital (China)

MP12-20 COMPARATIVE EVALUATION OF 3D AND 2D LAPAROSCOPIC RADICAL PROSTATECTOMY  
Chaozhao Liang¹, Jun Zhou¹, Yuanping Ye¹, Xiansheng Zhang¹, Haoqiang Shi¹, Zongyao Hao¹, Yifei Zhang¹, Song Fan¹, Kexiao Wang¹ ¹The First Affiliated Hospital of Anhui Medical University (China)

MP12-21 COMPARISON OF OUTCOME BETWEEN ROBOTIC ASSISTED, LAPAROSCOPIC, AND OPEN RADICAL PROSTATECTOMY  
Yi-Huei Chang¹, Po-Jen Hsiao¹, Guang-Heng Chen¹, Chin-Chung Yeh¹, Wen-Chi Chen¹, Chieh-Lung Chud¹, Kuo-Liang Chen¹, Chi-Ping Huang¹, Hsi-Chin Wu¹, ², Chi-Re Yang¹, Chao-Hsiung Chang¹ ¹China Medical University Hospital, Urology Department (Taiwan) ²Taiwan Municipal An-Nan Hospital-China Medical University (Taiwan)

MP12-22 LAPAROSCOPIC RADICAL CYSTECTOMY WITH INTRACORPOREAL ORTHOTOPIC ILEAL NEobladder: Technique and Clinical Outcomes  
Changjun Yin¹, Pengfei Shao¹, Pu Li¹, Xiaobing Ju¹, Qiang Lv¹, Jie Li¹, Xiaoxin Meng¹ ¹The First Affiliated Hospital of Nanjing Medical University (China)

MP12-23 VESICO-URETHRAL ANASTOMOSIS LOCATION IS ASSOCIATED WITH RECOVERY OF URINARY CONTINENCE AFTER LAPAROSCOPIC RADICAL PROSTATECTOMY  
Susumu Kageyama¹, Mitsuhiro Narita¹, Tetsuya Yoshida¹, Eiki Hanada¹, Keiji Tomita¹, Teruhiko Tsuru¹, Kazuyoshi Johnin¹, Akihiro Kawauchi¹ ¹Department of Urology, Shiga University of Medical Science (Japan)

MP12-24 THE CORRELATION OF ULTRASONOGRAPHIC PARAMETERS OF THE SPERMATIC VEIN AND CLINICAL OUTCOME IN SUBFERTILE PATIENTS WITH LEFT VARICOCELE AFTER LAPAROSCOPIC VARICOCELECTOMY  
Saint Shiou-Sheng Chen¹,², Allen W. Chiu² ¹Division of Urology, Taipei City Hospital Renai Branch (Taiwan) ²Department of Urology, National Yang-Ming University School of Medicine (Taiwan)

MP12-25 TRANSVESICAL LAPAROSCOPIC SURGERY FOR COMPLETE DOUBLE RENAL PELVIS AND URETER  
Yasuyuki Naitoh¹, Yasuhiro Yamada¹, Kenichi Kobayashi², Atsuko Fujihara², Kazuyoshi Johnin², Fumiyu Hongo¹, Kazumi Kami¹, Koji Okihara¹, Akihiro Kawauchi², Tsuneharu Miki² ¹Kyoto Prefectural University of Medicine (Japan) ²Shiga University of Medical Science (Japan)

MP12-26 PRE-PERITONEAL LAPAROSCOPIC PARTIAL CYSTECTOMY OF THE BLADDER PHEOCHROMOCYTOMA (WITH VIDEO)  
Xiaojun Tian¹, Lulin Ma¹ ¹Peking University Third Hospital (China)

MP12-27 THREE TYPES OF INTRAVESICAL HEM-OLOK CLIP MIGRATION AFTER LAPAROSCOPIC PROSTATECTOMY  
Chih-Chin Yu¹, Cheng-Kuang Yang¹, Yeu-Chuan Ou¹ ¹Division of Urology, Department of Surgery, Taichung Veterans General Hospital (Taiwan)

MP12-28 ADDITIONAL ONE PORT ON PLANNED GIBSON’S INCISION WOUND FOR COMPLETE DISTAL URETER BLADDER CUFF EXCISION IN RETROPERITONEOSCOPIC NEPHROURETERECTOMY —PRELIMINARY REPORT  
Wei-Yu Lin¹, Kuo-Hsiung Chu¹, Kuo-Tsai Huang¹, Jian-Hui Lin¹, Yung-Chin Huang¹, Dong-Ru Ho¹, Chih-Shou Chen¹, Tsai Pei Huang² ¹Division of Urology, Department of Surgery, Chung Gung Memorial Hospital (Taiwan)
Division of Urology, Yang Ming Hospital, (Taiwan)

**MP12-29 LAPAROSCOPIC RADICAL CYSTECTOMY RESOLVES THE ISSUE OF SURGICAL SITE INFECTION AS A POSTOPERATIVE COMPLICATION**
Satoshi Takahashi¹, Yoshiki Hiyama¹, Teruhiisa Uehara¹, Koji Ichihara¹, Jiro Hashimoto¹, Naotaka Nishiyama¹, Hiroshi Kitamura¹, Naoya Masumori¹

¹Department of Urology, Sapporo Medical University School of Medicine (Japan)

**MP12-30 INITIAL EXPERIENCE WITH LAPAROSCOPIC RADICAL PROSTATECTOMY**
Futoshi Morokuma¹, Takenari Gotanda², Syunsuke Gotou¹, Yu Hirata¹, Hiroshi Uchino¹, Noriaki Tokuda¹

¹Saga-Ken Medical Center Koseikai (Japan)
²Kagoshima City Hospital (Japan)

Friday, September 5

Moderated Poster Session (MP13)
01:30 pm–03:30 pm

**Endourology: BPH 1**
Room: RM 101 C

Moderator: Ehud Gnessin, Michael Ferrandino, Yi-Chia Lin, Apichat Kongkanand

**MP13-01 INTRAOPERATIVE INTERNET CONFERENCING AND REFERRAL OF ENDOSCOPIC IMAGES PHOTOGRAPHED AND TRANSMITTED BY SMARTPHONES**
Ernesto III Arada¹, Luis Florencio², Michael Macalalag³, Frederick Mendiola⁴, Jun Dy⁵, Ceasar Ballesteros⁶, Jeremiah Mangahas⁶

¹Quirino Memorial Medical Center (Philippines)
²Dela Salle University Medical Center (Philippines)

**MP13-02 TECHNIQUE USING DIGISCOPING UNIVERSAL ADAPTERS TO CONNECT ANY SMARTPHONE WITH TELESCOPES DURING VIDEO CYSToureTHROSCOPY**
Ernesto III Arada¹

¹Dela Salle University Medical Center (Philippines)

**MP13-03 UTILITY OF PREOPERATIVE CYSTOSCOPY IN CADAVERIC RENAL TRANSPLANT RECIPIENTS**
Zhaolong Deng¹, Valerie Huei Li Gan¹, Wai Siang Leong², Fang Jann Lee³, Lay Guat Ng⁴

¹Singapore General Hospital (Singapore)
²National University of Singapore (Singapore)

**MP13-04 MANAGEMENT OF BLADDER NECK CONTRACTURE POST ROBOTIC ASSISTED LAPAROSCOPIC PROSTATECTOMY**
Amanda C Chi¹, Samuel H Eaton², Barry B McGuire¹, Robert B Nadler¹

¹Northwestern University (United States)
²Duke University (United States)

**MP13-05 NEW TECHNIC FOR ORGANISED CLOT EVACUATION: TRANSURETRAL RESECTION OF CLOT (TUR-C)**
Sercan Yilmaz¹, Yusuf Kibar¹, Huseyin Tomruk¹, Engin Kaya¹

¹Gulhane Military Medical Academy Department Of Urology (Turkey)

**MP13-06 BILATERALE URETEROHYDRONEPHROSIS DUE TO CYSTITIS CYSTICA ET GLANDULARIS**
Ali Guragac¹, Zafer Demirer², Burak Kopra¹, Bilal Firat Alp³, Ibrahim Yildirim¹

¹Gulhane Military Medical Faculty Dept. of Urology (Turkey)
²Eskisehir Military Hospital Dept. of Urology (Turkey)

**MP13-07 CONTRIBUTION OF THE PIONEERS TO THE HISTORY OF LITHOTRITY**
A. Rempelakos¹, M. Chrisofos², C. Tsiamis³, E. Poulakou-Rebelakou⁴

¹Urological Department, Hippocrateion Hospital Athens (Greece)
²2nd Urologic Department, Athens University School, Attikon Hospital (Greece)
³Department of Microbiology, Athens University Medical School (Greece)
⁴Department of History of Medicine, Athens University Medical School (Greece)

**MP13-08 METALLIC URETERAL STENT IN THE MANAGEMENT OF BENIGN AND MALIGNANT URETERIC OBSTRUCTIONS: FIVE YEARS EXPERIENCE**
Mun Yee Siaw¹, Guo Liang Yong², Ken Lee Wan¹, Eng Geap Lee²

¹Monash University (Malaysia)
²University of Aberdeen (United Kingdom)

**MP13-09 THULIUM LASER VAPOENUCLEATION OF THE PROSTATE IN PATIENTS WITH EXCEPTIONALLY LONG PROSTATIC URETHRAS**
Justin Ji-Yuen Siu¹,², Chi-Ping Huang¹,², Chao-Hsiang Chang¹,²

¹Department of Urology, China Medical University Hospital (Taiwan)
²School of Medicine, China Medical University (Taiwan)

**MP13-10 A PROSPECTIVE COMPARISON BETWEEN NBI AND STANDARD WHITE LIGHT CYSTOSCOPY IN CASES OF NON-MUSCLE INVASIVE BLADDER CANCER**
Bogdan Geavlete¹, Marian Jecu¹, Florin Stanescu¹, Cristian Moldoveanu¹, Cosmin Ene¹, Catalin Bulai¹, Leon Adou¹, Petrisor Geavlete¹

¹“Saint John” Emergency Clinical Hospital (Romania)
MP13-11 LASER ENDOURETEROTOMY FOR URETEROVESICAL OBSTRUCTION IN PATIENT WITH RENAL TRANSPLANTATION
Zafer Demirer², Ali Guragac¹, Huseyin Tomruk¹, Hasan Cem Erelkola¹, Yusuf Kibar¹
¹Department of Urology, Gulhane Military Medical Academy (Turkey)
²Eskisehir Military Hospital (Turkey)

MP13-12 MALIGNANT MELANOMA METASTASIS TO PROSTATE AND BLADDER
Ali Guragac¹, Sercan Yılmaz¹, Zafer Demirer², Hasan Cem Erelkola¹, Yusuf Kibar¹
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MP13-13 NBI IMAGING AND BIPOLAR ELECTROSURGERY IN LARGE NON-MUSCLE INVASIVE BLADDER TUMORS – AN EVIDENCE-BASED EVALUATION OF A HYBRID APPROACH
Bogdan Geavlete¹, Florin Stanescu¹, Marian Jecu¹, Cristian Moldoveanu¹, Leon Adou¹, Cosmin Ene¹, Catalin Bulai¹, Petrisor Geavlete¹
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MP13-14 SHOULD THERE BE TIME TARGETS FOR THE MANAGEMENT OF URINARY STONE PATIENTS WITH INDWELLING STENTS?
Thomas Smith¹, Mohit Tiwari¹, Elizabeth Williams¹, Stephanie Gounaris-Shannon¹, Lucy Blake¹, Adrian Simoes¹, Rajeshwar Krishnan¹, Nitin Shrotri¹
¹Canterbury Hospital (United Kingdom)

MP13-15 SHOULD STERILE GLOVES BE USED FOR OUTPATIENT CYSTOSCOPY?
Yoichi Iwamoto¹, Masafumi Kato¹
¹Mie Central Medical Center (Japan)

MP13-16 SURGICAL DURATION OF ENDOSCOPIC UROLOGIC PROCEDURES: SIXTY MINUTES AND BEYOND
Richard Matulewicz¹, Aksharananda Rambachan², Barry McGuire², Daniel Oberlin², John Kim², Robert Nadler²
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MP13-17 THE HISTORY OF LITHOTRIPTIC INSTRUMENTS
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MP13-18 COMPARISON OF THE SAFETY AND EFFICACY OF STANDARD TRANSURETHRAL RESECTION OF BLADDER TUMOR AND 2-MICRON LASER FOR NON-MUSCLE-INVASIVE BLADDER CANCER
Yanbo Wang¹, Fengming Jiang¹, Zhihua Lu¹, Chunxi Wang¹
¹First Hospital of Jilin University (China)

MP13-19 ENDOUROLOGICAL MANAGEMENT OF 175 VESICAL STONE – A CASE REPORT
Pao-Hua Chen Chen¹, Jian-Xiang Zhang¹, Bai-Fu Wang¹, Jensen Lin¹, Chang-Pao Chang¹, Meng-Yi Yan¹, Heng-Chieh Chiang¹, Chun-Chi Chen¹, Kuo-Hsuan Huang¹, Hung-Jen Shih¹, Sheng-Hsien Huang¹, Jian-ting Chen¹
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MP13-20 CORRELATIVE FACTORS FOR URINARY RETENTION AFTER TRANSURETHRAL RESECTION OF PROSTATE — A NATIONWIDE DATABASE STUDY
Tu-Chun Wei¹, Chih-Chieh Lin¹, Alex T. L. Lin¹, Kuang-Kuo Chen¹
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²Department of Urology, School of Medicine, and Shu-Tien Urological Institute, National Yang Ming University (Taiwan)

MP13-21 FIRST-IN-HUMAN CLINICAL EXPERIENCE OF A NOVEL TREATMENT FOR BPH: IMAGE GUIDED ROBOTICALLY-ASSISTED WATERJET ABLATION OF THE PROSTATE
Peter Gilling¹
¹Tauranga Hospital (New Zealand)

MP13-22 TEMPRO BIPOLAR RF TREATMENT FOR BPH: A NON-SURGICAL APPROACH
Yakov Mirkin¹, Alexander Karapetyan¹, Sergey Shumoff¹, Vladimir Tsiurunikoff¹, Eugene Simonenko¹
¹URO-PRO Clinics (Russia)

MP13-23 THE EXPERIENCES OF TRANSURETHRAL RESECTION OF THE PROSTATE FOR RESECTED TISSUE WEIGHT GREATER THAN 100 GRAMS
Jian-Hung Geng¹, Hsin-Chih Yeh¹,²,³
¹Department of Urology, Kaohsiung Medical University Hospital (Taiwan)
²Department of Urology, Kaohsiung Municipal Ta-Tung Hospital (Taiwan)
³Department of Urology, Kaohsiung Medical University (Taiwan)

MP13-24 INCIDENCE AND OUTCOMES OF PROSTATE CANCER IN HOLMIUM LASER ENucleation of the Prostate
Yoshiko Sugita¹,²,³, Yoshiya Shitara¹,²,³, Atsushi Sugita¹,²,³, Hideharu Bessho¹,²,³, Takahiro Hirayama¹,², Tetsuo Fujita¹,²,³
MP13-25 PATIENTS WITH SMALL PROSTATES AND LOW-GRADE INTRAVESICAL PROSTATIC PROTRUSION PRESENTING WITH BLADDER OUTLET OBSTRUCTION
Han Jie Lee1, Alvin Lee1, Palaniappan Sundaram2, Norman Goh2, Keong Tatt Foo2
1 Yong Loo Lin School of Medicine, National University of Singapore (Singapore)
2 Department of Urology, Singapore General Hospital (Singapore)

MP13-26 EVALUATION OF PATIENTS WITH GOOD URINARY FLOW – THE USE OF INTRAVESICAL PROSTATIC PROTRUSION TO PREDICT BLADDER OUTLET OBSTRUCTION AND PROGRESSION TO TURP
Alvin Lee1, Han Jie Lee1, Keong Tatt Foo2, Henry Ho2
1 Yong Loo Lin School of Medicine, National University of Singapore (Singapore)
2 Singapore General Hospital (Singapore)

MP13-27 THULIUM LASER VAPOENUKLEATION OF THE PROSTATE (THUVEP) IN PROSTATES LARGER THAN 80ML: COMPARISON OF 1.9µM AND 2.0µM LASER DEVICES
Thomas Knoll1, Gunnar Wendt-Nordahl1, Andreas Gross2, Christophers Netsch2
1 Sindelfingen-Boeblingen Medical Center (Germany)
2 Asklepios Hospital Barnbek (Germany)

MP13-28 DECOMPRESSION OF UB HELP AVOID INADEQUATE RESECTION OF THULIP
Shih-Che Tseng1, Wei-Ting Kuo1, Jen-Tai Lin1
1 Kaohsiung Veterans General Hospital (Taiwan)

MP13-29 IMPACT OF BLOOD LOSS IN PERSISTENT URINARY INCONTINENCE FOLLOWING HOLMIUM LASER ENUCLEATION OF THE PROSTATE
Shuichiro Kobayashi1, Masataka Yano1, Takayuki Nakayama1, Satoshi Kitahara1
1 Tama-Nambu Chiiki Hospital (Japan)

MP13-30 PROSPECTIVE RANDOMISED CONTROLLED TRIAL COMPARING GREEN-LIGHT (GL) 180-W XPS PVP AND TRANSURETHRAL RESECTION OF THE PROSTATE (THE GOLIATH STUDY): ONE YEAR FOLLOW UP
James Andrew Thomas1, Andrea Tabaro2, Neil Barber3, Frank d’Ancona3, Gordon Muir5, Ulrich Witzscho6, Marc-Oliver Grimm6, Alexander Bachmann5
1 Department of Urology, Princess of Wales Hospital, Bridgend, UK (United Kingdom)
2 Department of Urology, Sant’Andrea Hospital, Sapienza University of Rome, Italy
3 Department of Urology, Frimley Park Hospital, Surrey, UK (United Kingdom)
4 Department of Urology Radboud University Nijmegen Medical Centre (Netherlands)
5 Department of Urology, King’s College Hospital, London, UK (United Kingdom)
6 Department of Urology and Pediatric Urology, Krankenhaus NordWest (Germany)
7 Department of Urology, University Hospital of Jena (Germany)
8 Department of Urology Basel, University Hospital Basel (Switzerland)

MP13-31 DEVELOPING THE REAL TYPE SIMULATOR FOR HOLEP (HOLMIUM LASER ENUCLEATION OF PROSTATE)
Hidefumi Kinoshita1, Takao Mishima1, Tadashi Matsuda1
1 Kansai Medical University (Japan)
MP14-05 EVALUATION OF GREENLIGHT XPS MAXIMUM POWER LEVEL ON PERIOPERATIVE OUTCOMES IN PATIENTS WITH BENIGN PROSTATIC HYPERPLASIA
Preeya Khandge, Amanda Cole, Juan Javier-DesLoges, Christina Carpenter, Leonard Glickman, Kevin Bastral, Ravi Munver
Hackensack University Medical Center (United States)
Rutgers-New Jersey Medical School (United States)
John Theurer Cancer Center (United States)

MP14-06 EFFICACY OF GREENLIGHT LASER THERAPY IN PATIENTS WITH BLADDER OUTLET OBSTRUCTION AND PROSTATE CANCER
Juan Javier-DesLoges, Preeya Khandge, Amanda Cole, Christina Carpenter, Leonard Glickman, Kevin Bastral, Ravi Munver
Hackensack University Medical Center (United States)
Rutgers-New Jersey Medical School (United States)
John Theurer Cancer Center (United States)

MP14-07 DETECTION OF SIGNIFICANT PROSTATE CANCER IN MORCELLATED SPECIMEN BY HOLMIUM LASER ENUCLEATION OF THE PROSTATE
Takashi Matsuoka, Yoshio Sugino, Arinobu Fukunaga, Yuka Kono, Keiyu Matsumoto, Hiroyuki Tsunemori, Toshifumi Yano, Noriaki Utsunomiya, Hiroyuki Tsunemori, Toshifumi Yano, Noriaki Utsunomiya, Hiroyuki Tsunemori, Toshifumi Yano, Noriaki Utsunomiya, Hiroyuki Tsunemori, Toshifumi Yano, Noriaki Utsunomiya,
Department of Urology Kobe City Medical Center General Hospital (Japan)
Department of Pathology Kobe City Medical Center General Hospital (Japan)

MP14-08 A RANDOMIZED CONTROLLED TRIAL COMPARING THE EFFICACY OF HYBRID BIPOLAR TRANSURETHRAL VAPORIZATION AND RESECTION OF THE PROSTATE WITH BIPOLAR TRANSURETHRAL RESECTION OF THE PROSTATE
Peter Ka-Fung Chiu, Sidney Kam-Hung Yip, Ning-Hong Chan, Chi-Hung Yee, Kim WM Lee, Joseph HM Wong, Simon SM Hou, Chi-Fai Ng
Division of Urology, Department of Surgery, Prince of Wales Hospital, The Chinese University of Hong Kong (Hong Kong)

MP14-09 THULIUM VAPORESECTION OF THE PROSTATE (THUVARP) AND THULIUM VAPOenuCLEATION OF THE PROSTATE (THUVEP) IN PATIENTS ON ANTICOAGULANT THERAPY: A RETROSPECTIVE THREE-CENTRE MATCHED-PAIRED COMPARISON WITH SHORT-TERM FOLLOW-UP
Christopher Netsch, Salvatore Buttice, Lucciano Macchine, Carlo Magno, Thomas RW Herrmann, Sophie Knipper, Andreas I Gross
1Asklepios Klinik Barmbek (Germany)
2MHH Medical School of Hannover (Germany)
3University of Messina (Italy)

MP14-10 ROBOT-ASSISTED TRANSVESICAL ENucleATION OF BENIGN PROSTATIC HYPERPLASIA: LESSONS FROM A SINGLE SURGEON’S LEARNING CURVE
Andreas Neisius, Peter Rubenwolf, Sebastian Nestler, Christian Thomas, Frederik C. Roos, Christian Hampel, Joachim W. Thiéroff
Division of Urology, Universitätshospital Mainz (Germany)

MP14-11 IS BIPOLAR TRANSURETHRAL RESECTION OF PROSTATE CAUSING LESS DELAY HAEIMUTRIA?
Peter Ka-Fung Chiu, Samuel CH Yee, Kim WM Lee, Joseph HM Wong, Simon SM Hou, Chi-Fai Ng
The First Hospital of Jilin University (China)

MP14-12 LEARNING CURVE OF MORCELLATION DURING 2-MICRON WAVE LASER ENucleATION OF THE PROSTATE
Xiao Qing Wang, Qi Hui Chen, Hong Li Shan, Yuan Yuan Hao
Mackay Memorial Hospital (Taipei Branch) (Taiwan)
Mackay Memorial Hospital (Tamshui Branch) (Taiwan)

MP14-13 LASER ENUCLEATION OF PROSTATE IN PATIENTS WITH ANTICOAGULANTS: RESULTS AT TWO INSTITUTIONS
Chu-Hao Weng, Stone Yang, Huang-Kuang Chang, Marcelo Chen, Wen-Chou Lin, Yung-Chiong Chow, Wei-Kung Tsai, Pai-Kai Chiang, Wun-Rong Lin, Jong-Ming Hsu
Mackay Memorial Hospital (Taipei Branch) (Taiwan)
Mackay Memorial Hospital (Tamshui Branch) (Taiwan)

MP14-14 USE OF EVICEL® FIBRIN SEALANT FOR IMPROVING HEMOSTASIS FOLLOWING TRANSURETHRAL PROSTATE DEBULKING SURGERY IN PATIENTS WITH BPH
Shahin Tabatabaei, Saman Shafofat Talab, Lori S. Kloc, M. Minhaj Siddiqui, Arash Akhavein, Rafael Vazquez, Dicken S. C. Ko
1Department of Urology, Massachusetts General Hospital, Harvard Medical School (United States)
2Department of Anesthesiology, Massachusetts General Hospital, Harvard Medical School (United States)

MP14-15 LAPAROSCOPIC SIMPLE PROSTATECTOMY: A REASONABLE OPTION FOR LARGE PROSTATIC ADENOMAS
Vasileios Panagopoulos, Iason Kyriazis, Panagiotis Kalidonis, Marines Vasilas
MP14-16 PREDICTORS OF COMPLICATION OF TRANSURETHRAL RESECTION OF PROSTATE
You-Chiuan Chien, Heng-Chieh Chiang
1Changhua Christian Hospital (Taiwan)

MP14-17 PERIOPERATIVE TREATMENT OF TURP IN THE TREATMENT FOR LARGE VOLUME BPH
Qi Hui Chen, Xiao Qing Wang
The First Hospital of Jilin University (China)

MP14-18 ANATOMICAL ENucleATION OF THE PROSTATE WITH UROBEAM 940NM LASER
Abai Xu, Yong Zou, Bingkun Li, Chunxiu Liu
Zhujiang Hospital, Southern Medical University (China)

MP14-19 IMPLEMENTING THE 180W GREENLIGHT XPS LASER INTO CLINICAL PRACTICE: ANALYSIS OF PERIOPERATIVE OUTCOMES DURING THE LEARNING CURVE
Akbar Ashraf, Sam Raftery, Adrian Clibb, Stuart Philip
1Mater Adult’s Hospital (Australia)
2University of Queensland (Australia)

MP14-20 DIODE LASER VAPORIZATION OF LARGE PROSTATE FOR BENIGN PROSTATIC HYPERPLASIA: VAPORIZATION ALONE OR COMBINED WITH SUBSEQUENT BIPOLAR TRANS-URETHRAL RESECTION. OUR EXPERIENCE ON 79 PATIENTS
Ferdinando De Marco, Thomas Bayer
1INI Urology Department (Italy)
2Urology Department (Germany)

MP14-21 PROSTATIC URETHRAL ANGLE IS A SIGNIFICANT PREDICTOR OF URINARY SYMPTOM SEVERITY AND PEAK FLOW RATE IN MEN WITH SMALL PROSTATE VOLUME
Dong Hyuk Kang, Joo Yong Lee, Yoon Soo Ha, Doo Yong Chung, Dae Hoon Lee, Kang Su Cho
1Department of Urology, Yangpyeong Health Center, Yangpyeong, Korea (South Korea)
2Department of Urology, Severance Hospital, Urological Science Institute, Yonsei University College of Medicine, Seoul, Korea (South Korea)

MP14-22 LEARNING CURVE FOR HOLMIUM LASER ENucleATION OF THE PROSTATE (HOLEP): IS EXPERIENCE OF TRANSURETHRAL RESECTION OF THE PROSTATE (TURP) NECESSARY?
Takaharu Ichikawa, Yasuhiko Nishiyama, Hitoshi Takamoto, Noritaka Ishito, Yasuo Yamamoto, Takashi Kurashige, Youichi Shiotsuba, Tomoko Sako, Shouhei Yokoyama, Susumu Yamane, Shunji Hayata
1Department of Urology, Kurashiki Medical Center (Japan)
2Department of Urology, Tottori Municipal Hospital (Japan)

MP14-23 THE URETHRA BIPOLAR PLASMA PROSTATE ENucleATION SURGERY FOR BENIGN PROSTATE HYPERPLASIA (WITH VIDEO)
Xiaojun Tian
Peking University Third Hospital (China)

MP14-24 ROBOTIC SIMPLE PROSTATECTOMY FOR SYMPTOMATIC LARGE-GLAND BPH: SAFETY, FEASIBILITY, AND COMPARATIVE ANALYSIS
Misop Han, Gautam Jayram, Mark Boll, Christian Pavlovich
1Johns Hopkins Hospital (United States)

MP14-25 A LONG TERM SOLUTION IN SECONDARY BLADDER NECK SCLEROSIS CASES – BIPOLAR PLASMA VAPORIZATION OVERCOMING STANDARD TUR IN A PROSPECTIVE, RANDOMIZED COMPARISON
Bogdan Geavlete, Cristian Moldoveanu, Florin Stanescu, Marian Jecu, Cosmin Ene, Catalin Bulai, Leon Adou, Petrisor Geavlete
1“Saint John” Emergency Clinical Hospital (Romania)

MP14-26 THE CONTINUOUS BIPOLAR PLASMA VAPORIZATION ADVANCEMENT A MEDIUM TERM, PROSPECTIVE, RANDOMIZED ASSESSMENT OF A PROSTATE – VERSUS STANDARD PLASMA VAPORIZATION AND MONOPOLAR TUR IN MEDIUM SIZE BPH CASES
Bogdan Geavlete, Florin Stanescu, Marian Jecu, Cristian Moldoveanu, Cosmin Ene, Catalin Bulai, Leon Adou, Petrisor Geavlete
1“Saint John” Emergency Clinical Hospital (Romania)

MP14-27 IMPACT OF INFLAMMATORY LESIONS ASSOCIATED WITH BPH ON POST TURP SYMPTOMS
Petrisor Geavlete, Dragos Georgescu, Razvan Maitescu, Bogdan Geavlete
1“Saint John” Emergency Clinical Hospital (Romania)
MP14-28 A PROSPECTIVE, LONG TERM, RANDOMIZED CONTROLLED TRIAL COMPARING OPEN PROSTATECTOMY TO BIPOLAR PLASMA ENucleATION – THE TEST OF TIME IN LARGE BPH CASES

Bogdan Geavlete1, Florin Stanescu1, Marian Jecu1, Cristian Moldoveanu1, Cosmin Ene1, Catalin Bulat1, Leon Adou1, Petrisor Geavlete1

1“Saint John” Emergency Clinical Hospital (Romania)

MP14-29 TRANSURETHRAL ANATOMICAL ENucleATION AND RESECTION OF PROSTATE (TUAERP) : A SINGLE CENTRE EXPERIENCE

Chunxiao Liu1, Shaobo Zheng1, Hulin Li1, Yawen Xu1, Abai Xu1, Binshen Chen1, Haitian Shen1, Peng Xu1

1Zhujiang Hospital, Southern Medical University (China)

MP14-30 IMPACT OF LUTEINIZING HORMONE RELEASING HORMONE (LHRH) AGONIST PRE-TREATMENT ON SURGICAL BLOOD LOSS DURING TRANSURETHRAL RESECTION OF THE PROSTATE: CLINICAL AND IMMUNOHISTOCHEMICAL RANDOMIZED CONTROLLED TRIAL

Ahmad Tawfik1, Mohamed Abo El-Enen1, Hussein Abdelhamid2, Mohamed Elrashidy3, Nehal Elmashad4

1Tanta University Hospital, Urology Department (Egypt)
2Fayoum University Hospital, Urology Department (Egypt)
3Tanta University Hospital, Histopathology Department (Egypt)
4Tanta University Hospital, Clinical Oncology Department (Egypt)

MP14-31 PAIN LEVEL DURING PROSTATE BIOPSIES IN TWO DIFFERENT POSITIONS: LEFT LATERAL DECUBITUS VERSUS DORSAL LITHOTOMY

Cenk Gurburc1, Onur Danacioglu1, Murat Arslan1, Oguz Efioğlu2, Gokhan Ats1, Asif Yildirim1, Turhan Caskurlu1

1Istanbul Goztepe Training and Research Hospital (Turkey)
2Izmir University Medical Park Hospital (Turkey)

MP14-32 THE SEVERITY OF CYSTINE AND STRUVITE STONE PATIENTS: A MATCHED-COHORT COMPARISON

Giovanni S Marchini1, Kleiton GR Yamacca1, Sabrina Reis1, Fabio CM Torricelli1, Alexandre Danilovic1, Fabio C Vicentini1, Arturo Brito1, Cesar Camara1, Eduardo Mazzucchelli1, Miguel Srougi1

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Friday, September 5

Endourology: PCNL 2

01:30 pm–03:30 pm

Room: RM 201 A

Moderator: Fatih Atug, Panagiotis Kallidonis, Jen-Tai Lin

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MP15-01 “TARGET-DOMAIN” LOW-DOSE NON-ENHANCED SPIRAL CT SCAN POSITIONING COMBINED WITH INTRAOPERATIVE ULTRASOUND-GUIDED PUNCTURE THE PCNL CLINICAL RESEARCH

Licheng Jiang1, Zhonghua Xu1, Yingchen Zhang1, Xueting Wang1, Jiyang Ding1, Huijie Ren1, Zhiqiang Wu1, Tao Wang1, Yufeng Cheng1

1Department of Urology, the 148th Center Hospital of Jinan Military Area, PLA (China)
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MP15-02 CLINICAL INVESTIGATION OF LOW-DOSE UNENHANCED HELICAL CT LOCALIZATION IN MPCNL TREATMENT FOR UPPER URINARY CALCULI

Licheng Jiang1, Zhonghua Xu1, Ying-Chen Zhang1, Xueing Wang1, Jiyang Ding1, Huijie Ren1, Zhiqiang Wu1, Tao Wang1, Yufeng Cheng1

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MP15-03 ASSOCIATION OF S.T.O.N.E. NEPHROLITHOMETRY WITH STONE-FREE OUTCOMES FOLLOWING PERCUTANEOUS NEPHROLITHOMETRY: A MULTI-INSTITUTIONAL ANALYSIS

Zhamshid Okhunov1, Vincent Bird2, Arash Akhavein3, Daniel M. Moreira4, Arvin K. George5, Brian Duty5, Michael del Junco6, Fotima K. Asgaraova7, Michael Rothberg7, Muntu Gupta7, Chad Tracy7, Mark R. Newton7, Kevan Sternebrg8, Benjamin King9, Edan Shapiro, Jorge Moreno9, Juan Carlos Rosales10, Arun Srinivasan10, Yasser Noureldan10, Nazih Khater11, Duane Baldwin11, Khurshid Ghandi12, Maksim Shlykov12, Brian Shinsky13, Justin Friedlander14, Steven Nakada15, Arthur D. Smith15, Jaime Landman15, Zeph Okeke13

1Department of Urology, University of California, Irvine (United States)
2The Smith Institute for Urology, North Shore-LIJ Hofstra School of Medicine (United States)
3Department of Urology, Columbia University Medical Center (United States)
MP15-04 “5-PANG PERC SYSTEM”: SIMPLE SWIFT AND SEAMLESS PERC TRACT DILATATION
Ashish Rawandale-Patil1,2, M. M. Siddiqui1,2, Lokesh Patni1,2, Yaser Ahmad2
1ACPM Medical College (India)
2Institute of Urology (India)

MP15-05 EVALUATION AND COMPARISON OF UROLITHIASIS SCORING SYSTEMS IN PERCUTANEOUS KIDNEY STONE SURGERY
Zhamshid Okhunov1, Kevin Labadie1, Arash Akhavein1, Daniel Moreira2, Jorge Moreno-Palacios1, Zep Okeke3, Vincent Bird1, Arthur D. Smith1, Jaime Landman1
1Department of Urology, University of California, Irvine (United States)
2Department of Urology, University of Florida, Gainesville (United States)
3Smith Institute for Urology, North Shore LIJ Health System (United States)

MP15-06 PERCUTANEOUS NEPHROLITHOTOMY IN PATIENTS WITH URINARY TRACT ABNORMALITIES
Philippe Violette1, Marie Dion1, Thomas Taillaly1, John Denstedt1, Hassan Rasvi1
1Western University (Canada)

MP15-07 PERCUTANEOUS NEPHROLITHOTOMY AFTER RECENT UROLITHIASIS RELATED SEPSIS: WHAT SHOULD PATIENTS EXPECT? ANSWERS FROM A MATCHED PAIR ANALYSIS
Andreas Neisius1,2, Ramy F. Youssef2,3, Zachariah G. Goldsmith4, Momiin Ghafrar2, Matvey Tsviyan3, Richard H. Shin4, Fernando Cabrera5, Adam G. Kaplan2, Michael N. Ferrandino2, Charles D. Scales2, Glenn M. Preminger2, Michael E. Lipkin7
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4Department of Urology, University of Mexico (United States)
5Department of Urology, University of Iowa (United States)
6Children’s Hospital of Philadelphia (United States)
7Department of Urology, McGill University (United States)
8Department of Urology, University of Michigan (United States)
9Department of Urology, Loma Linda University Medical Center (United States)
10Department of Urology, University of Caracas (Venezuela)
11Department of Urology, University of Wisconsin (United States)
12Department of Urology, Urologic Institute of Southeastern Pennsylvania (United States)
13Department of Urology, Universitatsmedizin Mainz (Germany)
14Division of Urologic Surgery, Comprehensive Kidney Stone Center, Duke University Medical Center (United States)
15Department of Urology, University of California, Irvine, Orange (United States)

MP15-08 MINIPERC IN STAGHORN CALCULI TREATMENT
Stanislav Naryshkin1,2, Oleg Teodorovich1,2, Gennady Borisensko5, Elizaveta Finagina5
1Central Clinical Hospital No1 JSC RZhD “Russian Railways” (Russia)
2Endoscopic Urology Department, Russian Medical Academy of Postgraduate Education (Russia)

MP15-09 COLON PERFORATION DURING PEDIATRIC PCNL: CONSERVATIVE MANAGEMENT
Mohammad Aslizadeh1, Mohammadreza Darabi Mahboub1, Amirabbas Asadpour1, Parisa Saeedi1
1 Mashhad University of Medical sciences (Iran)

MP15-10 PERCUTANEOUS NEPHROLITHOTOMY EFFECTIVELY APPLIED IN A CHILD WITH A COMPLETE RENAL STAGHORN STONE — ONE CASE REPORT
Hong-Lin Cheng1
1Department of Urology, School of Medicine and Hospital, National Cheng Kung University (Taiwan)

MP15-11 THE COMPARISON OF DUAL-PROBE ULTRASONIC LITHOTRITE AND HOLMIUM LASER LITHOTRITE FOR PERCUTANEOUS NEPHROLITHOTOMY
Xiao Qing Wang1, Hong Li Shan1, Yuan Yuan Hao1, Hai Ming Wang1
1The First Hospital of Jilin University (China)

MP15-12 PERCUTANEOUS NEPHROLITHOTOMY WITH TOTALLY ULTRASONOGRAPHY-GUIDED RENAL ACCESS IN THE FLANK POSITION
Seyed Hassan Inanloo1, Seyed Reza Yahyazadeh1
1Alborz University of Medical Sciences (Iran)

MP15-13 PREDICTIVE FACTORS TO PERFORM TUBELESS PERCUTANEOUS NEPHROLITHOTOMY IN CIPTO MANGUNKUSUMO HOSPITAL, JAKARTA, INDONESIA - A RETROSPECTIVE STUDY
Nur Rasvii1, Ponco Birowo1, Harris Banadj1
1Department of Urology Faculty of Medicine Universitas Indonesia/Cipto Mangunkusumo Hospital (Indonesia)

MP15-14 EVALUATION OF S.T.O.N.E. AND GUY’S SCORING SYSTEMS FOR PREDICTION OF SECONDARY PROCEDURES AFTER PRIMARY PERCUTANEOUS NEPHROSTOLITHOTOMY (PCNL)
Weil Lai1, Arash Akhavein1, Vincent Bird1
1University of Florida College of Medicine (United States)
ACCORDING TO CLAVIEN-DINDO GRADING SYSTEM, IS IT POSSIBLE TO PREDICT IN WHICH PATIENTS GRADE 3 AND ABOVE COMPLICATIONS OCCURRED BEFORE THE SURGERY?  
Zeki Aktas1, Ömer Yılmaz1, Hasan Soydan1, Ferhat Ates1, Erçan Malkoç1, Temuçin Şenkel6  
1Gülnane Military Medical Academy, Haydarpasa Training Hospital, Department of Urology (Turkey)

THE COMPARISON BETWEEN MINIMALLY INVASIVE PERCUTANEOUS NEPHROLITHOTOMY AND RETROPERITONEAL LAPAROSCOPIC URETERTOLITHOTOMY FOR IMPACTED UPPER URETERAL CALCULI  
Yuqing Liu1, Chunlei Xiao1, Jian Lu1, Yi Huang1, Lulin Ma1  
1Peking University Third Hospital (China)

PERCUTANEOUS NEPHROLITHOTOMY IN PATIENTS WITH SOLITARY KIDNEY  
Bakhman Galiev1, Boris Komjakov1  
1Mechinikov’s Medical University (Russia)

PEDIATRIC LOWER CALYCEAL ACCESS PCNL: CAN BE CONSIDERED AS A UNIVERSAL CALYX?  
Wael Gamal1  
1Sohag University Hospital (Egypt)

PCNL IN MALROTATED KIDNEY WITH PREVIOUS RENAL SURGERY  
Wael Gamal1  
1Sohag University Hospital (Egypt)

PCNL IN MARKEDLY DILATED PCS  
Wael Gamal1  
1Sohag University Hospital (Egypt)

PCNL ECTOPIC LUMBAR KIDNEY WITH PREVIOUS RENAL SURGERY  
Wael Gamal1  
1Sohag University Hospital (Egypt)

PCNL IN CHILDREN WITH PREVIOUS OPEN STONE SURGERY  
Wael Gamal1  
1Sohag University Hospital (Egypt)

MANAGEMENT OF LOWER CALYCEAL (LC) STONES <1.5 CM: RANDOMISED CONTROLLED TRIAL MICROPERIC VS. RIRS  
Ravindra Sabnis1, Amit Bhatt1, Ashish Goti1, Shashikant Mishra1, Arvind Ganpule1, Mahesh Desai1  
1Muljibhai Patel Urological Hospital (India)

COMPARISON OF PERCUTANEOUS NEPHROLITHOTOMY WITH OPEN STONE SURGERY FOR MANAGEMENT OF PATIENTS WITH LARGE STAGHORN CALCULI: A HEALTH ECONOMIC EVALUATION  
Friedrich Bo-Yuan Zhang1, Wun-Rong Lin1, Jong-Ming Hsu1, Maelco Chen1, Pai-Kai Jiang1, Wei-Kung Tsai1, Stone Yang1, Huang-Kuang Chang1, Wen-Chou Lin1, Yung-Chiong Chow1  
1Department of Urology, Mackay Memorial Hospital (Taiwan)

COMPARISON OF PERCUTANEOUS NEPHROLITHOTOMY AND RETROGRADE INTRARENAL SURGERY IN TREATING RENAL STONES  
Tae-sik Ahn1, Juhyun Park2, Ha Ni Lee2, Minyong Kang1, Seung Bae Lee2, Hwancheol Son1, Hyeon Jeong2, Hyeon Ho Kim1, Sung Yong Cho1  
1Seoul National University Hospital (South Korea)  
2Seoul Metropolitan Government Seoul National University Borame Medical Center (South Korea)

SUCCESS OF PERCUTANEOUS NEPHROLITHOTOMY : A RETROSPECTIVE STUDY COMPAIRING SPINAL ANESTHESIA WITH GENERAL ANESTHESIA IN PCNL  
Nur Rasyid1, Ponco Birowo1, Ari Astram1, Pryambodho P1, Susilo Candra1  
1Department of Urology, Cipto Mangunkusumo Hospital/Faculty of Medicine Universitas Indonesia (Indonesia)

GUY’S STONE SCORE PREDICTS POST OPERATIVE STONE CLEARANCE OUTCOMES AFTER PERCUTANEOUS NEPHROLITHOTOMY - THE ASIAN PERSPECTIVE  
Arianto Yuwono1, Ya-Dong Lu1, Mira, Li-Juan Shen2, Yung-Khan Tan1  
1Department of Urology, Tan Tock Seng Hospital (Singapore)  
2Clinical Research Unit, Tan Tock Seng Hospital (Singapore)

PATIENTS WITH BMI>60 HAVE EQUIVALENT OUTCOMES AFTER PERCUTANEOUS NEPHROLITHOTOMY COMPARED TO SUPER AND MORBIDLY OBESE PATIENTS: SINGLE CENTER STUDY  
Necole M Streeper1, Andrew C Radtke1, Kristina L Penniston1, Stephen Y Nakada1  
1University of Wisconsin School of Medicine and Public Health (United States)

THE SAFETY AND EFFICACY BETWEEN PARAVERTEBRAL NERVE BLOCK ANESTHESIA AND SPINAL ANESTHESIA IN PERFORMING PERCUTANEOUS NEPHROLITHOTOMY  
Ponco Birowo1, Charles Johannes1, Nur Rasyid1, Pryambodho1  
1Division of Urology – Department of Surgery, Cipto Mangunkusumo Hospital, Faculty of Medicine Universitas Indonesia (Indonesia)  
2Department of Anaesthesiology, Cipto Mangunkusumo Hospital/Faculty of Medicine Universitas Indonesia (Indonesia)
MP16-01 SIGNIFICANTLY FEWER RATES OF STRUVITE STONES ARE SEEN IN CHINESE PATIENTS LIVING IN CHINA COMPARED TO CHINESE PATIENTS LIVING IN NORTH AMERICA
Jianxing Li1, Thomas Chi2, Wei guo Hu3, Lei Xia4, Qi Chen5, Wei Xue6, Hui He4, Qing Zhi Long5, Olga Arsovksa7, Pauline Filippo6, Eric Taylor8, Ryan Paterson1, Roger Sur1, Ben Chew5, Marshall Stoller6
1Peking University People’s Hospital (China) 2University of California (United States) 3Renji Hospital Shanghai Jiaotong University School of Medicine (China) 4The First Affiliated Hospital of Xian Jiaotong University (China) 5University of British Columbia (Canada) 6University of California (United States) 7University of California (United States)

MP16-02 INSULIN RESISTANCE CORRELATES WITH STONE BURDEN AND URINARY METABOLIC CHANGES IN NON-DIABETIC STONE FORMERS
Timothy Tran1, Mary Flynn1, John O’Bell1, Katherine Richman1, Gyan Pareek1
1Alpert Medical School of Brown University (United States)

MP16-03 CYSTINURIA RELATED STONE DISEASE IS A MANAGEABLE PROBLEM: EXPERIENCE OF A TERTIARY STONE CENTER KOOP-MAN S, MOVASSAGHI M, FUCHS G
Gerhard Fuchs1-2, Mehran Movassaghi1, Steven Koopman1
1Cedars Sinai Academic Urology Practice (United States) 2University of Southern California (United States)

MP16-04 GEOGRAPHIC DIFFERENCES IN THE QUALITY OF CARE FOR PATIENTS WITH METABOLIC STONE DISEASE
Abdulrahman Alruwaily1, Casey Dunn1, Maggie Bierlein1, John Asplin1, Khurshid Ghani1, J Stuart Wolf1, Brent Hollenbeck1, John Hollingsworth1
1University of Michigan Medical School (United States) 2Litholink Corporation (United States)

MP16-05 COMPARISON OF STONE COMPOSITION AND URINARY RISK FACTORS BETWEEN ELDERLY AND YOUNGER COHORT WITH NEPHROLITHIASIS
Yaniv Shilo1, Ilan Z. Kafka1, Robert M. Turner II1, John C. Lynam1, Stephen V. Jackman1, Michael C. Ost1, Timothy D. Averch1
1University of Pittsburgh Medical Center (United States)

MP16-06 THE CHALLENGES OF CYSTINURIC PATIENTS: A COHORT QUALITY ANALYSIS
Tara Nikonow1, Yaniv Shilo1, Ilan Z. Kafka1, John C. Lynam1, Sarah Sprauer1, Danielle Lapoint1, Michelle J. Semins1, Michael C. Ost1, Stephen V. Jackman1, Timothy D. Averch1
1University of Pittsburgh Medical Center (United States)

MP16-07 IMPACT OF NUTRITIONAL INTERVENTION ON URINARY PARAMETERS IN STONE FORMER PATIENTS
Oscar Fugita1, Nagila Damasceno1, Evelyn Aguchiku1, Gelba Pinto1, Lucy Hirata1, Juliana Machado1, Mariluce Friedrich1, Alexandra Melo1
1Hospital Universitário - Universidade De São Paulo (Brazil)

MP16-08 INCONSISTENCY AND VARIABILITY IN DIETARY OXALATE CONTENT REPORTING
Barbara Shorter1, David Hoenig1, Sammy Elsamra1, Arthur Smith1, Zeph Okeke1
1Smith Institute for Urology, North Shore LIJ Health System (United States)

MP16-09 DOES MEDICAL MANAGEMENT OF CYSTINURIA REDUCE STONE INTERVENTIONS?
Richard Shin1, Ramy Yousef1, Fernando Cabrera1, Adam Kaplan1, Muhammad Iqbal1, Jonathan Hanna1, Borno Kassiri1, Momin Ghaffari1, Michael Ferrandino1, Charles Scales1, Glenn Preminger1, Michael Lipkin1
1Division of Urologic Surgery, Duke University (United States) 2Department of Urologic Surgery, University of California, Irvine (United States) 3Department of Urology, Shifa International Hospital (Pakistan) 4Duke Clinical Research Institute, Duke University (United States)

MP16-10 COMPARING URIC ACID STONE ATTENUATION IN LOW-DOSE AND CONVENTIONAL NONCONTRAST COMPUTERIZED TOMOGRAPHY
Daniel Faaborg1, Muhammad Alsouf4, Roger Li1, Michelle Lightfoot1, Kristene Myklak1, Gaudencio Ogin1, Javier Arenas1, D Duane Baldwin1
1Loma Linda University Medical Center (United States)

MP16-11 DO URINARY CYSTINE PARAMETERS PREDICT CLINICAL STONE ACTIVITY?
Justin Friedlander1, Jodi Antonelli1, Monica Morgan1, Daniel Mollengarten2, Sara Best1, Margaret Pearle2
MP16-12 IS HYPERURICOSURIA IN STONE PATIENTS PREDICTIVE OF MYOCARDIAL INFARCTION RISK?
Sri Sivalingam1, Ganesh Kartha1, Hemant Chaparala1, Juan Calle1, Manoj Monga1
1Cleveland Clinic (United States)

MP16-13 OUTCOMES AND COMPLICATIONS OF UROLITHIASIS TREATMENT IN ADULT SPINA BIFIDA PATIENTS
Robert Brown1, Carl Sarkissian1, Manoj Monga1, Sri Sivalingam1
1Cleveland Clinic Foundation (United States)

MP16-14 THE IN VITRO EMPIRICAL STUDY OF PROBABILITY FOR UN-ENHANCED LOW-DOSE CT SCAN IN COMPOSITION ANALYSIS OF URINARY CALCULUS
Licheng Jiang1, Zhonghua Xu2, Yingchen Zhang1, Xueing Wang1, Jiyang Ding1, Huijie Ren1, Zhiqing Wu1, Tao Wang1, Yufeng Cheng1
1Department of Urology, the 148th Center Hospital of Jinan Military Area, PLA (China)
2Department of Urology, Qilu Hospital, Shandong University (China)

MP16-15 THE CLINICAL INVESTIGATION OF PROBABILITY FOR UN-ENHANCED LOW-DOSE CT SCAN IN PREDICTING COMPOSITION OF URINARY CALCULUS
Licheng Jiang1, Zhonghua Xu2, Yingchen Zhang1, Xueing Wang1, Jiyang Ding1, Huijie Ren1, Zhiqing Wu1, Tao Wang1, Yufeng Cheng1
1Department of Urology, the 148th Center Hospital of Jinan Military Area, PLA (China)
2Qilu Hospital, Shandong University (China)

MP16-16 A RETROSPECTIVE STUDY TO IDENTIFY DIFFERENCES IN THE BIOCHEMICAL MARKERS OF PRIMARY HYPERPARATHYROIDISM PATIENTS WITH AND WITHOUT STONES.
David Mathews1, Gurpreet Rakhra1, Kesavapillai Subramonian1
1University Hospitals Birmingham NHS Foundation Trust (United Kingdom)

MP16-17 URINARY STONE RISK PROFILES IN STONE FORMER PATIENTS: A PRELIMINARY STUDY IN INDONESIA
Ponco Birowo1, Tommie Prasetyo1, Saptawati Bardosomo1, Yulhasri Yulhasri2, Nur Rasyid1
1Division of Urology – Department of Surgery, Cipto Mangunkusumo Hospital, Faculty of Medicine Universitas Indonesia (Indonesia)
2Department of Medical Nutrition, Faculty of Medicinie Universitas Indonesia (Indonesia)
3Department of Biochemistry and Molecular Biology, Faculty of Medicine Universitas Indonesia (Indonesia)

MP16-18 EVALUATION OF METABOLIC STONE CLINIC IMPLEMENTATION WITH REGARD TO RECURRENTE OF URINARY STONE FORMATION
Nicola Reeves2, Aditya Raja1, Soha Zouwail1, Hrishi Joshi1
1University Hospital of Wales (United Kingdom)

MP16-19 PROVIDER VARIATION IN THE QUALITY OF METABOLIC STONE MANAGEMENT
John Hollingsworth1, Casey Daun1, Abdul Alawai2, Maggie Bierlein1, John Asplin2, Stuart Wolf3, Khurshid Ghani1, Brent Hollenbeck1
1University of Michigan, Department of Urology (United States)
2Litholink Corporation (United States)

MP16-20 DEGREE OF FAMILY HISTORY INFLUENCES STONE RECURRENT RISK IN ADULT AND PEDIATRIC STONE FORMERS
Nicole M. Streeper1, Kristina E. Penniston1, Stephen Y Nakada1
1University of Wisconsin School of Medicine and Public Health (United States)

MP16-21 VALUE OF METABOLIC EVALUATION AND DIRECTED MEDICAL THERAPY IN PATIENTS WITH STRUVITE STONES
Ramy Youssif1, Richard Shill1, Muhammad Iqbal2, Adam Kaplan1,2, Fernando Cabrera1, Jonathan Hanna1, Anika Ackerman1, Andreas Neisius1, Charles Scales1,4, Michael Ferrandino1, Glenn Preminger1, Michael Lipkin1
1Duke University Medical Center (United States)
2Shifa International Hospital (Pakistan)
3University of California, Irvine (United States)
4Duke Clinical Research Institute (United States)
5Universitätsmedizin Mainz (Germany)

MP16-22 HOW WELL DO 24- HOUR URINE TESTS CORRELATE WITH THE CRYSTALLINE COMPONENTS OF RENAL CALCULI?
Marianthi Vatrika1, Thomas Smith1, Stephanie Gounaris-Shannon1, Adrian Simoes1, Rajeshwar Krishnan1, Nitin Shrotri1
1Kent and Canterbury NHS Trust (United Kingdom)

MP16-23 UPPER TRACT CALCULI AND ASSOCIATED SURGICAL COMPLICATIONS IN SPINA BIFIDA PATIENTS
Hsin-Hsiao Wang1, Michael Lipkin1, Sherry Ross1, Jonathan Routh1
1Duke University Medical Center (United States)

MP16-24 ESTIMATING THE ECONOMIC IMPACT OF PEDIATRIC UROLITHIASIS
Hsin-Hsiao Wang1, John Wiener1, Jonathan Routh1
1Duke University Medical Center (United States)

MP16-25 THE CLINICAL AND DEMOGRAPHIC FACTORS ASSOCIATED WITH PATIENTS’ COMPLIANCE AND INFLUENCE ON URINARY STONE FORMATION IN FIRST-TIME URETERAL STONE FORMERS
Yong-June Kim1, Young-Won Kim1, Ho-Won Kang1, Sang-Gun Lee1, Won-Tae Kim1, Seok-Joong Yoon1, Wun-Joe Kim1, Sang-Cheol Lee1
1Chungbuk National University (South Korea)
MP16-26 DOES RENAL INSUFFICIENCY INFLUENCE ON STONE RECURRENCE RISK IN FIRST-TIME STONE FORMERS?
Sang-Cheol Lee¹, Young-Won Kim¹, Hyung-Jee Kim², Ho-Won Kang¹, Sung-Phil Seo¹, Won-Tae Kim¹, Seok-Joong Yun¹, Won-Jae Kim¹, Yong-June Kim¹
¹Chungbuk National University (South Korea)
²Dankook University (South Korea)

MP16-27 DOES HYPERTENSION IMPACT 24-HOUR URINE PARAMETERS IN PATIENTS WITH NEPHROLITHIASIS?
Christopher Hartman¹, Justin Friedlander², Daniel Moreira¹, David Leavitt¹, David Smith¹, Zeph Okeke¹
¹North Shore-LIJ Health System, The Smith Institute for Urology (United States)
²University of Texas, Southwestern (United States)

MP16-28 THE CORRELATION BETWEEN ABDOMINAL OBESITY AND STONE ANALYSIS IN KOREAN
Jea Whan Lee¹, Tae Hoon Oh¹, Whi-An Kwon¹, Seung Chol Park¹, Hee Jong Jeong¹, Il Young Seo¹
¹Wonkwang University (South Korea)

MP16-29 EFFECTIVENESS OF MEDICAL EXPULSIVE THERAPY FOR PEDIATRIC UROLITHIASIS: SYSTEMATIC REVIEW AND META-ANALYSIS
Hsin-Hsiao Wang¹, Nermarie Velázquez¹, Daniel Zapata¹, Sherry Ross¹, John Wiener¹, Michael Lipkin¹, Jonathan Routh¹
¹Duke University Medical Center (United States)

Friday, September 5
Moderated Poster Session (MP17) 03:45 pm–05:45 pm
Laparoscopic Surgery: New Technology 1
Room: RM 101 B
Moderator: Hiromitsu Mimata, Liqun Zhou, Yao-Chou Tsai

MP17-01 FLUORESCENCE - TARGETED LAPAROSCOPIC LYMPH NODE DISSECTION IN PROSTATE CANCER
Stephan Hruby¹, Christine Englberger¹, Lukas Lasuardi¹, Tobias Schaez¹, Thomas Kunit¹, Martina Hager¹, Guenter Janetschek¹
¹Department of Urology, Paracelsus Medical University (Austria)
²Department of Pathology, Paracelsus Medical University (Austria)

MP17-02 ULTRA-TARGETED FLUORESCENCE LYMPHNODE DISSECTION IN PROSTATE CANCER
Stephan Hruby¹, Christine Englberger¹, Lukas Lasuardi¹, Tobias Schaez¹, Thomas Kunit¹, Matthias Messnitzter¹, Rosemarie Forster¹, Martina Hager¹, Guenter Janetschek¹
¹Department of Urology, Paracelsus Medical University (Austria)
²Department of Pathology, Paracelsus Medical University (Austria)

MP17-03 SUTURLESS LAPAROSCOPIC PARTIAL NEPHRECTOMY USING LASER TISSUE WELDING
Gilad Amiel¹, Tung Shu¹, Yasmin Wadia²
¹Baylor College of Medicine (United States)
²Laser Tissue Welding, Inc. (United States)

MP17-04 LAPAROSCOPIC SACROCLOPOPEXY USING BARBED SUTURES FOR MESH FIXATION AND PERITONEAL CLOSURE: A SAFE OPTION TO REDUCE OPERATIONAL TIMES
Jason Kyriazis¹, Marinos Vasilas¹, Mehmet Ozsoy¹, Panagiotis Kallidonis²
¹Department of Urology, Medical University of Vienna (Austria)
²Department of Urology, University of Patras (Greece)

MP17-05 WHAT’S MORE IMPORTANT FOR LAPAROSCOPIC PERFORMANCE OF NOVICE SURGEONS: MODALITY OF VISION OR PREVIOUS EXPERIENCE?
Mehmet Ozsoy¹,², Jason Kyriazis², Marinos Vasilas², Vasileios Panagopoulos², Panagiotis Kallidonis², Evangelos Liatsikos²
¹Department of Urology, Medical University of Vienna (Austria)
²Department of Urology, University of Patras (Greece)

MP17-06 INCORPORATING THREE DIMENSIONAL (3D) VISION IN LAPAROSCOPY: LEARNING CURVE OF AN EXPERT!
Mehmet Ozsoy¹,², Jason Kyriazis², Marinos Vasilas², Vasileios Panagopoulos², Panagiotis Kallidonis², Evangelos Liatsikos²
¹Department of Urology, Medical University of Vienna (Austria)
²Department of Urology, University of Patras (Greece)

MP17-07 COSMETIC IMPACT OF PORT VERSUS PORTLESS NEEDLESCOPIC SURGERY-A PROSPECTIVE, RANDOMIZED, SINGLE-BLINDED STUDY
Javier L. Arenas¹, Janna Vassantachart¹, Jacob Martin¹, Jonathan Maldonado¹, Michael Lee¹, Alexander Yeo¹
MP17-08 5-YEAR FUNCTIONAL OUTCOME OF LAPAROENDOSCOPIC SINGLE SITE PERITONEAL DIALYSIS CATHETER INSERTION FOR THE MANAGEMENT OF PATIENTS WITH CHRONIC KIDNEY DISEASE UNDER PERITONEAL DIALYSIS
Kuei-mei Li1, Thomas Y. Hsueh2,4,5, Yi-Shen Lin3, Yi-Chun Chiu1,4, Allen W. Chin2,4,5
1Division of Urology, Department of Surgery, Taipei city Hospital Zhongxiao branch (Taiwan)
2Division of Urology, Department of Surgery, Taipei city Hospital Ren-Ai branch (Taiwan)
3Division of Nephrology, Department of Internal Medicine, Taipei city hospital Zhongxiao branch (Taiwan)
4Department of Urology, School of Medicine, National Yang-Ming University (Taiwan)
5Institute of Traditional Chinese Medicine, School of Medicine, National Yang-Ming University (Taiwan)

MP17-09 IMPACT OF BARBED SUTURE IN CONTROLLING DORSAL VEIN COMPLEX DURING LAPAROSCOPIC RADICAL PROSTATECTOMY
Ali Serdar Güzên1, Theodoros Tokas1, Yigit Akin1, Jan Klein1, Jens Rassweiler1
1SLK-Kliniken, University of Heidelberg (Germany)

MP17-10 NEPHROSCOPE ASSIST LAPAROSCOPIC PERITONEAL DIALYSIS CATHETER PLACEMENT—A NEW APPLICATION
Ga-Shun Lai1, Jian-Ri Li1, Yen-Chuan Ou1, Chen-Li Cheng1
1Taichung Veterans General Hospital (Taiwan)

MP17-11 RETROPERITONEAL LAPAROSCOPIC SURGERY IN THE TREATMENT OF PRIMARY RETROPERITONEAL TUMOR
Yuchuan Hou1, Tao Yang1, Hui Guo1, Erpeng Liu1, Lingbo Yang1
1The First Hospital of Jilin University (China)

MP17-12 OUTCOMES OF NON-ISCHEMIC LAPAROSCOPIC PARTIAL NEPHRECTOMY USING A MICROWAVE TISSUE COAGULATOR FOR SMALL RENAL TUMORS
Takeshi Inoue1, Yasuhiro Nakai1, Satoshi Anai1, Kazumasa Torimoto1, Katsuya Aoki1, Eijiyo Okajima1, Shojo Sammu1, Kiyohide Fujimoto1
1Nara Medical University (Japan)

MP17-13 LAPAROSCOPIC URACHUS RESECTION (REPORT OF 2 CASES)
Jun Zhou1, Chaozhuo Liang1, Haoqiang Shi1
1The First Affiliated Hospital of Anhui Medical University, (China)

MP17-14 SUTURELESS LAPAROSCOPIC PARTIAL NEPHRECTOMY
Ma Lin1, Zhang Shudong1, Huang Yi1, Liu Ke1, Zhang Hongxian1, Tian Xiaojun1, Bi Hai1
1Peking University Third Hospital (China)

MP17-15 LAPAROSCOPIC RADICAL NEPHRECTOMY BY MODIFIED PFANNENSTIEL INCISION
Zhang Shudong1, Ma Lulin1, Huang Yi1, Liu Ke1, Zhang Hongxian1, Qi Min1
1Peking University Third Hospital (China)

MP17-16 LAPAROSCOPIC ACCESS: MULTICENTRIC ANALYSIS IN MORE THAN 65,000 PROCEDURES
Matteo Ram1, Angelo Territo1, Eugenio Martorana1, Ahmed Ghaith1, Salvatore Micali1, Giampaolo Bianchi1
1University of Modena and Reggio Emilia (Italy)

MP17-17 DORSAL VEIN COMPLEX LIGATION-FREE TECHNIQUE FOR LAPAROSCOPIC RADICAL PROSTATECTOMY: A SINGLE-CENTER EXPERIENCE OF CHINESE
Chunxiao Liu1, Shaobo Zheng1, Hulin Li1, Yawen Xu1, Abai Xu1, Binshen Chen1, Haiyan Shen1, Peng Xu1
1Zhujiang Hospital, Southern Medical University (China)

MP17-18 A HYPOGASTRIC SUBCUTANEOUS APPROACH FOR ENDOSCOPIC INGUINAL LYMPHADENECTOMY: CHINESE PRELIMINARY EXPERIENCE
Chunxiao Liu1, Shaobo Zheng1, Hulin Li1, Yawen Xu1, Abai Xu1, Binshen Chen1, Haiyan Shen1, Peng Xu1
1Zhujiang Hospital, Southern Medical University (China)

MP17-19 AVAILABILITY OF VIO SOFT-COAGULATION FOR LAPAROSCOPIC PARTIAL NEPHRECTOMY; INITIAL EXPERIENCE IN 15 CASES
Kyohei Kurose1, Daisuke Tanaka1, Osamu Fujita1, Daisuke Manabe1, Katuji Takeda1
1Kagawa Prefectural Central Hospital (Japan)

MP17-20 LAPAROSCOPIC OFF-CLAMP PARTIAL NEPHRECTOMY USING SOFT COAG ELECTROSURGICAL UNIT
Fumiya Hongo1, Akihiro Kawauchi2, Yasuhiro Yamada1, Takashi Ueda1, Atsuko Fujihara1, Susumu Kageyama2, Tetsuya Furuta1, Yasuyuki Naya1, Kazumi Miki1, Koji Okihara1, Tsuenehara Miki1
1Kyoto Prefectural University of Medicine (Japan)
2Shiga University of Medical Science (Japan)

MP17-21 A NOVEL TECHNIQUE OF NON-TISSUE SUTURING LAPAROSCOPIC PARTIAL NEPHRECTOMY
Nobuyuki Fukuawada1, Hiroshi Tanaka1, Naoya Iwashara1, Takahiro Suzuki2, Ai Kawaguchi1, Michiko Nakamura1, Tomoshige Akino1, Hiroshi Harada1, Toshimori Seki1
1Department of Urology, Sapporo City General Hospital (Japan)
**MP17-22** COMPARISONS OF PERCUTANEOUS VERSUS RETROPERITONEOSCOPIC CRYOABLATION FOR SMALL RENAL MASSES: MID-TERM FOLLOW-UP

Lin-Nei Hsu1, Po-Hui Chiang1, Shu-Huei Shen2, Wei-Ching Lee1, Yuao-Tso Cheng1

1Department of Urology, Chang Gung Memorial Hospital – Kaohsiung medical center, Chang Gung University College of Medicine, Kaohsiung, Taiwan (Taiwan)

2Department of Radiology, Taipei Veterans General Hospital, Taiwan (Taiwan)

**MP17-23** VAGINAL EXTRACTION OF EN BLOC SPECIMEN FOLLOWING LAPAROSCOPIC TOTAL URINARY TRACT EXENTERATION

Chen-Yu Wu1, Victor Chia-Hsiang Lin2, Yu-Chi Chen1

1Department of Urology, E-Da Hospital (Taiwan)

2School of Medicine for International Students, I-Shou University (Taiwan)

**MP17-24** LAPAROENDOSCOPIC SINGLE-SITE CRYPTORCHIDECTOMY IN THE TREATMENT OF CRYPTORCHIDISM

Pengjie Wu1,2, Gang Zhu1,2, Bin Jin1, Shengjie Liu1, Hong Ma1, Jianlong Wang1, Ben Wan1, Jianye Wang1,2

1Department of Urology, Beijing Hospital of the Ministry of Health (China)

2Graduate School of Peking Union Medical College (China)

**MP17-25** COMPLETE OFF-CLAMP ZERO ISCHEMIA PARTIAL NEPHRECTOMY WITHOUT THE EXPOSURE OF RENAL ARTERY UNDER NORMAL BLOOD PRESSURE: INITIAL EXPERIENCES HAVE REVEALED SHORT OPERATION TIME

Hitoshi Yanaihara1, Hirofumi Kaguyama1, Hirofumi Sakamoto1, Fuminari Hanashima1, Kayo Aonuma1, Kaori Matsuda1, Yoko Nakahira1, Hirotaka Asakura1

1Saitama Medical University (Japan)

**MP17-26** LAP. NEPHROURETERECTOMY: HOW TO KEEP ONCOLOGICAL PRINCIPLE INTACT

N I Bhatiya1,2,3

1Square Hospital (Bangladesh)

2Bangladesh Medical College Hospital (Bangladesh)

3Popular Medical College Hospital (Bangladesh)

**MP17-27** PURE TRANSVGAGINAL NATURAL ORIFICE TRANSLUMINAL ENDOSCOPIC SURGERY (NOTES) FOR NEPHRECTOMY: REPORT OF 16 CASES

Xiaofeng Zou1, Guoxi Zhang1, Rihai Xiao1, Yuanhu Yuan1, Yijun Xue1

1First Affiliated Hospital of Gannan Medical University (China)

**MP17-28** RANDOMIZED CONTROLLED TRIAL COMPARING TRANSVGAGINAL NATURAL ORIFICE TRANSLUMINAL ENDOSCOPIC SURGERY (NOTES)-ASSISTED ADRENALECTOMY AND CONVENTIONAL LAPAROSCOPIC ADRENALECTOMY

Guoxi Zhang1, Yijun Xue1, Xiaofeng Zou1, Yuanhu Yuan1, Rihai Xiao1

1First Affiliated Hospital of Gannan Medical University (China)

**MP17-29** TRANSVGAGINAL NATURAL ORIFICE TRANSLUMENAL ENDOSCOPIC SURGERY (NOTES)-ASSISTED VERSUS CONVENTIONAL LAPAROSCOPIC NEPHRECTOMY: A PROSPECTIVE, NON-RANDOMIZED TRIAL AT A SINGLE CENTER

Yijun Xue1, Xiaofeng Zou1, Guoxi Zhang1, Yuanhu Yuan1, Rihai Xiao1

1First Affiliated Hospital of Gannan Medical University (China)

**MP17-30** PROSPECTIVE NON-RANDOMIZED COMPARISON OF SURGICAL INVASIVENESS OF TRANSVGAGINAL NATURAL ORIFICE TRANSLUMENAL ENDOSCOPIC SURGERY (NOTES)-ASSISTED AND CONVENTIONAL LAPAROSCOPIC RADICAL NEPHRECTOMY

Xiaofeng Zou1, Yijun Xue1, Guoxi Zhang1, Yuanhu Yuan1, Rihai Xiao1

1First Affiliated Hospital of Gannan Medical University (China)

**MP17-31** A PROSPECTIVE INVESTIGATION OF THE IMPACT OF TRANSVGAGINAL NATURAL ORIFICE TRANSLUMENAL ENDOSCOPIC SURGERY (NOTES)-ASSISTED LAPAROSCOPIC NEPHRECTOMY ON FEMALE SEXUAL FUNCTION AND QUALITY OF LIFE

Bo Jiang1, Xiaofeng Zou1, Yuqing Wu1, Guoxi Zhang1, Yuanhu Yuan1

1First Affiliated Hospital of Gannan Medical University (China)

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**Friday, September 5**

Moderated Poster Session (MP18) 03:45 pm–05:45 pm

Robotic Surgery New Technology

Room: RM 101 C

Moderator: Marius C. Conradi, Ravi Kulkarni, Wan-Rong Lin

**MP18-02** ROBOTIC ASSISTED RADICAL PROSTATECTOMY OUTCOMES FOR OBESE PATIENTS

Giovanni Greaves1, Sue-Jean Yu1, Andrew J. Lightfoot1, Benjamin F. Katz1, Eton Llukani1, Kelly Monohan1, Phillip Mucksavage1, David I. Lee1

1University of Pennsylvania (United States)
MP18-03 ASSOCIATION BETWEEN URETHRAL AND VESICAL ANATOMICAL FEATURES AND EARLY RECOVERY OF URINARY CONTINENCE AFTER ROBOT-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY

Nobuhiro Haga1, Masao Kataoka1, Nobuhiro Kashiwa1, Shin Kamagai1, Ken Kuma1, Yuichi Sato1, Tomohiko Yamauchi1, Kei Ishibashi1, Ken Aikawa1, Yoshiyuki Kojima1
1Fukushima Medical University School of Medicine (Japan)

MP18-04 IMPACT OF PROSTATIC APICAL SHAPE ON EARLY RECOVERY OF CONTINENCE AFTER ROBOT-ASSISTED RADICAL PROSTATECTOMY

Hakmin Lee1, Kwangmo Kim1, Sung Il Hwang1, Hak Jong Lee1, Seok-Soo Byun1, Sang Eun Lee1, Sung Kyu Hong1
1Seoul National University Bundang Hospital (South Korea)

MP18-05 CLINICAL ANALYSIS OF ROBOTIC ASSISTED LAPAROSCOPIC RADICAL CYSTECTOMY WITH A MODIFIED EXTRACORPOREAL DOUBLE-U SHAPED ORTHOTOPIC NEOBLADDER FOR THE TREATMENT OF MUSCLE INVASIVE BLADDER CANCER

Zhou-Jun Shen1, Xiao-Jing Wang1, Wei He1
1Ruijin Hospital, Shanghai Jiaotong University, School of Medicine (China)

MP18-06 SAFETY OF SELECTIVE NERVE SPARING IN HIGH RISK PROSTATE CANCER DURING ROBOTIC ASSISTED RADICAL PROSTATECTOMY

Srinivas Samavedi1, Suneel Pigilam1, Haidar Abdul-Mahsin1, Kenneth Palmer1, George Ebra1, Rafael Coelho1, Vipul Patel1
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MP18-07 PERIOPERATIVE AND ONCOLOGICAL OUTCOMES IN HIGH RISK ELDERLY PATIENTS

Srinivas Samavedi1, Suneel Pigilam1, Haidar Abdul-Mahsin1, Kenneth Palmer1, George Ebra1, Rafael Coelho1, Vipul Patel1
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MP18-08 MIDTERM FUNCTIONAL AND ONCOLOGICAL OUTCOMES OF ROBOTIC ASSISTED RADICAL PROSTATECTOMY IN D’AMICO HIGH RISK PROSTATE CANCER PATIENTS

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MP18-09 IMPACT OF PRIOR ABDOMINAL SURGERY ON ROBOTIC ASSISTED RADICAL PROSTATECTOMY

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MP18-10 CONTINENCE OUTCOMES ROBOTIC ASSISTED RADICAL PROSTATECTOMY IN SUBOPTIMAL PATIENTS

Srinivas Samavedi1, Suneel Pigilam1, Haidar Abdul-Mahsin1, Kenneth Palmer1, George Ebra1, Rafael Coelho1, Vipul Patel1
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MP18-11 AGE STRATIFIED PROPENSITY SCORE MATCHED STUDY OUTCOMES OF ROBOTIC ASSISTED RADICAL PROSTATECTOMY

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MP18-12 DOES THE UROLOGIST’S EXPERIENCE INFLUENCE CHOICE OF ACTIVE SURVEILLANCE IN MEN WITH PROSTATE CANCER?

Gary W. Chien1, Brian J. Kim1, Jeff M. Slezak2, Albert Mikhail3, Edward Wu3, Steven J. Jacobsen2, William Chu1
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MP18-13 POORER QUALITY OF LIFE IS ASSOCIATED WITH INCREASED HEALTHCARE UTILIZATION IN MEN FOLLOWING ROBOT-ASSISTED RADICAL PROSTATECTOMY

Gary W. Chien1, Madhur Merchant1, Jeff M. Slezak2, Albert Mikhail1, Kimberly R. Porter2, Joy S. Gelfond2, Steven J. Jacobsen2, Brian J. Kim1
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MP18-14 THE IMPACT OF SURGICAL CASELOAD VOLUME ON QUALITY OF LIFE IN MEN AFTER ROBOT-ASSISTED RADICAL PROSTATECTOMY

Gary W. Chien1, Madhur Merchant1, Jeff M. Slezak2, Kimberly R. Porter2, Joy S. Gelfond2, Steven J. Jacobsen2, Brian J. Kim1
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2Kaiser Permanente, Department of Research and Evaluation (United States)

MP18-15 THE IMPACT OF SOCIO-DEMOGRAPHIC FACTORS ON ACTIVE SURVEILLANCE CHOICE IN MEN WITH LOW-RISK PROSTATE CANCER

Gary W. Chien1, Madhur Merchant1, Jeff M. Slezak2, Kimberly R. Porter2, Joy S. Gelfond2, Steven J. Jacobsen2, Brian J. Kim1
1Kaiser Permanente, Los Angeles Medical Center, Department of Urology (United States)
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MP18-16 VIABILITY OF HOSPITAL AT HOME URETERIC STENT REMOVAL 7 DAYS POST CYSTECTOMY?
Thomas Smith1, Enne Dogany1, Elizabeth Williams2, Stephanie Gounaris2, Ramesh Thurairaja2
1Canterbury Hospital (United Kingdom) 2Guy’s and St Thomas’ Hospital (United Kingdom)

MP18-17 THE RECOVER OF URINARY CONTINENCE AND ERECTILE FUNCTION AFTER ROBOTIC-ASSISTED RADICAL PROSTATECTOMY—ONE SINGLE INSTITUTE STUDY
Shih-Yen Lu1, Hung-Keng Li2, Hsiao-Jen Chung1,2, Alex T.L. Lin1,2, Kuang-Kuo Chen1,2
1Department of Urology Taipei Veterans General Hospital (Taiwan) 2Shu-Tien Urological Science Research Center (Taiwan)

MP18-18 ONCOLOGY AND FUNCTIONAL OUTCOME IN ELDER PEOPLE WITH PROSTATE CANCER RECEIVED ROBOTIC ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY, IN COMPARISON WITH RADIOTherapy: A SINGLE-CENTER EXPERIENCE
Shen-Chun Hung1, Yen-Chuan Ou1, Cheng-Kuang Yang1, Chen-Li Cheng1, Hao-Chung Ho1, Kun-Yuan Chiu1, Chung-Kuang Su1, Chen-Shiung Wang2, Chuan-Shu Chen2, Jian-Ri Li1
1Division of Urology, Department of Surgery, Taichung Veterans General Hospital, Taiwan (Taiwan)

MP18-19 NATIONAL MULTI-INSTITUTIONAL COMPARISON OF 30-DAY POSTOPERATIVE COMPLICATION AND READMISSION RATES BETWEEN OPEN RETROPUBIC RADICAL PROSTATECTOMY AND ROBOT-ASSISTED LAPAROSCOPIC PROSTATECTOMY USING NSQIP
Barry McGuire1, Mathew Pilecki1, Umang Jain1, John Kim1, Robert Nadler1
1Northwestern University Feinberg School of Medicine (United States)

MP18-20 THE OUTCOME OF PENTAFECTA IN 212 CASES OF ROBOTIC-ASSISTED RADICAL PROSTATECTOMY WITH BILATERAL NEUROVASCULAR BUNDLE PRESERVATION
Yen-Chuan Ou1, CK Yang1
1Taichung Veterans General Hospital (Taiwan)

MP18-21 EXPERIENCE OF COMPLICATION IN 800 CASES OF ROBOTIC-ASSISTED RADICAL PROSTATECTOMY BY A SINGLE SURGEON
Yen-Chuan Ou1, CK Yang1
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MP18-22 THE IMPACT OF ANATOMICAL DIMENSIONS USING PREOPERATIVE MAGNETIC RESONANCE IMAGING ON THE LEARNING CURVE FOR ROBOT-ASSISTED LAPAROSCOPIC PROSTATECTOMY
Akhisa Yao1, Hiroto Iwamoto1, Shuichi Morizane1, Takehiro Sejima1, Astushi Takenaka1
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MP18-23 ROBOTIC ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY AFTER TRANS-URETHRAL RESECTION OF THE PROSTATE
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MP18-24 PNEUMOPERITONEUM PRESSURE OF 20 MM HG IS SAFE IN patients UNDERGOING ROBOT-ASSISTED RADICAL PROSTATECTOMY
Neal Patel1, Philip T. Zhao2, Michael Dinizo2, Parth K. M. odi2, Amirali Sa Imasi2, Jaspreet Parihar2, Steven H. Ginsberg1, Yun-Sok H2, Isaac Yi Kim1
1Section of Urologic Oncology and Department of Anesthesia, Rutgers Cancer Institute of New Jersey (United States) 2Rutgers Robert Wood Johnson Medical School (United States)

MP18-25 INCORPORATION OF THE GREENLIGHT-SIM®/C212 SIMULATOR AT THE ANNUAL QUEBEC UROLOGY OBJECTIVE STRUCTURED CLINICAL EXAMINATIONS
Sero Andonian1, Mohamed A. Elkoushy1, Nader Fahmy1, Serge Carrier1, Mostafa M. Elhilali1, Yasser Noureldin1,2
1Division of Urology, McGill University Health Centre, McGill University (Canada) 2Urology Department, Benha University Hospital, Benha University (Egypt)

MP18-26 PRESSURE ANALYSIS OF LAPAROSCOPIC SURGERY USING THE FORCEPS WITH SENSOR
Kimito Osaka1, Manabu Nagasaka1, Yoshinobu Kubota1, Kazuhide Makiyama1
1Yokohama City University (Japan)

MP18-27 GENDER PREFERENCES IN UROLOGIC CARE
Jessica Kreshover1, Louis Kavoussi1
1Arthur Smith Institute of Urology (United States)

MP18-28 IMPROVEMENT OF PROCEDURAL SKILLS WITH A SHORT-TERM ROBOTIC PEDIATRIC UROLOGY HANDS-ON TRAINING COURSE
Monty Aghazadeh1, Mesrur Selcuk Silay2, David Koh2, Patricio Gargollo2, Chester Koh2, Alvin Goh3
1Baylor College of Medicine (United States) 2Texas Children’s Hospital/Baylor College of Medicine (United States) 3Houston Methodist Hospital (United States)
MP19-01 MAGNETIC BLACKSTAR® URETER STENT – FEASIBILITY STUDY
Marie-Claire Rassweiler1, Maurice-Stephan Michel2, Manuel Ritter1
1University Medicine Mannheim (Germany)

MP19-02 A NOVEL MINI-INCISION NEPHROURETERECTOMY FOR THE TREATMENT OF UPPER TRACT UROTHELIAL CANCER: A 13-YEAR EXPERIENCE
Chia-Cheng Yu1,2,3, Yu-Cheng Chang1,2,3, I-Hsuan Chen1, Jen-Tai Lin1, Jeng-Yu Tsai1,2,3, Yin-Shen Chen4, Lin-Hsiaung Yuan5,6, Tony Wu1,2
1Division of Urology, Department of Surgery, Kaohsiung Veterans General Hospital (Taiwan)
2National Yang-Ming University, School of Medicine (Taiwan)
3Department of Pharmacy, Tajen University (Taiwan)

MP19-03 THE USE OF BIDIRECTIONAL BARBED SUTURE DURING ROBOTIC ASSISTED RADICAL PROSTATECTOMY: IMPACT ON THE PERIOPERATIVE AND FUNCTIONAL OUTCOMES
Haidar Abdul-Muhsin1, Rair Valero1, Srinivas Samavedi1, Bernardo Rocco1, Rafael Coelho1, Kenneth Palmer1, Goerge Ebra1, Vipul Patel1
1Global Robotics Institute (United States)

MP19-04 SENSITIVITY OF NOVEL FLUORESCENCE URINE CYTOLOGY USING 5-AMINOLEVULINIC ACID (5-ALA) IS HIGHER THAN THAT OF CONVENTIONAL URINE CYTOLOGY
Satoshi Anai1, Yasushi Nakai1, Makito Miyake1, Yoshihiro Tatsumi1, Masaomi Kuvada1, Takeshi Inoue1, Yoshitomo Chihara1, Nobumichi Tanaka1, Yoshihiro Hiro1, Kiyohide Fujimoto1
1Nara Medical University (Japan)

MP19-05 NOVEL CONTRAST-ENHANCED ULTRASOUND AGENTS FOR SENTINEL LYMPH NODE DETECTION IN PENILE CANCER
Tom Mitchell1,2,3, Shah Rukh Abbas1, Elizabeth A M Hall4
1West Suffolk NHS Foundation Trust (United Kingdom)
2Cambridge University Hospitals NHS Foundation Trust (United Kingdom)
3Institute of Biotechnology, Department of Chemical Engineering and Biotechnology, University of Cambridge (United Kingdom)

MP19-06 ENDOSCOPIC THERAPY COMBINED ANTEGRADE PERCUTANEOUS APPROACH AND RETROGRADE TRANSURETHRAL APPROACH FOR URETERAL OBSTRUCTION AFTER KIDNEY TRANSPLANTATION
Lei Liu1, Lulin Ma1, Xiaofei Hou1, Chunlei Xiao1
1Urology department, Peking University Third Hospital (China)

MP19-07 SILS PLUS ABDOMINAL IRRIGATION FOR RETROPERITONEAL ORGANS
Tatsuo Igarashi1, Masayuki Teranuma2, Takuro Ishii3, Yukio Naya1
1Center for Frontier Medical Engineering, Chiba University. (Japan)
2Division of Artificial System Science, Graduate School of Engineering, Chiba University. (Japan)
3Teikyo University, Medical Center. (Japan)

MP19-08 DEVELOPMENT OF A NEW PUNCTURE NEEDLE USING MICRO-OPTICAL HDIG SYSTEM FOR PCNL
Koichiro Wada1, Ryuta Tanimoto2, Yasuyuki Kobayashi1, Katsumi Sasaki1, Motoo Araki1, Shin Ebara1, Toyoihiko Watanabe1, Yasutomo Nasu1, Kazuyuki Takei2, Morito Kanke3, Hiromi Kuno1
1Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences (Japan)
2Jefferson Medical College of Thomas Jefferson University (United States)
3Takei Medical & Optical Co. Ltd. (Japan)
4Sunuta Optical Glass Inc. (Japan)

MP19-09 NOVEL GREEN-LIGHT KTP LASER EN BLOC ENUCLEATION FOR NON-MUSCLE-INVASIVE BLADDER CANCER
Dalin He1, Jinhai Fan1, Kaijie Wu1
1Department of Urology, First Affiliated Hospital of Medical School, Xi’an Jiaotong University (China)

MP19-10 CLASSIFICATION AND ENDOSCOPIC REPAIR OF INFRAVESICAL OBSTRUCTION AFTER HIGH INTENSITY FOCUSED ULTRASOUND (HIFU) THERAPY FOR PROSTATE CANCER
Stefan Thuero1,2, Christin Chaussy1,2
1Harlaching Krehshille e.V (Germany)
2Dep of Urology at University Regensburg (Germany)
3Dep of Urology at Klinikum München Harlaching (Germany)

MP19-11 NEWLY LOCKABLE MONO-J STENTS IN DAILY CLINICAL PRACTICE: A PILOT STUDY
Benjamin Meister1, Thomas Martini1, Marie-Claire Rassweiler1, Manuel Ritter1
1University Medical Centre Mannheim (Germany)

MP19-12 CLAMPLESS AND SUTURELESS TECHNIQUE IN LAPAROENDOSCOPIC SINGLE-SITE PARTIAL NEPHRECTOMY: INITIAL CLINICAL EXPERIENCE
Zhang shudong1, Ma lulin1, Huang yi1, Liu ke1, Zhang hongxian1, Bi hai1
1Peking University Third Hospital (China)
MP19-13 ADVANCED PROSTATE CANCER: SIGNIFICANCE OF PSA NADIR AFTER TURP AND HIFU
Christian Chaussy1, Stefan Thueroff2
1Dept. Urology, Univ. Regensburg (Germany)
2Dept. Urology, Klinikum Harlaching (Germany)

MP19-14 USEFULNESS OF A URETEROSCOPIC NAVIGATION SYSTEM USING A MAGNETIC TRACKING DEVICE
Kenji Yoshida1, Akira Yokomizo2, Tadashi Matsuda1, Tsutomu Hamasaki2, Yukihiro Kondo2, Kunitisa Yamaguchi2, Hiro-omi Kanayama2, Yoshiaki Wakamoto5, Shigeo Horie2, Seiji Naito2
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2Department of Urology, Graduate School of Medical Sciences, Kyushu University (Japan)
3Department of Urology, Nippon Medical School (Japan)
4Department of Urology, Institute of HBS, The University of Tokushima Graduate School (Japan)
5Department of Urology of Juntendo University (Japan)

MP19-15 HIFU TREATMENT IN PROSTATE CANCER: EVALUATION OF BIOCHEMICAL FAILURE AND FUNCTIONAL RESULTS IN 3 YEARS FOLLOW-UP
Franco Blefari1, Marco Mencarini1, Angelo Macchiarella1, Michela Spurio1, Christian Dattilo1, Andrea Del Grasso1, Franco Rubino1, Filippo Di Loro1
1Dept. of Urology S. Stefano Hospital (Italy)

MP19-16 OPTICAL COHERENCE TOMOGRAPHY AS A TOOL FOR IN VIVO STAGING AND GRADING OF UPPER URINARY TRACT UROTHELIAL CELL CARCINOMA (UUT-UC): COMPARISON WITH BIOPSIES AND HISTOPATHOLOGY OF THE RESECTED SPECIMEN
MTJ Bus1, DM de Bruijn1, DJ Faber2, MP Laguna Pes1, TG van Leeuwen1, ThM de Reijke1, JJ de la Rosette1
1Academic Medical Center (Netherlands)

MP19-17 BALL-TIP HOLMIUM LASER FIBER MAY REDUCE FLEXIBLE URETEROSCOPE DAMAGE
Richard Shin1, Fernando Cabrera1, Zachariah Goldsmith1, Nicholas Kutz1, Ramy Youssef1,2, Adam Kaplan1, Andreas Neisius1,2, Charles Scales1,2, Michael Ferrandino1, Pei Zhong1,5, Glenn Preminger1, Michael Lipkin1
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3Department of Urology, University Medical Center Mainz (Germany)
4Duke Clinical Research Institute, Duke University (United States)
5Department of Mechanical Engineering and Materials Science, Duke University (United States)

MP19-18 PATIENTS PREFER THE USE OF A PATIENT DECISION-MAKING AID WHEN DISCUSSING SURGICAL OPTIONS FOR NEPHROLITHIASIS
Necole M Streeper1, Brian C Sninsky1, Kristina L Penniston1, Sara L Best1, Stephen Y Nakada1
1University of Wisconsin School of Medicine and Public Health (United States)

MP19-19 THE NEW FLEXIBLE CYSTOSCOPY WITH NAVIGATION SYSTEM EVALUATED BY BLADDER PHANTOMS
Akira Yokomizo1, Gen Kaw2, Kenji Yoshida2, Tsutomu Hamasaki1, Yukihiro Kondo2, Kunitisa Yamaguchi2, Hiro-omi Kanayama4, Yoshiaki Wakamoto5, Shigeo Horie2, Seiji Naito1
1Department of Urology, Graduate School of Medical Sciences, Kyushu University (Japan)
2Department of Urology and Andrology, Kansai Medical University (Japan)
3Department of Urology, Institute of HBS, The University of Tokushima Graduate School (Japan)
4Department of Urology, Nippon Medical School (Japan)
5Department of Urology of Juntendo University (Japan)

MP19-20 SMARTPHONE APPLICATIONS FOR URolithiasis
Daniel Stevens1, Kenneth McKenzie2, Helen Cui1, Jeremy Noble2, Benjamin Turner1
1University of Oxford (United Kingdom)
2Weston Area Health NHS Trust (United Kingdom)

MP19-21 OUTCOMES FOR BILATERAL SIMULTANEOUS URETEROSCOPY (BS-URS) FOR STONE DISEASE: SYSTEMATIC REVIEW OF LITERATURE
Bhavan Rai1, Greg Kata1, Hiro Ishii2, Bhaskar K Somani2
1Ninewells Hospital (United Kingdom)
2University Hospital Southampton NHS Trust (United Kingdom)

MP19-22 NEW APPLICATION OF ECMO FOR RESECTION OF INVASIVE UROTHELIAL CARCINOMA OF RENAL PELVIS EXTENDING INTO THE INFERIOR VENA CAVA
Chun-Feng Chang1,2, Jian-Tai Mei1, Chia-Sheng Chao1, Chiam-Ting Wang2, Ying-Jui Ni2
1Kaohsiung Armed Forces General Hospital (Taiwan)

MP19-23 INCREASED EFFICIENCY OF NANOSECOND ELECTROPULSE LITHOTRIPTERS ON STONE FRAGMENTATION RESULTING FROM PRELIMINARY LASER RADIATION
Alexey Martov1, Alexander Dudkov2, Sergey Eremenko3, Alexey Eremenko3, Valery Diamant4, Gennady Chepovetsky4, Nitzan Shaham5, Marat Lerner5
1Federal Medical and Biological Agency, Urology Department (Russia)
2Siberian State Medical University, Urology Department (Russia)
3Medical-Yug Urology Clinic (Russia)
4Medline Ltd. (Israel)
MP19-24 **VOLUMETRIC SURVEILLANCE OF LOW RISK PROSTATE CANCER WITH PROSTATE HISTOSCANNING**

Michael Mikhail¹, Nimalan Arumainayagam¹, Altaf Shamsuddin¹, Dror Nir², Mathias Winkler¹

¹Imperial College Healthcare NHS Trust (United Kingdom)
²Imperial College London (United Kingdom)

MP19-25 **EARLY EXPERIENCE WITH THE MIM SYMPHONY SOFTWARE REGISTRATION FOR MRI-TARGETED TRANSPERINEAL PROSTATE BIOPSIES**

Waseem Akhter¹, Muhammad Jamal Khan¹, Omar Karim¹, Hanif Motiwala¹, Marc Laniado¹

¹Heatherwood and Wexham Park Hospital NHS Trust, UK (United Kingdom)

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**Friday, September 5**

**Moderated Poster Session (MP20) 03:45 pm–05:45 pm**

Endourology: Ureteroscopy 2

Room: RM 201 A

**Moderator:** David Nguyen Hoang Duc, Ravi Munver, Chung-Jing Wang

MP20-01 **ENDOURETEROTOMY WITH DOUBLE STENTING FOR THE MANAGEMENT OF URETERAL STRICTURES**

Hamdy Ibrahim¹, Ahmed Abdel-Bary²

¹Bayoum University (Egypt)
²Beni-Suef University (Egypt)

MP20-02 **EXTERNAL VALIDATION AND EVALUATION OF RELIABILITY AND VALIDITY OF THE MODIFIED S-RESC SCORING SYSTEM TO PREDICT STONE-FREE STATUS AFTER RETROGRADE INTRARENAL SURGERY**

Tae-sik Ahn¹, Juhyun Park¹, Ha Ni Lee², Minyoung Kang¹, Seung Bae Lee², Hwancheol Son², Hyeon Jeong², Hyeon Hoe Kim¹, Sung Yong Cho²

¹Seoul National University Hospital (South Korea)
²Seoul Metropolitan Government Seoul National University Boramea Medical Center (South Korea)

MP20-03 **THE IMPACT OF STONE BURDEN MEASUREMENT BY THREE-DIMENSIONAL NON-CONTACT COMPUTED TOMOGRAPHY (3-D NCCT) ON PREDICTING THE SUCCESS OF RETROGRADE INTRARENAL SURGERY (RIRS)**

Hakan Kılıçarslan¹, Yurdaer Kaynak², Onur Koçyigit², Emre Okeer², Yakup Kordan³, Deniz Sigirli²

¹Uludag University, Faculty of Medicine, Department of Urology (Turkey)
²Eskisehir State Hospital, Department of Urology (Turkey)
³Uludag University, Faculty of Medicine, Department of Radiology (Turkey)
⁴Uludag University, Faculty of Medicine, Department of Biostatistics (Turkey)

MP20-04 **ASSESSING THE EFFICACY OF EXTRACORPOREAL SHOCKWAVE LITHOTRIPSY BEFORE RETROGRADE INTRANERAL SURGERY: A PROPENSITY SCORE MATCHED ANALYSIS**

Myungsun Shim¹, Seung-Kwon Choi¹, Hyang Keun Park¹

¹University of Ulsan College of Medicine, Asan Medical Center (South Korea)

MP20-05 **DOES COMBINATION THERAPY WITH TAMSULOSIN AND TOLTERODINE IMPROVE URETERAL STENT DISCOMFORT COMPARED TO MONOTHERAPY WITH TAMSULOSIN? A RANDOMIZED CONTROLLED TRIAL**

Necole M Streeper¹, Sri Sivalingam¹, Priyanka D Sehgal¹, Brian C Sninsky¹, Sara L Bent¹, Stephen Y Nakada¹

¹University of Wisconsin School of Medicine and Public Health (United States)

MP20-06 **DIAGNOSTIC VALUE OF UPPER URINARY TRACT NBI IN 200 CASES – SINGLE CENTER EXPERIENCE**

Petrisor Geavlete¹, Razvan Multescu¹, Dragos Georgescu¹, Bogdan Geavlete¹

¹‘Saint John’ Emergency Clinical Hospital (Romania)

MP20-07 **INTRAOPERATIVE INCIDENTS AND COMPLICATIONS AFTER 10001 SEMIRIGID URETEROSCOPES – SINGLE CENTER EXPERIENCE**

Petrisor Geavlete¹, Razvan Multescu¹, Dragos Georgescu¹, Bogdan Geavlete¹

¹‘Saint John’ Emergency Clinical Hospital (Romania)

MP20-08 **PLACE OF URETEROSCOPY IN URETERAL CALCULI TREATMENT DURING PREGNANCY**

Petrisor Geavlete¹, Dragos Georgescu¹, Razvan Multescu¹, Bogdan Geavlete¹

¹‘Saint John’ Emergency Clinical Hospital (Romania)

MP20-09 **RETROGRADE RENAL STONES APPROACH: ADJUSTING THE HOLMIUM LASER LITHOTRIPSY MODE**

Razvan Multescu¹, Dragos Georgescu¹, Bogdan Geavlete¹

¹‘Saint John’ Emergency Clinical Hospital (Romania)

MP20-10 **FLEXIBLE URETEROSCOPY – A SINGLE CENTER EXPERIENCE ON 1110 CASES**

Razvan Multescu¹, Dragos Georgescu¹, Bogdan Geavlete¹, Petrisor Geavlete¹
MP20-11 REACHING 200 PROCEDURES WITH A DIGITAL FLEXIBLE URETEROSCOPE: MIS-SION IMPOSSIBLE?
Razvan Multescu¹, Dragos Georgescu¹, Bogdan Geavlete¹, Razvan Satulan¹, Petrisor Geavlete¹
¹“Saint John” Emergency Clinical Hospital (Romania)

MP20-12 ROUTINE USE OF URETERAL ACCESS SHEATH DURING FLEXIBLE URETEROSCOPY – ANALYSIS OF EFFICACY AND SAFETY
Razvan Multescu¹, Dragos Georgescu¹, Bogdan Geavlete¹, Razvan Satulan¹, Petrisor Geavlete¹
¹“Saint John” Emergency Clinical Hospital (Romania)

MP20-13 ARE THE RISKS OF UTI AFTER URETEROSCOPIC LITHOTRIPSY INCREASED IN PATIENTS WITH PREOPERATIVE UTI? - A NATIONWIDE HEALTH INSURANCE DATABASE STUDY
Eric Yi-Hsiu Huang¹,², Hsiao-Jen Chung¹,², Chih-Chieh Lin¹,², Ruo-Shin Peng¹,², Allen W. Chi¹,², Alex T. L. Lin¹,², Kuang-Kuo Chen¹,²
¹Department of Urology, Taipei Veterans General Hospital (Taiwan)
²Shu-Tien Urological Science Research Center & Department of Urology, School of Medicine, National Yang-Ming University (Taiwan)

MP20-14 SHOULD WE ADD RETROGRADE INTRARENAL SURGERY BY FLEXIBLE URETEROSCOPY FOLLOWING SEMIRIGID URETEROSCOPY FOR SYMPTOMATIC URETERAL STONES?
Toru Kanno¹, Masashi Kubota¹, Ryuichi Nishiyama¹, Takashi Okada¹, Yoshihiro Higashi¹, Hitoshi Yamada¹
¹The Department of Urology, Ijinkai Takeda General Hospital (Japan)

MP20-15 CAN UPPER TRACT TRANSITIONAL CELL CARCINOMA (UTCC) BE MANAGED EN-DOSCOPICALLY IN CENTRES TREATING A SMALL NUMBER OF PATIENTS?
Thomas Smith¹, Enbre Dogany¹, Amy Nagle¹, Amy Ollerton¹, Rajeshwar Krishnan¹, Nitin Shrorti¹
¹East Kent NHS Trust (United Kingdom)

MP20-16 URETEROSCOPIC LITHOTRIPSY IS SAFE AND EFFECTIVE IN MANAGING URETERAL STONES WITH FORNICEAL RUPTURE
Wei-Jen Chen¹, Shu-Huei Shen¹, Alex T. L. Lin¹,²,³,⁴, Kuang-Kuo Chen¹,²,³,⁴
¹Department of Urology, Taipei Veterans General Hospital (Taiwan)
²Department of Radiology, Taipei Veterans General Hospital (Taiwan)
³Department of Urology, School of Medicine, National Yang-Ming University (Taiwan)
⁴Shu-Tien Urological Science Research Center (Taiwan)

MP20-17 PURE TRANSURETHRAL NATURAL OR-IFICE TRANSLUMINAL ENDOSCOPIC SURGERY (NOTES) FOR FENESTRATION AND DRAINAGE TREATMENT OF RENAL CYST: REPORT OF EIGHT CASES
Guoxi Zhang¹, Hui Xu¹, Jun Yang, Min Liu¹, Ruiquan Xu¹
¹First Affiliated Hospital of Gannan Medical University (China)

MP20-18 FLEXIBLE URETEROSCOPY FOR UPPER URINARY TRACT CALCULI IN CHILDREN
Yating Wu¹, Xiaofeng Zou¹, Guoxi Zhang¹, Yuanhu Yuan¹, Rihai Xiao¹
¹First Affiliated Hospital of Gannan Medical University (China)

MP20-19 THE BENEFIT OF URETERAL DILATATION AND MULTIPLE URETERAL STENTS FOR PATIENT WITH URETERAL OBSTRUCTION
Ming-Hong Kao¹, Chung-Cheng Wang¹,²
¹Department of Urology, En Chu Kong Hospital (Taiwan)
²Department of Biomedical Engineering, Chung Yuan Christian University (Taiwan)

MP20-20 EVIDENCE FOR FLEXIBLE URETERO-ENOSCOPY (FURS) FOR LARGE RENAL STONES IN THE MODERN ERA: A SYSTEMATIC REVIEW
Robert Geraghty¹, Omar Aboumarzouk², Bhavan Rat¹, Chandra Shekhara Biyani¹, Bhaskar Kumar Somani¹
¹University Hospital Southampton NHS Trust (United Kingdom)
²University Hospital Wales (United Kingdom)
³Ninewells Hospital (United Kingdom)
⁴Pinderfields General Hospital (United Kingdom)

MP20-21 CAN DAY-CASE URETEROSCOPY (URS) RATES FOR RENAL OR URETERIC STONES INCREASE WITH THE USE OF A PRE-OPERATIVE/ANESTHETIC PROTOCOL AND FOLLOWING WHO (WORLD HEALTH ORGANIZATION) CHECKLIST? RESULTS FROM A UNIVERSITY TEACHING HOSPITAL
Hiro Ishii¹, Carolyn Way¹, Bhaskar K Somani¹
¹University Hospital Southampton NHS Trust (United Kingdom)

MP20-22 THE EFFECT OF SOLIFENACIN IN IMPROVING PAIN AND LOWER URINARY TRACT SYMPTOMS BY INDWELLING URETERAL STENT : A RANDOMIZED CONTROLLED STUDY
Gun Nam Kim¹, Jae Sook Kim², Duck hyeon Cho¹
¹Department of Urology, CHA Gumi Medical Center, CHA University (South Korea)
²Department of Urology, Daegu Fatima Hospital (South Korea)

MP20-23 THE ASSOCIATED FACTORS FOR UR-ERETAL-STENT-RELATED SYMPTOMS AFTER URETEROSCOPIC LITHOTRIPSY– A PROSPECTIVE STUDY
Wei-Ming Cheng¹, Eric Yi-Hsiu Huang¹,², Alex T. L. Lin¹,², Kuang-Kuo Chen¹,²
¹Department of Urology, Taipei Veterans General Hospital (Taiwan)
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Yoram I. Siegel1, Nadav Berkovitz1, Tamimi Ashraf1, Amnon Zisman1, Paul Gottlieb1, Tali Bdolan-AbramCopel1, Laurian Copel1

1Sackler faculty of Medicine, (Israel)

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MP20-25 **THE USE OF A NOVEL REVERSE THERMOSENSITIVE POLYMER TO PREVENT URETERAL STONE RETROPULSION DURING INTRACORPOREAL LITHOTRIPSY: AN INITIAL EXPERIENCE.**

Vineet Gauhar1, Yong Ying Qiu1, Kwok Ying Lie1, Chin Tiong Heng1

1Alexandra Hospital/Jurong Health (Singapore)

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MP20-26 **WILL THE RISKS OF POSTOPERATIVE INFECTION BE INCREASED AFTER URETEROSCOPIC LITHOTRIPSY FOR PATIENTS WITH MILD PYURIA BEFORE THE OPERATION?**

Hung Keng Li1,2, Eric YH Huang1,2, Yu-Hua Fan1,2, Chi-Cheh Lin1,2, Hsiao-Jen Chung1,2, Junne-Yih Kuo1,2, William JS Huang1,2, Allen W. Chiu1,2, Howard HH Wu1,2, Yen-Hwa Chang1,2, Alex TL Lin1,2, Kuang-Kuo Chen1,2

1Department of Urology, Taipei Veterans General Hospital (Taiwan)
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MP20-27 **CLINICAL FACTORS PROLONGING THE OPERATIVE TIME OF FLEXIBLE URETEROSCOPY FOR RENAL STONES: A SINGLE-CENTER ANALYSIS**

Hiroki Ito1,2, Shinnosuke Kuroda1, Tadashi Tabel1, Takashi Kawahara2, Hideyuki Terao1, Masahiro Yao1

1Department of Urology, Taipei Veterans General Hospital (Taiwan)
2Shu-Tien Urological Research Center, School of Medicine, National Yang-Ming University (Taiwan)

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MP20-28 **EXPERIENCE OF PREVENTING FORGOTTEN DOUBLE J URETERAL STENT IN A HIGH-VOLUME-SERVICE MEDICAL CENTER–AN AUTO-REGISTRATION MONITOR SYSTEM**

Ping-Chi Chen1,2, Yu-Hua Fan1,2, Alex T.L. Lin1,2, Kuang-Kuo Chen1,2, Luke S. Chang1,2

1Department of Urology, Taipei Veterans General Hospital (Taiwan)
2School of Medicine and Shu-Tien Urological Institute, National Yang-Ming University (Taiwan)

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MP20-29 **FLUORO-LESS RETROGRADE INTRARENAL SURGERY WITH A URETERAL ACCESS SHEATH MODIFIED WITH A SCALE MARKER: A RANDOMIZED AND FEASIBILITY TRIAL**

Guohua Zeng1, Zhijian Zhao1, Fengquan Yang1, Wenqi Wu1, Wenzhong Chen1

1Department of Urology, Minimally Invasive Surgery Center, The First Affiliated Hospital of Guangzhou Medical University, and Guangdong Key Laboratory of Urolog (China)

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MP20-30 **CONTEMPORARY TRENDS IN HOSPITALIZATION RATES DUE TO STONE DISEASE IN A DEVELOPING COUNTRY: INFLUENCE OF AGE, GENDER, OBESITY AND INCOME**

Giovanni S Marchini1, Marcos F Mello1, Renata Levi1, Jose Eluf Neto1, Fabio C Vicentini1, Alexandre Danilovic1, Fabio CM Torricelli1, Cesar Camara1, Artur H Brito1, Eduardo Mazzucchelli1, Miguel Srougi1

1Hospital das Clinicas, University of Sao Paulo Medical School (Brazil)

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Saturday, September 6

**Moderated Poster Session (MP21)**

**Endourology: PCNL 3**

**Room: RM 101 A**

**Moderator:** Gary Chien, Jim Hu, Andy C. Huang

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MP21-01 **PEDIATRIC PCNL IN MALROTATED KIDNEY**

Wael Gamal1, Abdelmoneim Abuzeid1, Abd Bast Badawy1

1Sohag University Hospital (Egypt)

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MP21-02 **THE EFFECTIVENESS AND SAFETY OF PERCUTANEOUS NEPHROLITHOTOMY (PCNL) FOR SOLITARY KIDNEYS: A SINGLE-CENTER EXPERIENCE**

Glen Denmer Santok1, Jose Benito Abraham1

1National Kidney and Transplant Institute (Philippines)

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MP21-03 **UTILITY OF THE GUY’S STONE SCORE AND NEPHROLITHOMETRIC NOMOGRAM BASED ON COMPUTED TOMOGRAPHIC SCAN FINDINGS FOR PREDICTING PERCUTANEOUS NEPHROLITHOTOMY OUTCOMES**

Pedro Valente1, Hélder Castro1, Fernando Vila1, Rui Borges1, Joaquim Lindoro1

1Taêmeg and Sousa Hospital (Portugal)

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MP21-04 **URETEROSCOPY-ASSISTED DIRECTIONAL-EFLOW DOPPLER ULTRASOUND-GUIDED MINI-ENDOSCOPIC COMBINED INTRARENAL SURGERY FOR THE MANAGEMENT OF LARGE RENAL STONES: INITIAL EXPERIENCE**

Takaaki Inoue1, Takashi Murata1, Makoto Taguchi1, Tomoyuki Hayashi1, Yoshinobu Kubota2, Junichi Matsuzaki1

1Ohguchi East General Hospital (Japan)
2Yokohama City University Graduate School of Medicine (Japan)
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Rahul Kapoor¹, Prashant Bhagwat¹
Shrimedishine Hospital (India)

**MP21-06 ASSESSMENT OF COMPLICATIONS AND ANALYSIS OF THE RISK FACTORS FOR PERCUTANEOUS NEPHROLITHOTOMY USING THE CLAVIEN-DINDO GRADING SYSTEM**
Jun Yang¹, Xiaofeng Zou¹, Guoxi Zhang¹, Yuanhu Yuan¹, Rihai Xiao¹
First Affiliated Hospital of Gannan Medical University (China)

**MP21-07 BLOOD LOSS PREDICTIVE FACTORS AND TRANSFUSION PRACTICE DURING PERCUTANEOUS NEPHROLITHOTOMY OF KIDNEY STONE: A PROSPECTIVE STUDY**
Nur Rasivid¹, Ponco Birowo¹, Firtantoyo Adi Sjahputra¹, Faisal Abdi Matondang¹, Endrika Noviandrini¹, Maruto Harjanggi Huseini¹
Department of Urology, Cipto Mangunkusumo Hospital / Faculty of Medicine, Universitas Indonesia (Indonesia)

**MP21-08 PREOPERATIVE PREDICTORS OF THE OUTCOME OF ENDOSCOPIC COMBINED INTRARENAL SURGERY IN MODIFIED VALDIVIA POSITION FOR THE TREATMENT OF LARGE RENAL STONE.**
Shinnosuke Kuroda¹, Hiroki Ito¹, Tadashi Tabei¹, Hideyuki Terao¹, Yasushi Yumura¹, Masahiro Yao¹, Kazumi Noguchi¹, Junichi Matsuzaki¹
Department of Urology, Ohguchi Higashi Hospital (Japan)

**MP21-09 COMPLICATIONS OF PERCUTANEOUS NEPHROLITHOTOMY CLASSIFIED BY THE CLAVIEN GRADING SYSTEM**
Jian-Ting Chen¹, Bai-fu Wang¹, Chin-Fao Chang¹, Mon-I Yen¹, Heng-Yue Jiang¹, Sheng-Hsien Huang¹
First Division of Urology, Department of Surgery, Changhua Christian Hospital (Taiwan)

**MP21-10 IN VITRO COMPARISON OF DIFFERENT LITHOTRITES REGARDING THEIR EFFICACY OF STONE CLEARANCE**
Keil Christian¹, Hegele Axel¹, Hofmann Rainer¹, Olbert Peter²
Dept. of Urology and Pediatric Urology, University Medical Center (Germany)

**MP21-11 THE LOACH GUIDE WIRE COMBINED WITH UROSKOP ACCESS: SUCCESSFUL GUARANTEE OF AVOIDING SEVERE BLEEDING DURING PERCUTANEOUS NEPHROLITHOTOMY**
Yanbo Wang¹, Yan Wang¹, Fengming Jiang¹, Chunxi Wang¹
First Hospital of Jilin University (China)

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Yanbo Wang¹, Yuchuan Hou¹, Qihui Chen¹, Chunxi Wang¹
First Hospital of Jilin University (China)

**MP21-13 COMPARISON OF CYBERWAND DUAL PROBE LITHOTRIPTOR AND 60W HOLMIUM LASER IN PERCUTANEOUS NEPHROLITHOTOMY FOR RENAL STAGHORN CALCULI**
Yanbo Wang¹, Yan Wang¹, Qihui Chen¹, Chunxi Wang¹
First Hospital of Jilin University (China)

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Yanbo Wang¹, Yuchuan Hou¹, Yan Wang¹, Chunxi Wang¹
First Hospital of Jilin University (China)

**MP21-15 THE INOVATION USAGE OF LASER POWER IN UROLOGICAL PROCEDURE**
Hueih-Shing Hsu¹, Hsiang Wang¹, Shyh-Chyi Chang¹, Heng Chang Chuang¹
Lotung Pohai Hospital (Taiwan)

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Bannakij Lojanapiwat¹, Pruit Kittirattrakarn¹, Tanarit Chureemas¹
Division of Urology, Department of Surgery, Chiangmai University (Thailand)

**MP21-17 UPPER URETERIC STONE'S ENDOSCOPIC TREATMENT WITH COMBINED PERCUTANEOUS NEPHROLITHOTOMY (PNL) AND RETROGRADE URERORENOSCOPY (URS)**
Engin Kaya¹, Ali Guragac¹, Bahadir Topuc¹, Turgay Ebiogl¹, Anar Ismailov¹, Selahattin Bedir¹
Guilhane Military Medical Academy (Turkey)

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David Leavitt¹, Bradley Morganstern¹, Nithin Theckamparampil¹, Manaf Alom¹
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<td>1The Smith Institute for Urology (United States)</td>
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<td>1Peking University People’s Hospital (China) 2Peking University International Hospital (China)</td>
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<td>1McGill University Health Centre (Canada) 2Urology Department, Benha University (Egypt) 3Urology Department, Suez Canal University (Egypt)</td>
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<td>1Department of Laboratory Medicine, Ditmanson Medical Foundation Chia-Yi Christian Hospital (Taiwan) 2Department of Urology, Ditmanson Medical Foundation Chia-Yi Christian Hospital (Taiwan)</td>
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<td>1Department of Urology, Ditmanson Medical Foundation Chia-Yi Christian Hospital (Taiwan)</td>
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<td>1University College London (United Kingdom) 2University College London Hospitals (United Kingdom)</td>
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<td>1Hospital das Clínicas, University of Sao Paulo Medical School (Brazil)</td>
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Changjun Yin¹, Pengfei Shao¹, Pu Li¹, Xiaobing Ju²
¹The First Affiliated Hospital of Nanjing Medical University (China)

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Chia-Min Yang¹, Hsiao-Jen Chung¹,², Yi-Hsiu Huang¹,², Tzu-Ping Lin¹,², Alex T.L. Lin¹,²
¹Department of Urology, Taipei Veteran General Hospital (Taiwan)
²Department of Urology, School of Medicine, Shu-Tien Urological Research Institute National Yang-Ming University, (Taiwan)

MP22-03 EFFECTIVENESS OF LAPAROSCOPIC NEPHRON-SAVING PARTIAL NEPHRECTOMY WITH TEMPORARY BLOCKING-UP OF THE SEGMENTAL BRANCH OF THE RENAL ARTERY
Fangmin Chen¹, Jiaqi Shi¹, Haifeng Li¹, Dengbao Li¹, Deshui Ren¹, Hao Yang¹, Quliang Zhong¹, Cheng Chen¹, Yu Chen¹
¹Department of Urology, First Affiliated Hospital to Guiyang Medical College (China)
²Department of Urology, the Third Affiliated Hospital to QiqiHa'er Medical College (China)

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Pedro Valente¹, Fernando Vila¹, Rui Borges¹, Hélder Castro¹, Alcino Oliveira¹, Joaquin Lindoro¹
¹Tâmega and Sousa Hospital (Portugal)
²Trás-os-Montes and Alto Douro Hospital (Portugal)

MP22-05 PERIOPERATIVE OUTCOMES OF LAPAROSCOPIC PARTIAL NEPHRECTOMY BY USING THE R.E.N.A.L. NEPHROMETRY SCORE
Tetsuo Fujita¹, Takahiro Hirayama¹, Morihiro Nishi¹, Daisuke Ishii¹, Kazumasa Matsumoto¹, Kazunari Yoshida¹, Masatsugu Iwamura¹
¹Kitasato University School of Medicine (Japan)

MP22-06 TRACKING NEPHRON SPARING SURGERY: THE 50 MOST REFERENCED ARTICLES IN PARTIAL NEPHRECTOMY
Aryeh Keehn¹, Richard Maiman¹, Jacob Taylor¹, Michael Lasser¹, Reza Ghavamian¹
¹Albert Einstein College of Medicine (United States)

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Xiaoning Wang¹, Xiaofeng Zou¹, Guoxi Zhang¹, Yijun Xue², Yuanhu Yuan²
¹First Affiliated Hospital of Gannan Medical University (China)

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Xin Zhong¹, Xiaofeng Zou¹, Guoxi Zhang¹, Ruiquan Xu¹, Yuanhu Yuan²
¹First Affiliated Hospital of Gannan Medical University (China)

MP22-09 TOTAL ENDOSCOPIC NEPHROURETERECTOMY WITH BLADDER CUFF EXCISION FOR NATIVE KIDNEY IPSILATERAL TO TRANSPLANTED KIDNEY: A SINGLE-CENTER PRELIMINARY EXPERIENCE IN CHINA
Bi Hai¹, Hou Xiaolei¹, Ma Lu-Lin¹, Zhao Lei¹, Wang Guoliang¹
¹Department of Urology, Peking University Third Hospital (China)

MP22-10 FEASIBILITY OF ADRENALECTOMIES IN A UNITED KINGDOM NON-SPECIALIST CENTRE?
Thomas Smith¹, Elizabeth Williams¹, Amelia Gruber¹, Varga Branislav¹, Mariantti Vatrika¹, William Choi¹
¹Canterbury Hospital (United Kingdom)

MP22-11 TWO CASES OF RETROPERITONEAL TUMOR LOCATED DORSAL TO THE INFERIOR VENA CAVA: SUCCESSFUL EXCISION USING THE RETROPERITONEOSCOPIC APPROACH
Ryuichi Ito¹, Masahiro Iinuma¹, Yasusi Ichimura², Naoko Kawata¹, Norihiko Tsuchiya¹, Tomonori Habuchi¹
¹Department of Urology, Akita University School of Medicine (Japan)
²Mito Medical Center (Japan)

MP22-12 SIMULTANEOUS BILATERAL RETROPERITONEOSCOPIC NEPHROURETERECTOMY IN RENAL RECIPIENTS: A SINGLE-CENTER EXPERIENCE
Jianfei Ye¹, Lulin Ma¹
¹Peking University Third Hospital (China)
MP22-13 COMPARATIVE STUDY FOR EVALUATING THE COSMETIC OUTCOME OF SMALL-INCISION ACCESS RETROPERITONEOSCOPIC TECHNIQUE (SMART) WITH STANDARD RETROPERITONEOSCOPY USING OBSERVER SCAR ASSESSMENT SCALE (OSAS). ARE SMALL INCISIONS A BIG DEAL?
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1Dept. of Urology, SLK Kliniken Heilbronn, University of Heidelberg (Germany)

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Tzu-Hao Huang, Yen-Hua Chang, Hsiao-Jen Chung, Alex Tong-Long Lin, Kuang-Kuo Chen
1Department of Urology, Taipei Veterans General Hospital (Taiwan)
2Department of Urology, School of Medicine, National Yang-Ming University (Taiwan)
3Shu-Tien Urological Science Research Center, National Yang-Ming University (Taiwan)

MP22-15 MANAGEMENT OF URETERAL ENDOMETRIOSIS WITH MODIFIED LAPAROSCOPIC PSOAS HITCH
Daohu Wang, Heng-ai Li, Chengqiang Mo, Wei Chen, Shuochong Yao, Shaopeng Qiu
1Dept. of Urology, The 1st Affiliated Hospital, Sun Yat-sen University (China)
2Dept. of Gynecology, The 1st Affiliated Hospital, Sun Yat-sen University (China)

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Ivan Travnicek, Petr Stransky, Milan Hora, Tomas Urge, Olga Dolejsova, Kristyna Kalusova, Michal Krcma, Ondrej Hes
1Faculty Hospital Plzen (Czech Republic)
2Faculty of Medicine Plzen, Charles University Prague, Czech Republic

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Masahiro Sugii, Kyokushin Hou, Kazuhiko Araki, Hiroshi Masuda, Satoko Kozima, Yukio Naya
1Teikyo University Chiba Medical Center (Japan)

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1Department of Urology, Kitasato University School of Medicine (Japan)

MP22-19 RIGHT-SIDED TRANSPERITONEAL HAND-ASSISTED LAPAROSCOPIC DONOR NEPHRECTOMY: HYBRID TECHNIQUE USING A SATINSKY CLAMP TO MAXIMIZE THE LENGTH OF THE RENAL VEIN
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1School of Medicine, Kyungpook National University (South Korea)

MP22-20 A NOVEL TECHNIQUES OF RETROPERITONEAL LAPAROSCOPIC NEPHRON-SPARING SURGERY WITHOUT SUTURE (WITH VIDEO)
Xiaojun Tian, Lulin Ma
1Peking University Third Hospital (China)

MP22-21 UNUSUAL ADULT ADRENAL GANGLIONEUROBLASTOMA
Yanbo Wang, Yuchuan Hou, Yan Wang, Chuxi Wang
1First Hospital of Jilin University (China)

MP22-22 AN UNUSUAL CASE OF TREMENDOUS NON-PROGRESSED CHROMOPHOBIC RENAL CELL CARCINOMA FOR 8 YEARS PERFORMED BY LAPAROSCOPE
Yanbo Wang, Yan Wang, Yuchuan Hou, Chuxi Wang
1First Hospital of Jilin University (China)

MP22-23 LAPAROSCOPIC ADRENALECTOMY FOR PHEOCHROMOCYTOMA: HEMODYNAMIC AND OUTCOME COMPARISON BETWEEN SMALL AND LARGE TUMORS
Rajeev Kumar, Niren Rao, Rashmi Ramachandran, Nikhil Tandon, Prabhjot Singh
1All India Institute of Medical Sciences (India)

MP22-24 COMPLETE LAPAROSCOPIC NEPHROURETERECTOMY WITH INTRAVESICAL LOCKABLE CLIP FOR UROTHELIAL CARCINOMA OF UPPER URINARY TRACT
Milan Hora, Petr Stransky, Tomáš Urge, Olga Dolejsova, Kristyna Kalusova, Ondřej Hes, Ivan Travníček
1Faculty Hospital Plzen (Czech Republic)
2Faculty of Medicine Plzen, Charles University Prague, Czech Republic

MP22-25 SAFETY OF HEM-O-LOCK CLIPS FOR VASCULAR CONTROL DURING LAPAROSCOPIC NEPHRECTOMY IN KOREAN PEOPLE: A MULTICENTER CASE CONTROL STUDY
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1School of Medicine, Kyungpook National University (South Korea)
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Mohammad Mehdi Hosseini1, Alireza Aminsharifi1, Dariush Irani1, Reza Haghipanah1, Ali Esfah1, Shahrokh Jahanbini1
1Laparoscopy Research Center, Shiraz University of Medical Sciences (Iran)

MP22-27 LAPAROSCOPIC PYELOLITHOTOMY: A GOOD ALTERNATIVE FOR PCNL AND OPEN SURGERY
Mohammad Mehdi Hosseini1, Alireza Aminsharifi1, Reza Haghipanah1, Ali Esfah1, Dariush Irani1
1Laparoscopy Research Center, Shiraz University of Medical Sciences (Iran)

MP22-28 RISK FACTOR FOR FAILURE OF LAPAROSCOPIC PYELOPLASTY: LONG-TERM FOLLOW-UP RESULTS
Ilh Young Seo1, Tae Hoon Oh1, Seung Chul Park1, Jea Whan Lee1
1Wonkwang University School of Medicine (South Korea)

MP22-29 RETROPERITONEOSCOPIC LEFT LIVING DONOR NEPHRECTOMY: EXPERIENCES OF 14 CASES
Daohu Wang1, Heng-ai Li1, Jiang Qiu1, Guodong Chen1, Suxiong Deng1, Lizhong Chen1
1The 1st affiliated hospital, Sun Yat-sen University (China)

MP22-30 COMPLICATION OF LAPAROSCOPIC AND OPEN NEPHRECTOMY IN SOUTHERN CHINA: COMPARISON USING THE MODIFIED CLAVIEN CLASSIFICATION SYSTEM
Hua Xu1, Hao-wen Jiang1, Qiang Ding1
1Huashan Hospital, Fudan University (China)
MP23-21 FIRST EVALUATION OF THE IPAD GUIDED RENAL SURGERY USING A NEW TRAINING MODEL
Marie-Claire Rassweiler1, Jan-Thorsten Klein2, Michael Mueller3, Hans-Peter Meinzer4, Jens Rassweiler2
1University Medicine Mannheim (Germany) 2SLK Kliniken Heilbronn (Germany) 3German Cancer Research Center, Dep. of Medical and Biological Informatics (Germany)

MP23-22 USE OF NOVEL TECHNIQUE TO ESTIMATE URETER LENGTH USING PREOPERATIVE CT
Nazih Khater1, Roger Li1, Muhammad Alsyouf4, Michelle Lightfoot1, Carol Conceicao1, Christopher Chung1, Gaudencio Olgin1, Javier Arenas1, Evan Lehrman1, Jason Smith1, D. Duane Baldwin1
1Loma Linda University Medical Center (United States)

MP23-23 ACOUSTIC PROPERTY OF PROSTATE CANCER TISSUE MEASURED USING ULTRASONIC MICROSCOPE
Hiroaki Sugimoto1, Takuro Ishii1, Tadashi Yamagishi2, Kazuya Kawamura2, Shinichi Sakamoto3, Tatsuo Igarashi2
1Graduate School of Engineering, Chiba University (Japan) 2Center for Frontier Medical Engineering, Chiba University (Japan) 3Department of Urology, Graduate School of Medicine, Chiba University (Japan) 4Department of Urology, Chiba Medical Center, Teikyo University (Japan)

MP23-24 COMPARISON OF RADIATION DOSE FROM CONVENTIONAL AND TRIPLE BOLUS CT UROGRAPHY PROTOCOLS IN THE DIAGNOSIS AND MANAGEMENT OF RENAL CORTICAL NEOPLASMS
Zhamshid Okhunov1, Garen Abedi1, Chandana Lal1, Kara Babatian1, Michel del Junco1, Mohammad Helmy1, Jaime Landman1
1University of California, Irvine (United States)

MP23-25 THREE-DIMENSIONAL VOLUME EVALUATION OF PERIRENAL ADIPOSE TISSUE VOLUME PREDICTS RENAL CORTICAL NEOPLASM HISTOPATHOLOGY
Zhamshid Okhunov1, Mari Bozoghlianian2, Hellen Kim2, Kevin Labadie1, Martin Hofmann1, Michel del Junco1, Allen Jean2, Mohammad Helmy1, Jaime Landman1
1Department of Urology, University of California, Irvine (United States) 2Department of Radiology, University of California, Irvine (United States)

MP23-26 ACUTE URETERAL STONES: DIAGNOSTIC MODALITIES AND MANAGEMENT OUTCOMES
Mahmoud Abdel-Gawad1, Emad Elsobky2
1Emirates International Hospital (United Arab Emirates) 2Alnoor hospital (United Arab Emirates)

MP23-27 CT PLANNING IMAGE VERSUS KUB FOR PREDICTION OF STONE RADIOGRAPHY
Palle Jørgen Sloth Osterh1, Ole Graumann1, Susanne Sloth Osterh1
1Urological Research Center, Lillebaelt Hospital, University of Southern Denmark (Denmark)

MP23-28 CORRELATION OF MULTI-PARAMETRIC MRI WITH ROBOT-ASSISTED TRANSPERINEAL PROSTATE MAPPING IN DIAGNOSIS OF PROSTATE CANCER
Jacklyn Ye1, Jonathan Teo1, Kenneth Chen1, Kae Jack Tay1, Henry Ho1, John Yuen1, Eng Choon Tan1, Christopher Cheng1
1Singapore General Hospital (Singapore) 2Mount Elizabeth Hospital (Singapore)

MP23-29 PRECISE CHARACTERISATION OF BLADDER INNERVATION WITH 3D IMAGE RECONSTRUCTION
Zhamshid Okhunov1, Garen Abedi1, Michael del Junco1, Renai Yoon1, Jamie Wikenheiser2, Jioti Huang3, Jaime Landman1
1Department of Urology, University of California, Irvine (United States) 2Department of Anatomy & Neurobiology, University of California, Irvine (United States) 3Department of Pathology, University of California, Los Angeles (United States)

Saturday, September 6 01:30 pm–03:30 pm
Moderated Poster Session (MP24) Robotic Surgery New Technology Room: RM 101 D
Moderator: Michele Gallucci, Mantu Gupta, Christopher Ng, Pai-Fu Wang

MP24-01 UPDATED EXPERIENCE WITH THE INTRACORPORAL FIRST ASSISTANT SPARING TECHNIQUE FOR ROBOT-ASSISTED PARTIAL NEPHRECTOMY
Michael B. Rothberg1, Aaron C. Weinberg1, Rashed Ghandour2, Ruslan Korets3, Ketan K. Badani1
1Columbia University Medical Center (United States)

MP24-02 ROBOTIC PYELOLITHOTOMY AND URETEROPELVIC JUNCTION REPAIR IN A CROSS FUSED ECTOPIC KIDNEY
Jayram Krishnan1, Robert Brown1, Homayoun Zargar1, Riccardo Autorino1, Humberto Laydner1, Oktay Akca1, Dinesh Samarakkasekera1, Jihad Kaouk1, Georges-Pascal Haber1, Robert Stein1
1Cleveland Clinic (United States)
MP24-03 USE OF DEHYDRATED HUMAN AMNIOTIC MEMBRANE DURING ROBOT ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY IN EARLY RETURN OF ERECTILE FUNCTION: A RETROSPECTIVE STUDY
Sanjay Razdan1, Shirin Razdan2, Joseph Johnson3
1Herbert Wertheim FIU College of Medicine (United States)
2University of Miami Miller School of Medicine (United States)
3University of Miami (United States)

MP24-04 COMBINED MULTI-SITE PROCEDURES ARE FEASIBLE WITH ROBOTIC ASSISTED LAPAROSCOPIC SURGERY IN CHILDREN
Mesrur Selcuk Silay1, David Roth1, Patricio Gargollo1, Chester Koh1
1Texas Children’s Hospital/Baylor College of Medicine (United States)

MP24-05 FEASIBILITY OF OMITTING CORTICAL RENORRHAPHY DURING ROBOTIC PARTIAL NEPHRECTOMY: A MATCHED ANALYSIS
Clinton D Bahler1, Hitesh T Dube1, Kevin J Flynn1, Swapnil Garg1, M Francesca Mond1, Chandru P Sundaram1
1Indiana University School of Medicine (United States)

MP24-06 ROBOTIC KIDNEY TRANSPLANTATION WITH REGIONAL HYPOTHERMIA: RESULTS FROM A PROSPECTIVE TWO-ARM NON-RANDOMIZED CONTROLLED TRIAL (IDEAL PHASE 2B)
Prasun Ghosh1, Akshay Sood1, Vijay Kher1, Wooja Jeong1, Rommy Abaza2, Mahendru Bhandari1, Mani Menon3, Rajesh Ahlawat1
1Medanta -The Medicity (India)
2Henry Ford Hospital (United States)
3Ohio Health Dublin Methodist Hospital (United States)

MP24-07 A COMPARISON OF PATIENT COMFORT AND SATISFACTION AFTER ROBOTIC PROSTATECTOMY WITH SUPRAPUBIC TUBE VERSUS URETHRAL CATHETER DRAINAGE
Aaron Lay1, Monica S.C. Morgan1, Selahattin Bedhir2, Asim Ozayar1, Claus G. Roehrborn1, Jeffrey A. Cadeddu1, Jodi A. Antonelli1
1University of Texas Southwestern, Department of Urology (United States)
2Gulhane Military Medical Academy, Department of Urology (Turkey)

MP24-08 PREVALENCE AND RISK FACTORS OF CONTRALATERAL EXTRAPROSTATIC EXTENSION IN MEN UNDERGOING RADICAL PROSTATECTOMY FOR LOCALIZED UNILATERAL DISEASE AT BIOPSY: A GLOBAL MULTI-INSTITUTIONAL EXPERIENCE
Marc Bienc2, Pierre-Alain Hueber12, Vincent Trudel12, Abdullah Alenzi23, Mevlana Derya Balbay5, Abdullah Erdem Canda6, Vladimir Mouraviev6, David M. Albala6, Assaad El-Hakim1, Mathieu Latour2, Fred Soaad2, Kevin C. Zorn2, 3
1University of Montreal, Montreal (Canada)
2Montreal University Hospital Center, Department of Urology (Canada)
3Hôpital du Sacré-Coeur de Montréal, Department of Urology (Canada)
4Memorial Sisli Hospital, Department of Urology (Turkey)
5Yıldırım Beyazit University, School of Medicine, Ankara Ataturk Training and Research Hospital, Department of Urology (Turkey)
6Associated Medical Professionals of New York (United States)

MP24-09 COMPLETELY INTRACORPOREAL ROBOTIC-ASSISTED LAPAROSCOPIC ILEOVESICOSTOMY IS ASSOCIATED WITH EARLIER RETURN OF BOWEL FUNCTION
MaryEllen Dolat1, Shaoqing Zhou1, Adam Klausner2, 3, Lance Hampton2, 4
1Virginia Commonwealth University School of Medicine (United States)
2Hunter Holmes McGuire Veteran’s Affairs Medical Center (United States)

MP24-10 USING INTRAURETERAL INDOCYANINE GREEN TO FACILITATE ROBOT-ASSISTED URETERAL RECONSTRUCTIONS
Ziho Lee1, Blake Moore1, Laura Giusto1, Daniel Eun1
1Temple University (United States)

MP24-11 SAFETY AND EFFECTIVENESS OF SAF-R, A NOVEL PATIENT POSITIONING DEVICE FOR ROBOT-ASSISTED PELVIC SURGERY IN TRENDLEBURG POSITION
Shahin Tabatabaei1, Saman Shafaat Talab1, Azadeh Elmi1, Jaydev Sarma1, Glen W. Barrisford1
1Department of Urology, Massachusetts General Hospital, Harvard Medical School (United States)
2Department of Anesthesiology, Massachusetts General Hospital, Harvard Medical School (United States)

MP24-12 SIMULTANEOUS LAPAROSCOPIC BI-LATERAL NEPHROURETERECTOMY AND RADICAL CYSTECTOMY ASSISTED BY A ROBOTIC SURGICAL SYSTEM
Chi-Ping Huang1, 2, Justin Ji-Yuen Su1, 2, Hsi-Chin Wu1, 2, Chao-Hsiang Chang1, 2
1Department of Urology, China Medical University Hospital (Taiwan)
2School of Medicine, China Medical University (Taiwan)

MP24-13 SAFETY OF LIVE ROBOTIC SURGERY TRANSMISSION IN UROLOGY: A PRO-PENSITY SCORE-MATCHED STUDY
Haidar Abdul-Muhsin1, Srinivas Samavedi1, Bernardo Rocco1, Rafael Coelho1, Kenneth Palmer1, George Ebra1, Vipul Patel1
1Global Robotics Institute (United States)
Toshio Takagi1, Jumpei Iizuka1, Yasunobu Hashimoto1, Kazunari Tanabe1
1Tokyo Women’s Medical University (Japan)

MP24-27 THE IMPACT OF BODY MASS INDEX ON THE TREATMENT OUTCOME FOR URETERAL STONES WHEN USING A THIRD GENERATION LITHOTRIPTER
Hui-Ming Chung1, Yung-Min Liao1, Wei-Min Tsai1, Yung-Chen Tsai1
1Mennonite Christian Hospital (Taiwan)

MP24-28 IMPROVED EFFICIENCY OF ESWL WITH OPTICAL COUPLING CONTROL
Geert Tailly1, Martine Tailly-Cusse1
1AZ Klika (Belgium)

MP24-29 CAN WE FURTHER IMPROVE LOWER POLE STONE CLEARANCE RATES? A RANDOMISED CONTROLLED STUDY
Shaun Lee1, Wing Seng Leong1, Men Long Liong3
1Monash University (Malaysia)
2Lam Wah Ee (Malaysia)
3Island Hospital (Malaysia)

MP25-01 COMPARISON OF FUNCTIONAL RENAL PARENCHYMAL VOLUME PRESERVATION BETWEEN PARTIAL NEPHRECTOMY, CRYOABLATION, AND RADIOFREQUENCY ABLATION USING 3-D VOLUME MEASUREMENTS
Solomon Woldu1, Aaron Weinberg1, Zhamshid Okhunov3, Gregory Thorenson2, Rashed Ghandour2, Jeffrey Newhouse1, Mohammed Helmy1, Jeffrey Caddell5, Jaime Landman1, Ketan Badani1, James McKiernan1
1Columbia University Medical Center (United States)
2University of Texas, Southwestern Medical Center (United States)
3University of California, Irvine (United States)

MP25-02 PERIRENAL FAT CHARACTERISTICS ON PREOPERATIVE CT SCAN DOES NOT PREDICT DIFFICULTY OF DISSECTION
Aaron Weinberg1, Solomon Woldu1, Piraz Motamedinia1, Ruslan Korets2, Trushar Patel1, Ketan Badani1
1Columbia University Medical Center College Of Physicians and Surgeons (United States)
2Mount Sinai Medical Center (United States)
3Univeristy of South Florida Medical Center (United States)

MP25-03 UTILITY OF QUALITATIVE AND QUANTITATIVE IMAGING FEATURES FROM STANDARD AND DIFFUSION-WEIGHTED MRI FOR DETECTION OF METASTATIC PELVIC LYMPH NODES AT RADICAL CYSTECTOMY FOR BLADDER CANCER
Daniel Wollin1, Fang-Ming Deng1, William Huang1, James Babb1, Andrew Rosenkrantz1
1NYU Langone Medical Center (United States)

MP25-04 DIAGNOSTIC ACCURACY OF PROSTATE HISTOSCANNING
David Ellis1, Nimalan Arumainayagam1, Michael Mikhail1, Altaf Shamsuddin1, Dror Nir2, Matthias Winkler1
1Charing Cross Hospital, Imperial College NHS Trust, (United Kingdom)
2Imperial College (United Kingdom)

MP25-05 TARGETED HISTOSCANNING GUIDED PROSTATE BIOPSY – INITIAL CLINICAL EXPERIENCE
Eric Barret1, Arjun Sivaraman2, Rafael Sanchez-Salas1, Petr Macek3, Fernando Secin4, François Rozet5, Marc Galiano1, Xavier Cathelineau1
1Department of Urology, Institut Montsouris, Paris-Descartes University, Paris (France)
2Department of Urology, St. John’s medical college, Bangalore (India)
3Department of Urology, General University Hospital and First Faculty of Medicine Charles University, Prague (Czech Republic)
4Department of Urology, San Lazaro Foundation and CEMIC, Buenos Aires (Argentina)

MP25-06 OPTICAL COHERENCE TOMOGRAPHY PROVIDES IMAGES SIMILAR TO HISTOLOGY AND ALLOWS THE PERFORMANCE OF EXTENSIVE MEASUREMENTS OF DRUG-ELUTING METAL STENTS IN ANIMAL URETERS
Panagiotis Kallidonis1, Jason Kyriazis1, Ioannis Georgiopoulou1, Despina Lioudi1, Vasileios Panagopoulos1, Marinus Vassilas1, Abdurrahman Al-Aowr1, Dimitrios Karabatidis3, Athanasios Tsamadas4, Stavros Tsantis2, Georgios Kagadis2, Evangelos Liatsikos1
1Department of Urology, University of Patras (Greece)
2Department of Medical Physics, University of Patras (Greece)
3Department of Radiology, University of Patras (Greece)
4Department of Pathology, University of Patras (Greece)

MP25-07 THE ACOUSTIC SHADOW WIDTH IS A MORE ACCURATE PREDICTOR OF TRUE STONE SIZE DURING ULTRASOUND
Franklin Lee1, Barbrina Dunmire2, Jonathan Harper1, Ziyue Liu1, Ryan Hsi1, Michael Bailey1, Mathew Sorensen1
1University of Washington Department of Urology (United States)
LOWER THE RADIATION EXPOSURE OF NON-CONTRAST TOMOGRAPHY FOR THE FOLLOW UP OF URETERAL STONES
Mehmet Selcuk Keskin1, Burak Argun2, Ilker Tutk3, Ali Reza Kural4, Ahmet Sahin5
1Acibadem University (Turkey)
2Acibadem Maslak Hospital (Turkey)

NARROW-BAND IMAGING (NBI) - JUST DOUBLE CHECK ADVANTAGE OR REAL IMPROVEMENT IN FOLLOW-UP (FU) OF NON-MUSCLE-INVASIVE BLADDER CANCER?
Lucas Hirner1,2, Elke Stagge2, Herbert Ruebben4, Marcus Schenck1, Andreas Eisenhardt2
1Department of Urology, Urooncology and Pediatric Urology, University Hospital Essen (Germany)
2Medical praxis PUR/R (Germany)

THE SYNTHESIS OF POLY-ARGININE PEPTIDE MODIFIED SUPERPARAMAGNETIC IRON OXIDE AND ITS IN VITRO MRI RESEARCH OF BLADDER CANCER
Jinhai Fan1, Dalin He1, Chen Ding2, Jian Yang3, Yong Wang2, Yiqing Du1, Xinyang Wang3
1Department of Urology, First Affiliated Hospital of Medical College of Xi’an Jiaotong University (China)
2Department of Urology, The First Affiliated Hospital of Medical College of Xi’an Jiaotong University (China)
3Oncology Research Lab, Key Laboratory of Environment and Genes Related to Diseases, Ministry of Education (China)

COMPARISON OF HISTORIC VS CONTEMPORARY RADIATION DOSAGE IN RENAL COLIC
Dermot O’Kane1,2, T Manning3, E How4, J Quinn5, A Hawes6, Neil Smith3, Nathan Lawrentschuk7, Damien Bolton8
1Austin Hospital Department of Urology, University of Melbourne Department of Surgery (Australia)
2Department of Urology, Gold Coast University Hospital (Australia)
3Faculty of Medicine, Griffith University (Australia)

CONTEMPORARY SENSITIVITY AND SPECIFICITY OF DIGITAL PLAIN X-RAY FOR IDENTIFICATION OF VARIANT CALCIUM COMPOSITION URINARY CALCULI
Dermot O’Kane1,2, T Manning3, E Gow2, J Quinn4, A Hawes5, Neil Smith6, Nathan Lawrentschuk7, Damien Bolton8
1Austin Hospital Department of Urology, University of Melbourne Department of Surgery (Australia)
2Urology Department Gold Coast University Hospital (Australia)
3School of Medicine Griffith University (Australia)
4Department of Urology, Mackay Memorial Hospital (Taiwan)
5School of Medicine, National Yang-Ming University (Taiwan)
6Department of Urology, Teikyo University (Japan)
7Department of Biostatistics, School of Public Health, Graduate School of Medicine, The University of Tokyo (Japan)
8Department of Urology, Juntendo University, Graduate School of Medicine (Japan)
MP25-20  THE PERFORMANCE OF TRUS IN THE DIAGNOSIS OF DEFECT OF SEMINAL VESICLES
Daohu Wang1, Xu Chen1, Hua Wang1, Rongpei Wu1, Hui Liang1, Shaopeng Qiu1
1Dept. Urology, 1st Affiliated Hospital, Sun Yat-sen Univerisity (China)

MP25-21  NATIONAL TRENDS IN FOLLOW-UP IMAGING AFTER PYEOPLASTY IN CHILDREN
IN THE US
Ryan Hsi1, Sarah Holt1, John Gore1, Jonathan Harper1
1University of Washington (United States)

MP25-22  ROLE OF PREOPERATIVE MAGNETIC RESONANCE IMAGING IN PREDICTING THE EARLY RECOVERY OF URINARY CONTINENCE AFTER RADICAL PROSTATECTOMY
Seung-Kwon Choi1, Jongwon Kim2, Aram Kim1, Myungsun Shim1, Cheryn Song1, Hanjung Ahn1
1Asan Medical Center (South Korea)
2Korea Cancer Center Hospital (South Korea)

MP25-23  VALUE OF IMAGING IN THE DIAGNOSIS OF LOCALIZED AMYLOIDOSIS OF THE URETER
Xiaobo Ding1, Huimao Zhang1, Dan Tong1, Jiping Wang1
1First Hospital of Jilin University (China)

MP25-24  THE VALUE OF CT SPECTRUM IMAGING IN DIFFERENTIAL DIAGNOSIS OF RENAL CANCER INVADING RENAL PELVIS AND RENAL PELVIS CARCINOMA INVADING KIDNEY: A PRELIMINARY STUDY
Xiaobo Ding1, Huimao Zhang1, Yang Sun1
1First Hospital of Jilin University (China)

MP25-25  REDUCING THE RADIATION DOSE WITH THE ADAPTIVE STATISTICAL ITERATIVE RECONSTRUCTION TECHNIQUE FOR CHEST CT IN ADULTS: A PARAMETER STUDY
Xiaobo Ding1, Liang Chen1, Huimao Zhang1
1First Hospital of Jilin University (China)

MP25-26  DISTRIBUTION OF PROSTATE CANCER FOCI IN PATIENTS WITH TRANRECTAL 10-CORE SYSTEMIC RANDOM BIOPSY-ANALYSIS OF 5310 CORES IN SOUTH TAIWAN
Kung-Yuh Wu1, Yuh-Shyan Tsai1, Wen-Horn Yang1, Tsong-Shin Tsai1
1Dept. of Urology, National Cheng Kung University Hospital (Taiwan)

MP25-27  CLEAR CELL RENAL CELL CARCINOMA LOCALED AT SINUS RENALIS CONFUSED WITH RENAL PELVIS MASS IN IMAGE
Pengjie Wu1,2, Gang Zhu1,2, Shengjie Liu1, Dong Wei1, Jianye Wang1
1Department of Urology, Beijing Hospital of the Ministry of Health (China)
2Graduate School of Peking Union Medical College (China)

MP25-28  POSTERIOR NUTCRACKER SYNDROME: CLINICAL, RADIOLOGICAL AND SURGICAL MANAGEMENT OF 30 PATIENTS
Khaleed Ben Ahmed1, Faouzi Mallal1, Wissem Hamida2, Mouna Ben Othmen1, Mehdi Jaiden1, Faouzi Mosbah1
1Department of Urology Sahoul Souss (Tunisia)

MP25-29  EFFECTS OF FIRST-LINE TREATMENT USING POTASSIUM CITRATE IN RADIO-Opaque Urinary Stones
Young Sam Cho1, Khae Hawn Kim2, Kwan Joong Joo1, Heung Jae Park1, Chil Hun Kwon1
1Department of Urology, Kangbuk Samsung Hospital, Sungkyunkwan University School of Medicine (South Korea)
2Department of Urology, Gachon University Gil Hospital (South Korea)

MP25-30  VALIDATION OF A NOVEL ASIAN DIETARY QUESTIONNAIRE IN ASSESSING NUTRITIONAL RISK FACTORS FOR URINARY STONE FORMATION
Keng-Siang Png1, Arianto Yuwono1, Kavita Sundaram1, Mira Shen1, Sing-Joo Chia1
1Tan Tock Seng Hospital (Singapore)
MP26-04 LONG-TERM OUTCOMES AFTER LAPAROENDOSCOPIC SINGLE-SITE RADICAL NEPHRECTOMY
Young Eun Yoon¹, Kwang Suk Lee¹, Jang Hee Han¹, Dae Keun Kim¹, Kyung Hwa Choi², Kwang Hyun Kim³, Won Sik Ham¹, Koon Ho Rhad¹, Woong Kyu Han¹
¹Department of Urology, Urological Science Institute, Yonsei University College of Medicine (South Korea)
²Department of Urology, CHA Bundang Medical Center, CHA University (South Korea)
³Department of Urology, Ewha Womans University Mokdong Hospital (South Korea)

MP26-05 LAPAROENDOSCOPIC SINGLE-SITE ADRENALECTOMY VERSUS CONVENTIONAL 4-PORTS ADRENALECTOMY ~ COMPARATIVE STUDY OF SURGICAL OUTCOMES FROM OSAKA UNIVERSITY HOSPITAL
Yasushi Miyagawa¹, Youchi Kakuta¹, Motohide Uemura¹, Hiroshi Kikuchi¹, Ryouchi Inamura¹, Norio Nonomura¹
¹Department of Urology, Osaka University Hospital (Japan)

MP26-06 LAPAROENDOSCOPIC SINGLE-SITE RETROPERITONEAL LYMPH NODE DISSECTION VIA PARARECTUS APPROACH: EXPERIENCE WITH 3-YEAR FOLLOW-UP
Abai Xu¹, Yong Wen¹, Yong Zou¹, Wei Du¹, Haiyan Shen¹, Yinxing Luo¹, Chunxiao Liu¹
¹Zhujiang Hospital, Southern Medical University (China)

MP26-07 TRANSUMBILICAL LAPAROENDOSCOPIC SINGLE-SITE RESECTION OF RETROPERITONEAL PARAGANGLIOMA
Weifeng Xu¹, Hanzhong Li¹, Wei gang Yan¹
¹Department of Urology, Peking Union Medical College Hospital (China)

MP26-08 SIMULTANEOUS LAPAROENDOSCOPIC SINGLE-SITE SURGERY (LESS) FOR SURGICAL TREATMENT OF INTRA-ABDOMINAL PATHOLOGIES IN TWO DIFFERENT ORGANS
Kwang Taek Kim¹, Hahn-Ey Lee¹, Yong Hyun Park¹, Sang Jin Yoon¹, Hyeon Hoe Kim²
¹Gachon University Gil Medical Center (South Korea)
²Seoul National University Hospital (South Korea)

MP26-09 LAPAROENDOSCOPIC SINGLE-SITE RADICAL NEPHRECTOMY BY SINGLE-CUP OR SINGLE-RING GLOVE TECHNIQUE
Zhang Shudong¹, Ma Lulin¹, Huang yi¹, Liu Ke¹, Zhang Hongxian¹, Bi Hat¹
¹Peking University Third Hospital (China)

MP26-10 COMPARISON OF RETROPERITONEAL LAPAROENDOSCOPIC ADRENALECTOMY WITH SINGLE-SITE SURGERY AND CONVENTIONAL RETROPERITONEAL LAPAROENDOSCOPIC ADRENALECTOMY
Yueing Liu¹, Shudong Zhang¹, Jian Lu¹, Lulin Ma¹
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MP26-11 A COMPARATIVE ANALYSIS OF LAPAROENDOSCOPIC SINGLE-SITE ADRENALECTOMY AND CONVENTIONAL LAPAROENDOSCOPIC ADRENALECTOMY: INITIAL EXPERIENCE AT SAPPORO CITY GENERAL HOSPITAL
Tomoshige Akino¹, Nobuyuki Fukuzawa¹, Michiko Nakamura¹, Ai Kawauchi¹, Hitetaka Suzuki¹, Naoya Iwahara¹, Hiroshi Tanaka¹, Hiroshi Harada¹, Toshimori Seki¹
¹Sapporo City General Hospital (Japan)

MP26-12 EXPERIENCE OF LAPAROENDOSCOPIC SINGLE-SITE SURGERY FOR ADRENALECTOMY
Szu-Han Chen¹, Ching-Chia Li¹,²
¹Department of Urology, Kaohsiung Medical University Hospital (Taiwan)
²Department of Urology, Kaohsiung Municipal Ta-Tung Hospital (Taiwan)

MP26-13 LAPAROENDOSCOPIC SINGLE-SITE SIMPLE NEPHRECTOMY USING A MAGNETIC ANCHORING SYSTEM IN A PORCINE MODEL
Hye Won Lee¹, Deok Hyun Han¹, Hwang Gyun Jeon¹, Seong Il Seo¹, Seong Soo Jeon¹, Hyun Moo Lee¹, Han Yong Choi¹, Bong Chang Jeong¹
¹Samsung Medical Center (South Korea)

MP26-14 LAPAROENDOSCOPIC SINGLE-SITE SURGERY IS FEASIBLE IN THE PEDIATRIC UROLOGY PATIENTS
Kazuyoshi Johnin¹, Kenichi Kobayashi¹, Akihiro Kawauchi¹, Yasuyuki Naitoh¹, Yasuhiro Yamada¹, Atsuco Fujihara¹, Koji Okihara¹, Tsuneharu Miki¹
¹Department of Urology, Shiga University of Medical Science (Japan)
²Department of Urology, Graduate School of Medical Science, Kyoto Prefectural University of Medicine (Japan)
MP26-15 SUPRAPUBIC-ASSISTED LAPAROENDOSCOPIC SINGLE-SITE SURGERY NEPHRECTOMY WITH REPORT OF 110 CASES
Guoxi Zhang1, Xiaofeng Zou1, Yijun Xue1, Yuanhu Yuan1, Rihai Xiao1
1First Affiliated Hospital of Gannan Medical University (China)

MP26-16 SUPRAPUBIC-ASSISTED LAPAROENDOSCOPIC SINGLE-SITE SURGERY (SAE-LESS) FOR NEPHROURETERECTOMY
Quanliang Liu1, Xiaofeng Zou1, Guoxi Zhang1, Yunfeng Liao1, Yijun Xue1
1First Affiliated Hospital of Gannan Medical University (China)

MP26-17 A NOVEL LAPAROSCOPIC ADRENALECTOMY VIA TRANSUMBILICAL APPROACH: FOCUS ON TECHNIQUE
Hui Xu1, Xiaofeng Zou1, Guoxi Zhang1, Yuanhu Yuan1, Rihai Xiao1
1First Affiliated Hospital of Gannan Medical University (China)

MP26-18 PRELIMINARY EXPERIENCE WITH TRANSPERITONEAL LAPAROENDOSCOPIC SINGLE-SITE RADICAL NEPHRECTOMY USING A HOME-MADE SINGLE-PORT DEVICE IN CHINA
Bi Hai1, Ma Lu-lin1, Zhang Shu-dong1, Hou Xiao-fei1, Wang Guo-liang1, Zhao Lei1
1Department of Urology, Peking University Third Hospital (China)

MP26-19 LESS DONOR NEPHRECTOMY: FEASIBILITY AND SAFETY FROM PRELIMINARY SERIES
Takashi Kobayashi1, Tomomi Kamba1, Nobori Shibasaki1, Yoshiyuki Okada1, Hiromitsu Negoro1, Naoki Saito1, Toshinari Yamasaki1, Yoshiyuki Okada1, Koji Yoshimura1, Osamu Ogawa1
1Kyoto University Hospital (Japan)

MP26-20 PFANNENSTIEL REDUCED PORT SURGERY FOR RENAL TUMOR: A CLINICAL REPORT OF 2 CASES
Mutsushi Yamazaki1,2, Toshitaka Shin1, Tomoko Kanda1, Kenichi Mori1, Yasuhiro Sumino1, Fuminori Sato1, Hiromitsu Mimata1
1Department of Urology, Oita University Faculty of Medicine (Japan)
2The Cancer Institute Hospital of JFCR (Japan)

MP26-21 CONCOMITANT LAPAROENDOSCOPIC SINGLE-SITE SURGERY FOR RADICAL NEPHRECTOMY AND ANTERIOR RESECTION OF THE SIGMOID COLON
Jun-Hung Geng1,2, Wen-Chieh Fan1, Ching-Chia Li1,3,4
1Department of Urology, Kaohsiung Municipal Ta-Tung Hospital (Taiwan)
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MP26-22 A NEW INTERNAL PORT-FREE RETRACTOR SYSTEM FOR LAPAROENDOSCOPIC SINGLE-SITE SURGERY
Toshibaka Shin1, Mutsushi Yamazaki2, Kenichi Hirai3, Fuminori Sato1, Hiromitsu Mimata1
1Oita University, Faculty of Medicine (Japan)
2The Cancer Institute Hospital of JFCR (Japan)

MP26-23 VALIDITY OF AN ESTIMATING FORMULA TO MINIMIZE SINGLE INCISION IN LAPAROENDOSCOPIC SINGLE-SITE DONOR NEPHRECTOMY
Takamitsu Inoue1, Norihiko Tsuchiya1, Mutsuru Saito1, Hiroshi Tsuruta1, Susumu Akihama1, Shintaro Narita1, Shigeru Sato1, Tomonori Habuch1
1Akita University (Japan)

MP26-24 PURE LAPAROENDOSCOPIC SINGLE-SITE RETROPERITONEOSCOPIC ADRENALECTOMY: TECHNIQUE AND EARLY OUTCOMES
Shengjie Liu1, Gang Zhu1, Pengjie Wu1, Hong Ma1, Ben Wen1, Jiansong Wang1
1Department of Urology, Beijing Hospital of the Ministry of Health (China)

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Milan Horà1,2, Petr Straˇnský1, Tomáˇs Úrge1,2, Kristýna Kalusová1, Olga Dolejšová1,2, Michal Krém1,2, Ondrej Hes1,2, Ivan Trávníˇcek1,2
1Faculty Hospital Plzen (Czech Republic)
2Faculty of Medicine Plzen, Charles University Prague (Czech Republic)

MP26-26 VAGINAL EXTRACTION OF THE KIDNEY FOLLOWING LAPAROSCOPIC NEPHRECTOMY
Ryohei Hattori1, Shigeaki Yamamoto1, Shoji Suzuki1, Akitaka Suzuki1, Kouchi Suzuki1, Kumi Kato1
1Nagoya Daiichi Red Cross Hospital (Japan)

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Oktay Akca1,2, Homayoun Zargar1, Riccardo Autorino1, Luis Felipe Brandao1, Ahmet S. Gurler2, Abdullah Avsar2, Rahim Horà1,2, Selami Albayrak3
1Glickman Urological and Kidney Institute, Cleveland Clinic (United States)
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Yoshihide Kawasaki1, Akihiro Ito1, Yasuhiro Kaiho2, Ryo Morimoto2, Kei Takase2, Shigeto Ishidoya2, Jun Itoh1, Koji Mizusuka1, Yoichi Arai1
1Tohoku University Graduate School of Medicine, Department of Urology (Japan)
2Tohoku University Graduate School of Medicine, Department of Nephorology, Endocrinology and Vascular Medicine (Japan)
3Sendai City Hospital, Department of Urology (Japan)

MP26-29 TRANSVAGINAL NATURAL ORIFICE TRANSLUMENAL ENDOSCOPIC SURGERY (NOTES) IN UROLOGY: ONE SINGLE CENTRE EXPERIENCE
Xiaofeng Zou1, Guoxi Zhang1, Yuanhu Yuan1, Ri hai Xiao1, Gengqing Wu1
1First Affiliated Hospital of Gannan Medical University (China)
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Ashish Rawandale-Patil1,2, M. M. Siddiqui1,2, Lokesh Patni1-2, Yaser Ahmad1
1Institute of Urology (India)
2ACPM Medical College (India)

MP27-07 A PROSPECTIVE-RANDOMIZED COMPARISON OF TWO HIGH-FIDELITY WITH ONE LOW-FIDELITY ENDouroLOGICAL SIMULATOR FOR URERETEROscopy (URS)
Sophie Knipper1, Ann Kathrin Orywal1, Andreas J Gross1, Christopher Netsch1
1Asklepios Klinik Barmbek (Germany)

MP27-08 MODULAR TRAINING FOR PERCUTANEOUS NEPHROLITHOTRIPSY: THE SAFE WAY TO GO
Panagiotis Kallidonis1,2, Jason Kyriazis1, Mehmet Ozsoy1, Vasillis Panagopoulos1, Marinos Vasilas1, Jens-Uwe Stolzenburg2, Evangelos Liatsikos1-2
1University of Patras (Greece)
2University of Leipzig (Germany)
3Medical University of Vienna (Austria)

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Xiao Qing Wang1, Yuan Yuan Hao1, Qi Hui Chen1, Zhi Hua Lu1, Chun Xi Wang1
1The First Hospital of Jilin University (China)

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Oliver Brunnhorst1, Shahab Shahid1, Abdullatif Aydin1, Craig McIlhenny2, Shahid Khan3, Abdullatif Aydin1, Craig McIlhenny2, Shahid Khan3, Abdullatif Aydin1, Craig McIlhenny2, Shahid Khan3, Abdullatif Aydin1, Craig McIlhenny2, Shahid Khan3
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3Department of Urology, East Surrey Hospital, Surrey and Sussex Healthcare NHS Trust (United Kingdom)
4Roswell Park Cancer Institute (United States)
5Department of Surgery and Cancer, Imperial College London, St. Mary’s Hospital Campus (United Kingdom)

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Zeki Aktas1, Omer Yilmaz1, Ali Yilmaz1, Ercan Malkoc1, Ferhat Ates1
1Gülhane Military Medical Academy, Haydarpasa Training Hospital, Department of Urology (Turkey)
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\(^1\)Division of Urology, Taipei City Hospital (Taiwan)
\(^2\)National Taipei University of Nursing and Health Science (Taiwan)

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Heng-Jun Xiao\(^1\), Jun Pang\(^1\), Xiao-Peng Liu\(^1\), Yan Zhang\(^1\), Jian-Guang Qiu\(^1\), Jun Chen\(^1\), Bin Zhang\(^1\), Dong Li\(^1\), Dan Liao\(^1\), Ye-Hui Chen\(^1\), Yong-Chao Qiu\(^1\), Xin Gao\(^1\)
\(^1\)Department of Urology, the Third Affiliated Hospital of Sun Yat-sen University (China)

MP27-21 LAPAROSCOPIC LOWER URINARY TRACT SURGERY: ROLE OF THE SURGEON ASSISTANT
Hsin-Jung Hou\(^1\), Saint S. Chen\(^1\), Thomas Y. Hsu\(^1\), Andy C. Huang\(^1\), Allen W. Chiu\(^1\)
\(^1\)Taipei City Hospital, Renai branch (Taiwan)

MP27-22 VERRUCOUS CARCINOMA OF URETER: A CASE REPORT AND REVIEW OF LITERATURES
Hui-hui Chuang\(^1\), Yu-Wei Lai\(^1\), Andy C. Huang\(^1\), Yi-Chun Chiu\(^2\), Thomas Y. Hsu\(^1\), Shiou-Sheng Chen\(^1\), Allen W. Chiu\(^1\)
\(^1\)Divisions of Urology, Department of Surgery, Taipei City Hospital (Taiwan)
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MP27-23 EXPERIENCE IN CARING A PATIENT RECEIVED ROBOTICS ASSISTED LAPAROSCOPIC ENTEROCYSTOPLASTY: A PERSPECTIVE VIEW OF NURSE PRACTITIONER IN TAIWAN
Wei-Chin Su\(^1\), Yi-Chun Chiu\(^2,3,4\), Thomas Y. Hsu\(^1,3,4,5\), Allen W. Chiu\(^3,4,5\)
\(^1\)Department of Nursing, Taipei City Hospital Zhongxiao Branch (Taiwan)
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\(^3\)Division of Urology, Department of Surgery, Taipei City Hospital Ren-Ai Branch (Taiwan)
\(^4\)Division of Urology, School of Medicine, National Yang-Ming University (Taiwan)
\(^5\)Institute of Traditional Chinese Medicine, School of Medicine, National Yang-Ming University (Taiwan)

MP27-24 STUDY FOR THE EFFECT ON QUALITY OF LIFE AND NEGATIVE EMOTIONS BY SELF-MANAGEMENT GUIDANCE FOR PATIENTS WITH BLADDER CANCER BY RADICAL CYSTECTOMY AND URINARY DIVERSION
Xiaojing Bai\(^1\)
\(^1\)Department of Urology, The First Affiliated Hospital of Xi’an Jiaotong University Medical College (China)

MP27-25 THE HEMOSTATIC EFFECT OF THREE FIXED METHODS OF BALLOON CATHERER AFTER TURP
Xiaojing Bai\(^1\), Yumei Jiang\(^1\), Jing Zhang\(^1\), Jinmei Li\(^1\)
\(^1\)Department of Urology, The First Affiliated Hospital of Xi’an Jiaotong University Medical College (China)

MP27-26 THE IMPACT OF TELEPHONE FOLLOW-UP ON COGNITIVE LEVEL OF PATIENTS IN-DWELLING DOUBLE J STENT AFTER PCNL
Xiaojing Bai\(^1\), Yumei Jiang\(^1\), Jinmei Li\(^1\), Jing Zhang\(^1\)
\(^1\)Department of Urology, The First Affiliated Hospital of Xi’an Jiaotong University Medical College (China)

MP27-27 THE IMPACT OF MENTAL NURSING ON CURATIVE EFFECT OF PATIENTS UNDERGO URETHRAL EXTERNAL SPHINCTER INJECTION OF BOTULINUM TOXIN TYPE A FOR DYSURIA UNDER URETHROSCOPIC
Yumei Jiang\(^1\), Xiaojing Bai\(^1\)
\(^1\)Department of Urology, The First Affiliated Hospital of Xi’an Jiaotong University Medical College (China)

MP27-28 TO COMPARE THE LENGTH OF STAY (LOS) FOR HOSPITALIZATION OF ROBOTIC ASSISTED RADICAL CYSTECTOMY BETWEEN WITH ENHANCEMENT RECOVERY AFTER SURGERY (ERAS) AND WITHOUT ERAS
Suk Yin Crystal Li\(^1\), See Ming Simon Hou\(^1\), Shu Yin Eddie Chan\(^1\), Man Lei Tam\(^1\)
\(^1\)Department of Surgery, Prince of Wales Hospital (Hong Kong)

MP27-29 IMPLICATION OF EVIDENCE PRACTICE IN REDUCING THE RISK OF CAUTI IN BLADDER IRRIGATION BY UTILIZING A NEW CLOSED URINE DRAINAGE SYSTEM IN PRINCE OF WALES HONG KONG (PWH)
Suk Yin Crystal Li\(^1\), See Ming Simon Hou\(^1\), Chi Fai Ng\(^1\), Chi Hang Yee\(^1\), Man Lei Tam\(^1\)
\(^1\)Department of Surgery, Prince of Wales Hospital (Hong Kong)
Saturday, September 6

Moderated Poster Session (MP28)
03:45 pm–05:45 pm

Endourology: New Technology 2
Room: RM 101 D

Moderator: Shih-Chieh Chueh, Jong-Ming Hsu, T. P. Lin, Chang-Jun Yin

MP28-01 ASSOCIATION OF IPSS SUBSCALES WITH POST LASER PROSTATECTOMY URINARY INCONTINENCE
Abdulrahman Alruwaily¹, Rabia Siddiqui¹, Maggie Bierlein¹, Heather Crossley¹, Sara Lenherr¹, John Wei¹
¹University of Michigan Medical School (United States)

MP28-02 WORKPLACE DANGERS AND SAFETY FOR THE UROLOGIST
Kelly A. Healy¹, Demetrius H. Bagley¹
¹Thomas Jefferson University (United States)

MP28-03 ENDOSCOPIC, LAPAROSCOPIC, AND ROBOTIC UROLOGIC SURGERY IN NON-AGENERIANS (90+ YEAR AGE GROUP)
Athena Christakos²,³, Thomas Fitz-Gibbon¹,², Leonard Glickman¹, Michael Degen¹, Ravi Munver¹,²,³
¹Hackensack University Medical Center (United States)
²Rutgers-New Jersey Medical School (United States)
³John Theurer Cancer Center (United States)

MP28-04 COST-SAVINGS PROTOCOL IN THE ENDouroLOGY SUITE DECREASES HEALTH CARE EXPENDITURES WITHOUT COMPROMISING QUALITY OF CARE
Dilan Gupta², August Matteis², Fotima Asqarov², Chad Kitch², Gina Badalato², Ruslan Korets², Mantu Gupta¹
¹Mount Sinai Medical Center (United States)
²Columbia University (United States)

MP28-05 DOES TIME INTERVAL FROM STONE DIAGNOSIS TO TREATMENT AFFECT OUTCOMES?
Justin Friedlander¹,², Asim Ozayar³, Shuvro De², Nicholas Kavoussi², Jodi Antonelli², Margaret Pearle³
¹Einstein Healthcare Network, Urologic Institute of Southeastern PA (United States)
²University of Texas Southwestern Medical Center (United States)
³University of Pennsylvania (United States)

MP28-06 EFFECT OF GRADE OF REFLUX ON DEFLUX EFFICACY
Durwood Neal¹, Elizabeth Malm-Buatsi², Carrie Yeast²
¹University of Oklahoma (United States)
²University of Missouri (United States)

MP28-07 USE OF DEFLUX IN ADULT PATIENTS WITH VESICO-URETERAL REFLUX
Durwood Neal¹
¹University of Oklahoma (United States)

MP28-08 DELAYS OF TREATMENT FOR OBSTRUCTIVE PYELONEPHRITIS DUE TO STONES BY NON-UROLOGIC SERVICES LENGTHENS HOSPITALIZATION AND INCREASES MORBIDITY
Daniel Wolin¹, Alon Y. Mass¹, Michael Borofsky¹, Tracy Marien¹, Ojas Shah¹
¹New York University School of Medicine (United States)

MP28-09 INITIAL EXPERIENCE OF URETHRAL METALLIC STENT FOR URETHRAL STRICTURE PATIENT
Soodong Kim¹, Gyuang Tak Sung¹, Wonyeo Cho¹
¹Dong-A University Hospital (South Korea)

MP28-10 COMPARISON OF OUTCOMES IN PATIENTS UNDERGOING PERCUTANEOUS RENAL CRYOABLATION WITH SEDATION VERSUS GENERAL ANESTHESIA
Zhamshid Okhunov¹, Samuel Juncal¹, Michael Ordon¹, Arvin George², Michael del Junco¹, Louis Kavoussi², Jaime Landman¹
¹Department of Urology, University of California, Irvine (United States)
²Arthur Smith Institute for Urology, Hofstra North Shore-LIJ School of Medicine (United States)

MP28-11 THE TRENDS OF THE MANAGEMENT OF IATROGENIC UROLOGICAL INJURIES PERFORMED IN THE ABDOMINOPELVIC SURGERY
Ho Won Lee¹, Jung Hoon Cho¹, Sang Jin Kim¹, Won Sik Ham¹, Yong Tae Kim¹, Tchun Yong Lee¹, Sung Yul Park¹
¹Hanyang University (South Korea)
²Myongji Hospital (South Korea)
³Yonsei University (South Korea)

MP28-12 WHEN TO USE LAPAROSCOPIC CRYOAABLATION FOR THE SMALL RENAL MASS: A NATIONWIDE EXAMINATION OF UTILIZATION
Aaron Weinberg¹, Solomon Woldu¹, Timothy Wen², Christopher Deibert¹, Ruslan Korets¹, Ketan Badani³
¹Columbia University Medical Center (United States)
²Keck School of Medicine of the University of Southern California (United States)
³Mount Sinai Medical Center (United States)

MP28-13 SYMPTOMS ASSOCIATED TO URETERAL STENTS IN KIDNEY TRANSPLANT PATIENTS
Jorge David Magaña-Rodríguez¹, Jaime Omar Herrera-Cáceres², Daniel Olvera-Posada¹, Carlos E. Mendez-Probst¹
¹University of Oklahoma (United States)
²University of Colorado (United States)
³University of California, San Diego (United States)
MP28-14 CURRENT PRACTICES IN THE MANAGEMENT OF PATIENTS WITH URETERAL CALCULI IN THE EMERGENCY ROOM OF A UNIVERSITY HOSPITAL
Fugita Oscar1, Consolmagno Horacio1, Sakai Americo1, Nogueira Marcos1, Claros Oliver1, Watanabe Silva Carlos1
1Hospital Universitario - Universidade De Sao Paulo (Brazil)

MP28-15 EMPHYSEMATOUS PYELITIS IN DIABETIC PATIENT WITH RENAL CALCULI AND THE TREATMENT WITH RETROGRAD INTRARENAL SURGERY
Sercan Yilmaz1, Huseyin Tomruk1, Engin Kaya1, Turgay Ebiloglu1, Ali Guragan1, Selahattin Bedir1, Ibrahim Yildirim1
1Gulhane Military Medical Academy Department of Urology (Turkey)

MP28-16 CLINICAL EXPERIENCE OF TRANSURETHRAL RESECTION IN THE TREATMENT FOR GLANDULAR CYSTITIS (24 CASE REPORTS)
Qi Hui Chen1, Xiao Qing Wang1, Zhi Hua Lu1
1The First Hospital of Jilin University (China)

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Cheol Kya Oh1, Seok San Park1, Sang Hyun Park1, Jae Seung Chung1, Seong Cheol Kim1
1Haeundae Paik Hospital, Inje Medical School (South Korea)

MP28-18 OUTCOMES AND SAFETY OF RETROGRADE INTRARENAL SURGERY (RIRS) FOR MANAGEMENT OF RENAL STONES
Nur Rasv1d1, Adianti Khadijah1, Ponco Birowo1,2
1Department of Urology, Cipto Mangunkusumo Hospital/Faculty of Medicine Universitas Indonesia (Indonesia)

MP28-19 ADVANTAGE OF TRANSURETHRAL RESECTION WITH NARROW BAND IMAGING FOR NON-MUSCLE-INVASIVE BLADDER CANCER
Koji Mita1, Kohei Kobatake1, Shinya Ohara1, Masao Kato1
1Department of Urology, Hiroshima City Asa Hospital (Japan)

MP28-20 STENTING MAY BE SUPERIOR TO NEPHROSTOMY TUBE PLACEMENT IN THE SETTING OF OBSTRUCTIVE PYELONEPHRITIS SECONDARY TO URETERAL STONES
Alon Y. Mass1, Tracy Marien1, Areeba Sadiq1, Muddusir Ayaz1, Ojas Shah1
1New York University School of Medicine (United States)

MP28-21 THE POTENTIAL ROLE OF APOPHINE IN THE TREATMENT OF URETERAL STENT RELATED SYMPTOMS
Territo Angelo1, Rani Matteo1, Sighinolfi Maria Chiara1, Morselli Simone1, Micali Salvatore1, Bianchi Giampaolo1
1University of Modena and Reggio Emilia (Italy)

MP28-22 PERCUTANEOUS THERAPY OF RENAL PELVIC TRANSITIONAL CELL CARCINOMA (WITH VIDEO)
Xiaojian Tian1, Chunlei Xiao1, Lulin Ma1
1Peking University Third Hospital (China)

MP28-23 IS THE CATEGORY, PAPILLARY UROTHELIAL NEOPLASM OF LOW MALIGNANT POTENTIAL, IN THE 2004 WHO CLASSIFICATION REALLY BENIGN?
Hansoo Chung1, Hui-Young Lee2,3
1Department of Urology, Incheon Sarang Hospital (South Korea)
2Department of Internal Medicine, School of Medicine, Kangwon National University, Kangwon National University Hospital (South Korea)

MP28-24 COMPARISON OF TREATMENT RESULTS BETWEEN HOLMIUM LASER ENDOURETHROTOMY AND COLD KNIFE ENDOSCOPIC INCISION OF URETHRAL STRICTURE
Yuqing Liu1, Chunlei Xiao1, Jian Lu1, Lulin Ma1
1Peking University Third Hospital (China)

MP28-25 PERCUTANEOUS RENAL ENDOSCOPY FOR THE MANAGEMENT OF LARGE VOLUME UPPER TRACT UROTHELIAL CARCINOMA
Joel E. Abbott1, Julio G. Davalos2
1St John Providence Health (United States)
2Chesapeake Urology, University of Maryland (United States)

MP28-26 COMPLETE RESOLUTION OF HUGE ANTERIOR CYLINDRICAL DIVERTICULUM CASE REPORT
Meng-Lin Chang1, Shih-Chang Fuh1, Ting-Jui Chang2, Chih-Kai Hsu1
1Taipei Medical University Hospital (Taiwan)

MP28-27 SAFETY AND EFFICACY OF URETEROSCOPY FOR STONE DISEASE IN OBESE PATIENTS: RESULTS FROM A UNIVERSITY TEACHING HOSPITAL
Hiro Ishii1, Paul Cook1, Bhaskar Kumar Somani1
1University Hospital Southampton NHS Trust (United Kingdom)

MP28-28 A NETWORK META-ANALYSIS OF THERAPEUTIC OUTCOMES AFTER NEW IMAGE TECHNOLOGY-ASSISTED TRANSURETHRAL RESECTION IN PATIENTS WITH NON-MUSCLE INVASIVE BLADDER CANCER: 5-AMINOLAEVULINIC ACID FLUORESCENCE VERSUS HEXYLAMINOLEVULINATE FLUORESCENCE VERSUS NARROW BAND IMAGING
Jong Kyou Kwon1, Joo Yong Lee1, Dong Hyuk Kang2, Kang Su Cho3, Seong Uk Jeh1, Ho Won Kang1, Won Sik Ham1, Young Deuk Choi1,4,5
1Department of Urology, Severance Hospital, Urological Science Institute, Yonsei University College of Medicine (South Korea)
**Video Poster Session**

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<td>Smith Institute for Urology (United States)</td>
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<td>Lei Zhang(^1), Bin Xu(^1), Ming Chen(^1)</td>
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<td>Fukushima Medical University of School of Medicine (Japan)</td>
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VP01-11 MULTIPORT LAPAROSCOPIC ADRENALECTOMY FOR CONN’S SYNDROME
Cenk Gurbuz¹, Ozgur Efioğlu¹, Gokhan Ays¹
Gonca Tamer², Nebahat Ozdemir³
Turhan Caskurlu¹
¹Istanbul Medeniyet University Goztepe Training Hospital Department of Urology (Turkey)
²Istanbul Medeniyet University Goztepe Training Hospital Department of Endocrinology (Turkey)

VP01-12 WHICH SYSTEM IS BETTER FOR BEGINNERS’ LAPAROSCOPY TRAINING? GLASSES BASED FULL-HD 3D MONITOR SYSTEMS OR STANDARD (FULL-HD 2D) MONITOR SYSTEMS
Serdar Yalcin¹, Yusuf Kibar¹, I. Yasar Ozgok¹
¹Department of Urology, Gulhane Military Medical Academy (Turkey)

Thursday, September 4 Video Poster Session (VP02) 01:30 pm–03:30 pm
Laparoscopic Surgery Lower Tract Room: RM 103
Moderator: Cassio Andreoni, Steven K. Huan, Gang Zhu

VP02-01 TRICKS TO PREVENT PSEUDOCURRENCES AFTER LAPAROSCOPIC REPAIR OF DIRECT INGUINAL HERNIA
Wei-Chun Weng¹
¹Tungs' Taichung MetroHarbor Hospital (Taiwan)

VP02-02 A STEPWISE APPROACH TO THE POST-TURP BLADDER NECK IN RALP
Granville L. Lloyd¹
¹Department of Urology University of Wisconsin (United States)

VP02-03 LAPAROSCOPIC ANTERIOR EXENTERATION FOR GARTNER’S DUCT CYST ADENOCARCINOMA
Manickam Ramalingam¹,², Anandan Murugesan¹, Kallappan Senthil², Mizar Ganapathy Pai²
¹PSG Institute of Medical Sciences and Research (India)
²Urology Clinic (India)

VP02-04 LAPAROSCOPIC RADICAL PROSTATECTOMY: 10 YEARS EXPERIENCE
Kadir Omur Gunseren¹, Onur Kaygısız², Yakup Kordan¹, Hakan Varuskan¹, Ismet Yavascaoglu¹
¹Department of Urology, Uludag University School of Medicine (Turkey)

VP02-05 LAPAROSCOPIC SIMPLE PROSTATECTOMY
Onur Kaygısız¹, Kadir Omur Gunseren¹, Cagdas Gokhan Ozmerdiven¹, Hakan Varuskan¹, Ismet Yavascaoglu¹
¹Department Of Urology, Uludag University School Of Medicine, (Turkey)

VP02-06 PROTRUDING HEM-O-LOK CLIP IN THE BLADDER WITH STONE FORMATION AFTER LAPAROSCOPIC RADICAL PROSTATECTOMY
Sung-Woo Park¹, Seung Chan Jung¹, Dong Hoon Lee¹, Jong Kil Nam¹, Tae Nam Kim¹, Moon Kee Chung¹
¹Pusan National University Yangsan Hospital (South Korea)

VP02-07 LAPAROSCOPIC PROSTATE-SPARING RADICAL CYSTECTOMY; CASE REPORT
Gokhun Ozmerdiven¹, Onur Kaygısız¹, Hakan Varuskan¹, Hakan Kilicarslan¹, Ismet Yavascaoglu¹
¹Uludag University, Department of Urology (Turkey)

VP02-08 ANASTOMOSIS WITH SINGLE V-LOC SUTURE IN LAPAROSCOPIC RADICAL PROSTATECTOMY
Ma Lulin¹, Zhang Fan¹
¹Peking University Third Hospital (China)

VP02-09 PRE-PERITONEAL PARTIEL CYSTECTOMY WITH GUIDED CYSTOSCOPY
Huang Yi¹, Zhang Fan¹
¹Peking University Third Hospital (China)

VP02-10 LAPAROSCOPIC EXTENDED PELVIC LYMPH NODE DISSECTION “SPLIT-ROLL TECHNIQUE”- IN RADICAL CYSTECTOMY
Jaspreet Singh Chhabra¹, Shashikant Mishra¹, Sudharsan Sb¹, Arvind Ganpule¹, Ravindra Sabnis¹, Mahesh Desai¹
¹Muljibhai Patel Urological Hospital (India)

VP02-11 LAPAROSCOPIC RADICAL NEPHROURETERECTOMY WITH PARTIAL CYSTECTOMY WITH LYMPH NODE DISSECTION FOR MULTICENTRIC UROTHELIAL TUMOR
Jaspreet Singh Chhabra¹, Ankush Jairath¹, Arvind Ganpule¹, Ravindra Sabnis¹, Shashikant Mishra¹, Mahesh Desai¹
¹Muljibhai Patel Urological Hospital (India)

VP02-12 LAPAROSCOPIC PARTIAL CYSTECTOMY GUIDED BY REAL-TIME CYSTOSCOPIC VISUALIZATION.
Jitendra Jagtap¹, Shashikant Mishra¹, Amit Bhattu¹, Jaspreet Singh Chhabra¹, Arvind Ganpule¹, Ravindra Sabnis¹, Mahesh Desai¹
¹Muljibhai Patel Urological Hospital (India)
VP03-01 GLASSES-BASED 3D FULL HD MONITOR SYSTEM: CONSIDERABLE PRELIMINARY TRAINING CHOICE FOR RESIDENTS AND BEGINNERS; LAPAROSCOPIC RENAL CYST DECOLTICATION
Serdar Yalcin1, Yusuf Kibar1, I. Yasar Ozgok1
1Department of Urology, Gulhane Military Medical Academy (Turkey)

VP03-02 LAPAROSCOPIC ADRENALECTOMY FOR A LARGE ADRENAL MYELOLIPOMA: SURGICAL TECHNIQUE
Alexander Jay1, Andrew Tan1, Sarah Norton1, Shuo Liu1
1Royal Perth Hospital (Australia)

VP03-03 LAPAROSCOPIC PARTIAL NEPHRECTOMY: ULUDAG UNIVERSITY EXPERIENCE
Yakup Kordan1, Aykut Sonmez1, Hakan Vuruskan1, Ismet Yavascaoglu1, Hakan Kilicarslan1
1Department of Urology, Uludag University School of Medicine (Turkey)

VP03-04 LAPAROSCOPIC RETROPERITONEAL LYMPH NODE DISSECTION; ULUDAG UNIVERSITY EXPERIENCE
Yakup Kordan1, Sinan Celen1, Hakan Vuruskan1, Hakan Kilicarslan1, Ismet Yavascaoglu1
1Department of Urology, Uludag University (Turkey)

VP03-05 SUCCESSFUL LAPAROSCOPIC NEPHRECTOMY IN A PATIENT WITH ILEAL CONDUIT. BY: RYAN HALILI, MD AND JOSE BENITO ABRAHAM, MD
Ryan Halili1, Jose Benito Abraham1,2,3,4
1National Kidney and Transplant Institute (Philippines)
2Saint Luke’s Medical Center (Philippines)
3University of the East Memorial Medical Center (Philippines)
4AFP Medical Center (Philippines)

VP03-06 LAPAROSCOPIC TRANSPERITONEAL HEMINEPHRECTOMY IN ADULTS WITH Duplicated RENAL COLLECTING SYSTEMS
Yakup Kordan1, Gokhun Ozmerdiven1, Onur Kaygiz1, Hakan Vuruskan1, Hakan Kilicarslan1, Ismet Yavascaoglu1
1Uludag University, Department of Urology (Turkey)

VP03-07 LAPAROSCOPIC ADRENALECTOMY: ULUDAG UNIVERSITY EXPERIENCE
Yakup Kordan1, Gokhun Ozmerdiven1, Onur Kaygiz1, Hakan Vuruskan1, Hakan Kilicarslan1, Ismet Yavascaoglu1
1Uludag University, Department of Urology (Turkey)

VP03-08 LAPAROSCOPIC TRANSPERITONEAL HEMINEPHRECTOMY IN HORSESHOE KIDNEY
Yilmaz ASLAN1, Altug TUNCHEL1, Ozer GUZEL1, Melih BALCI1, Ersin KOSEOGLU1, Anil ERKAN1, Cagdas SENEL1, Ali ATAN2
1Ankara Numune Education and Research Hospital (Turkey)
2Gazi University Faculty of Medicine Hospital (Turkey)

VP03-09 HYBRID LAPAROSCOPIC URETEROCECTOMY FOR MANAGEMENT OF LOWER URETERIC STRICTURES
Jian-Ting Chen1, Sheng-Hsien Huang1, Bai-Fu Wang1, Chin-Pao Chang1, Heng-Chieh Chiang1, Hung-Jen Shih1
1Department of Surgery, Division of Urology, Changhua Christian Hospital (Taiwan)

VP03-10 LAPAROSCOPIC LIVE-DONOR NEPHRECTOMY WITH TRANSVAGINAL GRAFT EXTRACTION
Dmitry Perlin1,2, Ilia Aleksandrov1,2, Vasily Zippunnikov1, Arkady Sapozhnikov1,2, Olga Shevchenko1
1Volgograd Regional Hospital of Urology (Russia)
2Volgograd State Medical University (Russia)

VP03-11 LAPAROSCOPIC RADICAL NEPHRECTOMY WITH INFERIOR VENA CAVA THROMBECTOMY
Dmitry Perlin1,2, Ilia Aleksandrov1,2, Vasily Zippunnikov1, Arkady Sapozhnikov1,2, Olga Shevchenko1
1Volgograd Regional Hospital of Urology (Russia)
2Volgograd State Medical University (Russia)
VP04-01 THE USE OF MONOPOLAR AS SINGLE ENERGY SOURCE DURING LAPAROSCOPIC NEPHRECTOMY: FEASIBLE AND INEXPENSIVE
Shashikant Mishra1, Natalia Otano1, Ankush Jairath1, Arvind Ganpule1, Ravindra Sabnis1, Mahesh Desai1
1Muljiabhai Patel Urological Hospital (India)

VP04-02 PURE LAPAROSCOPIC PARTIAL NEPHRECTOMY FOR RIGHTrenal hilar angiomyolipoma
Yuan-Hung Pong1,2, Yu-Chuan Lu1, Vincent FS Tasi2, Yeong-Shiaw Pu1, Kuo-How Huang1
1Department of Urology, National Taiwan University Hospital (Taiwan)
2Department of Urology, Ten Chan Hospital (Taiwan)

VP04-03 RETROPERITONEOSCOPIC PARTIAL NEPHRECTOMY WITH SEGMENTAL ARTERY CLAMPING: A VERSATILE TECHNIQUE FOR BOTH ANTERIOR AND POSTERIOR RENAL TUMOURS
Joseph Hon-Ming Wong1, Chi-Hang Yee1, Eddie Shu-Yin Chan1, Chi-Fai Ng1, See-Ming Hou1
1The Chinese University of Hong Kong (Hong Kong)

VP04-04 LAPAROSCOPIC RESECTION OF IPSILATERAL ADRENAL METASTASIS AFTER LAPAROSCOPIC PARTIAL NEPHRECTOMY FOR RENAL CELL CARCINOMA: A CASE REPORT
Takashige Abe1, Naoto Miyashima1, Kunihiko Tsuchiya1, Satoru Maruyama1, Nobuo Shihonara1, Katsuya Nonomura1
1Department of Urology, Hokkaido University (Japan)

VP04-05 LAPAROSCOPIC PARTIAL NEPHRECTOMY IN A HORSESHOE KIDNEY: A VIDEO PRESENTATION
Kelven Chen1, Tze Kiat Ng1, Lincoln Tan1, Ho Yee Tiong1
1National University Health System (Singapore)

VP04-06 RETROPERITONEOSCOPIC URETEROlysis and RECONSTRUCTION OF RETROCAVAL URETER: EXPERIENCE OF 2 CASES
Daohu Wang1, Heng-ai Li1, Chengqiang Mo1, Jintao Zhuang1, Wei Chen1, Shaopeng Qiu1
1The 1st Affiliated Hospital of Sun Yat-San University (China)

VP04-07 LAPAROSCOPIC RADICAL NEPHRECTOMY FOR SYNCHRONOUS ADRENAL AND RENAL TUMOUR
Manickam Ramalingam1,2, Kallappan Senthil1, Anandan Murugesan1, Mizar Ganapathy Pai2
1PSG Institute of Medical Sciences and Research (India)
2Urology Clinic (India)

VP04-08 INJURY AND IMMEDIATE REPAIR OF URETER OR OBTURATOR NERVE DURING LAPAROSCOPIC RADICAL PROSTATECTOMY
Takashige Abe1, Masafumi Kon1, Kunihiko Tsuchiya1, Satoru Maruyama1, Nobuo Shihonara1, Katsuya Nonomura1
1Department of Urology, Hokkaido University (Japan)

VP04-09 ROLE OF HAND-ASSISTED LAPAROSCOPIC RADICAL NEPHRECTOMY FOR RENAL CELL CARCINOMA IN THE MODERN ERA
Arianto Yuwono1, Zhen-Bang Liu1, Keng-Siang Png1
1Department of Urology, Tan Tock Seng Hospital (Singapore)

VP04-10 PERFORMING A PURE LAPAROSCOPIC RIGHT HEMINEPHROURETERECTOMY FOR UROTHELIAL CARCINOMA OF RENAL PELVIS IN A HORSESHOE KIDNEY
Masaru Ozasawa1, Buaa Iwabuchi1, Toshiaki Kawaguchi1, Toshikazu Tanaka1, Chikara Ohyama2
1Aomori Prefectural Central Hospital (Japan)
2Hirosaki University (Japan)

VP04-11 COMPLETE OFF-CLAMP ZERO ISCHEMIA PARTIAL NEPHRECTOMY UNDER NORMAL BLOOD PRESSURE, DIFFERENT LAYERS OF INCISION FOR CLEAR CELL CARCINOMA AND FOR PAPILLARY CARCINOMA
Hitoshi Yanaihara1, Hirofumi Kagayama1, Fuminari Hanashima1, Hirofumi Sakamoto1, Kayo Aonuma1, Kaori Matsuda1, Yoko Nakahira1, Hirotaka Asakura1
1Saitama Medical University (Japan)
Friday, September 5 Video Poster Session (VP05) 01:30 pm–03:30 pm

PCNL
Room: RM 201 C
Moderator: Athanasios Papatsoris, Julie Riley, W. J. Wu

VP05-01 TOTALLY FLUOROSCOPIC GUIDED PRONE PERCUTANEOUS NEPHROLITHOTRIPSY: TECHNIQUE STEP BY STEP
Evangelos Liatsikos1, Jason Kyriazis1, Panagiotis Kallidonis1, Marinios Vasilas1, Vasileios Panagopoulos1, Ioannis Georgiopoulos1, Panagiotis Kitrou1, Jens - Uwe Stolzenburg2
1Department of Urology (Greece)
2Department of Urology (Germany)

VP05-02 BMI BEST PREDICTS OUTCOME OF URETEROSCOPY-ASSISTED RETROGRADE NEPHROSTOMY (UARN) FOR PCNL
Joseph Hsu1,2, Jason Wynberg1,2, Christopher Atalla1,2, Brian Odom1, Lynn Paik1,2
1Detroit Medical Center (United States)
2Michigan State University (United States)

VP05-03 REVERSE THERMOSENSITIVE GEL PREVENTS ANTERGRADE MIGRATION OF FRAGMENTS DURING PERCUTANEOUS NEPHROLITHOTRIPSY: A FEASIBILITY STUDY
Yung Tan1, Jegathesan Thiruchelvam1
1Tan Tock Seng Hospital (Singapore)

VP05-04 INFUNDIBULOPLASTY OF CALYCEAL DIVERTICULA USING MODIFIED PERCUTANEOUS TECHNIQUE
Mantu Gupta2, Gina Badalato1, Ruslan Korets1, Matthew Pagano1
1Columbia University College of Physicians and Surgeons (United States)
2Icahn School of Medicine at Mount Sinai (United States)

VP05-05 ROAD TO X-RAY LESS PERCUTANEOUS NEPHROLITHOTRIPSY
Hin Lysander Chan1, Hoit Chak Wilson Chan1, Chun Ki Chan1, Man Hung Phoebe Cheung1, Kin Man Justin Lam1, Hing Shing So1
1United Christian Hospital (Hong Kong)

VP05-06 ULTRA-MINI-PERCUTANEOUS NEPHROLITHOTOMY OF UPPER URETERAL IMPACTED STONES. OUR INITIAL EXPERIENCE
Ramin Haghighi1, Masoud Etemadian2
1North Khorsan University of Medical Sciences (Iran)
2Iran University of Medical Sciences (Iran)

VP05-07 “MINI-PERC” TECHNIQUE AND PERCUTANEOUS LASER INFUNDIBULOTOMY FOR UPPER POLE CALYCEAL DIVERTICULAR STONE: A TECHNICAL CHALLENGE
Wai Kit Ma1, Ada Tsai Lin Ng1, Brian Sz Ho Ho1, Ming Kwong Yiu1
1Queen Mary Hospital, The University of Hong Kong (Hong Kong)

VP05-08 HIGH POWER HOLMIUM-YAG LASER COMBINED WITH SUCTION FOR PERCUTANEOUS NEPHROLITHOTOMY (PCNL) IN LARGE BULK RENAL CALCULUS
Ravindra Sabnis1, Amit Bhattu1, Vinodh Murili1, Jitendra Jagtap1, Shashikant Mishra1, Arvind Ganpule1, Mahesh Desai1
1Muljibhai Patel Urological Hospital (India)

VP05-09 MICROPERC IN AN 11 MONTH OLD INFANT WITH NEPHROLITHIASIS
Jitendra Jagtap1, Vinod Murli1, Amit Bhattu1, Jaspreet Singh Chhabra1, Shashikant Mishra1, Arvind Ganpule1, Ravindra Sabnis1, Mahesh Desai1
1Muljibhai Patel Urological Hospital (India)

VP05-10 ULTRASOUND GUIDED PCNL LEADS TO BETTER STONE FREE RATES AND DECREASED NEED FOR RE-INTERVENTION
Foo Cheong Ng1, Sey Kiat Lim1, Wai Loon Yam1
1Changi General Hospital (Singapore)

VP05-11 A RARE CASE OF NEEDLE IN KIDNEY MIGRATED FROM URETHRA TREATED WITH PERCUTANEOUS NEPHROSCOPY
Jianxing Li1, Bo Xiao2, Weiguo Hu1, Bo Yang1, Xiaofeng Wang1
1Peking University People’s Hospital (China)
2Peking University International Hospital (China)

Friday, September 5 Video Poster Session (VP06) 01:30 pm–03:30 pm

Robotic Surgery Upper Tract 1
Room: RM 102
Moderator: Anthony C.F. Ng, Yoshiyuki Kojima, Gyung Tak Sung

VP06-01 ROBOT ASSISTED URETERAL RECONSTRUCTION IN 3 PATIENTS
Omer Burak Argun1, Itier Tüfek2, Mehmet Selçuk Keskin1, Ahmet Sahin1, Ali Riza Kural1
1Acibadem Maslak Hospital (Turkey)
2Acibadem University (Turkey)

VP06-02 TROUBLESHOOTING ROBOT-ASSISTED RADICAL NEPHRECTOMY WITH A LEVEL I VENA CAVAL TUMOR THROMBECTOMY: CONFIRMING VASCULAR CONTROL PREVENTS COMPLICATIONS
Clinton D Bahler M.D.1, David Y Yang B.S.1, Chandra P Sundaram M.D.1
VP06-03  COMPLEX ROBOTIC PARTIAL NEPHRECTOMY FOR HILAR MASSES
  Michael Maddox1, Philip Dorsey1, Christopher Keel1, Julie Wang1, Benjamin Lee1
  1Tulane University Department of Urology (United States)

VP06-04  UTILITY OF INDOCYANINE GREEN IN ROBOTIC PARTIAL NEPHRECTOMY WITH SELECTIVE ARTERIAL CLAMPING
  Clinton D Bahler1, Kashyap Shatagopam1, Chandra P Sundaram1
  1Indiana University School of Medicine (United States)

VP06-05  CONCURRENT ROBOTIC URETERAL REIMPLANT AND Buccal Mucosa Graft URETEROPLASTY: A NOVEL TECHNIQUE FOR RECONSTRUCTION OF MULTIPLE URETERAL STRICTURES
  Alon Y. Mass1, Michael Stifelman1, Lee C. Zhao1
  1New York University School of Medicine (United States)

VP06-06  ROBOT-ASSISTED LAPAROSCOPIC EXCISION OF UNCOMMON RETROPERITONEAL MASSES
  Jason Joseph1, Akira Yamamoto1, Li-Ming Su1
  1Department of Urology, University of Florida (United States)

VP06-07  ZERO-ISCHEMIA ROBOT ASSISTED PARTIAL NEPHRECTOMY FOR HIGH NEPHROMETRY SCORE TUMOR
  Rocco Papalia1, Riccardo Mastroiani2, Mariangisilgia Ferriero1, Giuseppe Simone1, Salvatore Guaglianone1, Manuela Costantini2, Michele Gallucci1
  1Regina Elena Nationa Cancer Institute (Italy)
  2University Campus Biomedico (Italy)

VP06-08  THE EUNORRHAPHY: A DOUBLE ARMED SUTURE RENORRHAPHY
  Ziho Lee1, Blake Moore1, Elton Llukani1, Lindsey Parkes1, Anastasia Schwab1, Jack Mydlo1, Daniel Eun1
  1Temple University (United States)

VP06-09  SAFETY AND FEASIBILITY OF ROBOT-ASSISTED PARTIAL NEPHRECTOMY OF RENAL HILAR TUMORS
  Nobuyuki Hina1, Junya Furukawa1, Takeshi Ishimura1, Hideaki Miyake1, Kazushi Tanaka1, Masato Fujisawa1
  1Kobe University Graduate School of Medicine (Japan)

VP06-10  RETROPERITONEAL ROBOTIC-ASSISTED LAPAROSCOPIC CALYCEAL DIVERTICULAR ABLATION
  Nora Baker1, Jacob Khurgin1, Daniel Canter1,2, DYT Chen1
  1Albert Einstein Medical Center (United States)
  2Fox Chase Cancer Center (United States)

VP06-11  ROBOTIC ASSISTED ADRENALECTOMY AND RETROPERITONEAL LYMPH NODE DISSECTION FOR METASTATIC LUNG CANCER
  Clinton D Bahler1, Matthew W Tellman1, Chandra P Sundaram1
  1Indiana University School of Medicine (United States)

VP06-12  ROBOTIC-ASSISTED LAPAROSCOPIC RECONSTRUCTIVE SURGERY IN BILATERAL URETEROPELVIC JUNCTION OBSTRUCTION
  Wei-Ting Kuo1, Lun-Hsiang Yuan1
  1Urology division, Department of Surgery, Kaohsiung Veterans General Hospital (Taiwan)
VP07-04 DOES URETERIC CURVE MATTER?  
Kandasami Sangam, Arul Myilsamy  
1Vedanayagam Hospital and Postgraduate Institute (India)

VP07-05 BACKSTOP GEL®: A BREAKTHROUGH IN SEMIRIGID URETERORENOSCOPY (URS)  
Guido Giusti, Silvia Proietti, Roberto Peschechera, Gianluigi Taverna, Mauro Seveso, Pierpaolo Grazzitti  
1Humanitas Clinical and Research Center (Italy)

VP07-06 CASE REPORT- FIBROEPITHELIAL POLYP  
Jennifer Yates, Achankeng Afiadata  
1University of Massachusetts Medical School (United States)

VP07-07 ENDOSCOPIC MANAGEMENT OF KERATINIZING SQUAMOUS METAPLASIA OF THE BLADDER WITH URETERAL OBSURATION  
David Leavitt, Sonia Bahlani, Sammy Elsaami, Nithin Theckamparambil, Robert Moldwin, Arthur Smith, Zeph Okeke  
1The Smith Institute for Urology (United States)

VP07-08 THE APPLICATION OF NANOSECOND ELECTROPULSE LITHOTRIPSY IN THE MANAGEMENT OF COMPLEX FORMS OF NEPHROLITHIASIS  
Sergey Eremenko, Alexey Martov, Alexander Gudkov, Alexey Eremenko, Valery Diamant, Gennady Chepovetsky  
1Medical-Yug Urology Clinic (Russia), 2Federal Medical and Biological Agency, Urology Department (Russia)

VP07-09 THE SAFETY AND EFFICACY OF RETROGRADE INTRARENAL SURGERY IN THE TREATMENT OF “AVIATION PILOT RENAL STONES”  
Jianxing Li, Bo Xiao, Bo Yang, Weiguo Hu, Liang Chen, Xiaofeng Wang  
1Peking University People’s Hospital (China), 2Peking University International Hospital (China)

VP07-10 LAPAROSCOPIC RADICAL CYSTECTOMY: ULUDAG UNIVERSITY EXPERIENCE  
Sinan Celen, Yakup Kordan, Hakan Varuskan, Ismet Yavuscaoagi, Hakan Kilicaslan  
1Department of Urology, Uludag University (Turkey)

VP07-11 ECTOPIC RIGHT INCOMPLETE TRIPLE URETERS AND LEFT COMPLETE DUPLICATED URETER ASSOCIATED WITH BICORNUATE BICOLLIS: A CASE PRESENTATION  
Fu Hsiu Hsieh, Tsan-Jung Yu, Victor Chia-Hsiang Lin  
1E-Da Hospital (Taiwan)

VP08-01 COMBINING ENucleATION AND VAPORIZATION TECHNIQUES WITH 180W XPS GREENLIGHT  
Pablo Contreras, Hernando Ríos Pita, Juan Fernández Long, Francisco López  
1Hospital Aleman (Argentina)

VP08-02 BIPOLAR ENucleATION OF PROSTATE VERSUS LASER ENucleATION FOR BENIGN PROSTATE HYPERPLASIA: A SINGLE SURGEON RETROSPECTIVE COHORT STUDY  
Ju-Chuan Hu, Cheng-Che Chen, Kun-Yuan Chiu  
1Divisions of Urology, Department of Surgery, Taichung Veterans General Hospital (Taiwan)

VP08-03 THULIUM LASER VAPO-RESECTION OF THE PROSTATE: FROM PRECISION TO SATISFACTION  
Raymond Wai Man Kan, Miu Ling Li, Marco Tsz Yeung Chan, Cheng Hing Cheng, Cheong Yu, Peggy Sau Kwan Chu, Chi Wai Man  
1Tuen Mun Hospital (Hong Kong)

VP08-04 HOPEL: “EN BLOC” ENucleATION OF PROSTATIC ADENOMA, HOW DO WE IT  
Franco Biefardi, Filippo Di Lord, Angelo Macchiarella, Marco Mencarini, Andrea Del Grasso, Michela Spario, Christian Daanillo, Franco Rubino  
1Dept. of Urology S. Stefano Hospital (Italy)

VP08-05 LASER-ASSISTED BIPOLAR TRANSURETHRAL RESECTION OF THE PROSTATE FOR PATIENTS WITH LARGE PROSTATE  
Jian-Ting Chen, Heng-Chieh Chiang, Hun-Jen Shih  
1Department of Surgery, Division of Urology, Changhua Christian Hospital (Taiwan)

VP08-06 SIMPLIFIED TWO-LOBE Technique BASED ON THE ANTEROPosterIOR DISSECTION HOPEL METHOD  
Masaki Shimbo, Fumiyasu Endo, Kazuhiro Matsuishi, Yoko Kyono, Kohsuke Hishiki, Kenji Komatsui, Go Anan, Kazunori Hattori, Osamu Muraiishi  
1Department of Urology, St. Luke’s International Hospital (Japan)
VP08-07 PROSTATE MORCELLATION AFTER TRANSURETHRAL PROSTATE ENucleATION: TECHNIQUE, TIPS AND TRICKS
Christian Tiburtius¹, David Leavitt², Christopher Netsch¹, Zeph Okeke², Thomas Herrmann³, Arthur Smith², Andreas Gross¹
¹Asklepios Hospital Barmbek, Department of Urology (Germany)
²The Smith Institute for Urology (United States)
³University of Hannover, Department of Urology (Germany)

VP08-08 THULIUM VAPOENUCLEATION OF THE PROSTATE: SURGICAL TECHNIQUE FROM VAPORIZATION TO VAPOENUCLEATION
David Leavitt², Christian Tiburtius¹, Christopher Netsch¹, Zeph Okeke², Thomas Herrmann³, Arthur Smith², Andreas Gross¹
¹Asklepios Hospital Barmbek, Department of Urology (Germany)
²The Smith Institute for Urology (United States)
³University of Hannover, Department of Urology (Germany)

VP08-09 LAPAROSCOPIC PARTIAL CYSTECTOMY IN URACHAL DISEASES
Gokhun Ozmerdiven¹, Onur Kaygisiz¹, Hakan Vuruskan¹, Hakan Kılıçarslan¹, Ismet Yavascaoğlu¹
¹Uludag University, Department of Urology (Turkey)

VP08-10 SINGLE INCISION LAPAROSCOPIC NEPHRECTOMY FOR MASSIVE HYDRONEPHROTIC KIDNEY
Shaoqing Zhoud¹, Michael Byrne¹, Lance Hampton¹
¹Virginia Commonwealth University (United States)

VP08-11 LAPAROENDOSCOPIC SINGLE-SITE SIMPLE NEPHRECTOMY: HOW I DO IT
Joseph Hon-Ming Wong¹, Chi-Hang Yee¹, Eddie Shi-Tin Chan¹, Chi-Fai Ng¹, See-Ming Hou¹
¹The Chinese University of Hong Kong (Hong Kong)

VP08-12 RIGHT LAPAROENDOSCOPIC SINGLE SITE (LESS) LIVE DONOR NEPHRECTOMY—A STEP-BY-STEP OPERATIVE VIDEO DEMONSTRATION
S Jeff Chueh¹, Joseph Africa¹,², Bashir Sankari¹,²,³, Anthony Avallone¹, Jihad Kaouk¹
¹GUKI, Cleveland Clinic (United States)
²CAMC (United States)
³Cleveland Clinic Abu Dhabi (United Arab Emirates)

Friday, September 5
Video Poster Session (VP09) 03:45 pm–05:45 pm
Robotic Surgery Upper Tract 2
Room: RM 102
Moderator: Rolf Muschter, Ryoichi Shiroki, Sheng-Tang Wu
VP09-08 BILATERAL ROBOT-ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY IN A PATIENT WITH BILATERAL SYNCHRONOUS RENAL CELL CARCINOMA
Zhenbang Liu1, Keng-Siang Png1
1Tan Tock Seng Hospital (Singapore)

VP09-09 ROBOT-ASSISTED LAPAROSCOPIC NEPHROURETERECTOMY AND RADICAL PROSTATECTOMY PERFORMED IN A SINGLE SESSION
Hakmin Lee1, Jin-Nyoung Ho1, Seok-Soo Byun1
1Seoul National University Bundang Hospital (South Korea)

VP09-10 RETROPERITONEAL ROBOT-ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY: SEGMENTAL ARTERY CONTROL
Wei-Hong Lai1, Steven Kuan-Hua Huang1, Allen W. Chiu1
1Division of Urological Oncology, Department of Surgery, Chi-Mei Medical Center (Taiwan)
2School of Medicine, National Yang-Ming University (Taiwan)

VP09-11 ROBOTIC AND HAND ASSISTED LAPAROSCOPIC RIGHT PARTIAL NEPHRECTOMY FOR GIANT ANGIOMYOLIPOMA
Yi-Huei Chang1, Po-Jen Hsiao1, Guang-Heng Chen1, Chao-Hsiang Chang1, Hsi-Chin Wu1,2
1Department of urology, China Medical University Hospital (Taiwan)
2Tainan Municipal An-Nan hospital (Taiwan)

Friday, September 5 Video Poster Session (VP10) 03:45 pm–05:45 pm
Endourology 3
Room: RM 103
Moderator: Xin Gao, Alexey Martov, Volkan Tugcu, Ömer Tuncay

VP10-01 RADIOGRAPHIC AND ENDOSCOPIC FINDINGS OF THE KETAMINE BLADDER
Ariel Schulman1, Rui Gao2, Zuhair Al-Hussaini1, Ruqing Huang1, Antonio Montgomery1
1Maimonides Medical Center (United States)
2First Affiliated Hospital of Fujian Medical University (China)

VP10-02 ROBOTIC TRANSPERINEAL SATURATION BIOPSY: TECHNIQUE AND OUTCOMES
Kenneth Chen1, Jonathan Teo1, Kae-Jack Tay1, Henry SunSien Ho1, John Shyipeng Yuen1, Christopher Waisam Cheng1
1Singapore General Hospital (Singapore)

VP10-03 INTRAOPERATIVE PERIPROSTATIC NERVE ACTION POTENTIAL MONITORING DURING ROBOTIC PROSTATECTOMY
Ketan K. Badani1, Ashutosh K. Tewari2, Paras Singh3, Adnan Ali3, Robert Leung3, Brian Antonucci2, Ruslan Korets3, Michael B. Rotherberg2, Ari Bergman1, Trushar Patel1, Marc B. Zimmerman3, Sonny Yamazaki3,4
1Columbia University Medical Center (United States)
2Weill Cornell Medical College (United States)
3Hutchinson Technology (United States)
4Medtronic, Inc. (United States)

VP10-04 INITIAL EXPERIENCE WITH A ROBOTIC SURGEON-CONTROLLED REMOTELY-OPERATED SUCTION/IRRIGATION (ROSI) SYSTEM
Alon Y. Mass, MD1, Michael Stifelman, MD1
1New York University School of Medicine (United States)

VP10-05 RETROPERITONEOSCOPIC URETEROLITHOTOMY WITHOUT USING GAUR’S BALLOON TECHNIQUE
Dinesh Patel1, Ashwin Kulkarni1
1Devasya Superspeciality Kidney Institute & Research Centre (India)

VP10-06 TRANSURETHRAL HOLMIUM LASER RESECTION OF DISTAL URETER AND BLADDER CUFF: A 10-YEAR COMPARATIVE STUDY.
Yu Gong1, Chuanjun Du1, Jiamin Chen1, Jiamin Wen1, Chong Xue1
1Department of Urology, The Second Affiliated Hospital, Zhejiang University School of Medicine. (China)

VP10-07 THE URO DYNA-CT ENABLES COMPLEX 3D-PLANNED LASERGUIDED PUNCTURES
Manuel Ritter1, Marie-Claire Rassweller1, Maurice-Stephan Michel1
1Department of Urology, Medical Center Mannheim, Heidelberg University (Germany)

VP10-08 BILATERAL UPPER TRACT UROTHELIAL CANCER IN A PATIENT WITH ORTHOTOPIC NEOBLADDER: CONSERVATIVE MANAGEMENT STRATEGY
João Cabral1, Isaac Braga1, Miguel Ramos1,2, Manuel Oliveira1, Avelino Fraga1, Vitor Cavadas1,2
1Department of Urology Hospital de Santo António, C.H.P (Portugal)
2Instituto de Ciências Biomédicas Abel Salazar, University of Oporto (Portugal)
3Escola de Ciências da Saúde, University of Minho (Portugal)
VP10-09 USE OF KTP LASER FOR PHOTO-SELECTIVE VAPORIZATION OF THE PROSTATE AND BLADDER STONE LITHOTRIPSY: INITIAL CLINICAL EXPERIENCE WITH THREE CASES

Jorge Magana1, Francisco Rodriguez1, Bernardo Gabilondo1, Carlos E Mendez Probst1
1Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán (Mexico)

VP10-10 COMBINATION OF SUBURETERAL AND INTRAURETERAL INJECTION TECHNIQUES FOR A PATIENT WITH REFRACTORY HIGH-GRADE VESICO-URETERAL REFLUX.

Turgay EBİLOGLU1, Burak KOPRU2, Engin KAYA2, Bahadır TOPUZ2, Yusuf KİBAR2
1Etimesgut Military Hospital, Department of Urology (Turkey)
2Gulhane Military Medical Academy, Department of Urology (Turkey)

VP10-11 LAPAROSCOPIC URETEROLITHOTOMY WITH PNL THROUGH LAPAROSCOPIC PORT IN PATIENT WITH GIANT URETERAL STONE AND RENAL STONE

Ji Yong Kim1, Young Gon Kim1, Myung Ki Kim1
1Chonbuk National University Medical School and Hospital (South Korea)
VP12-01 LAPAROSCOPIC EXCISION OF A HUGE SEMINAL VESICLE CYST ASSOCIATED WITH IPSILATERAL RENAL AGENESIS
Kau Han Lee¹, Alex Chien-Hwa Liao¹, Chien-Liang Lin¹, Steven Kuan-Hua Huang²,
Kuo-Hung Sheng³
¹Division of Urology, Department of Surgery, Chi-Mei Medical Center (Taiwan)
²Division of Urological Oncology, Department of Surgery, Chi-Mei Medical Center (Taiwan)

VP12-02 LAPAROSCOPIC MANAGEMENT OF NUT-CRAKER SYNDROME WITH PLACING EXTRAVASCULAR STENT: CASE REPORT AND LITERATURE REVIEW
Fangmin Chen¹, Jiati Shi¹, Haifeng Li¹, Denghao Li², Peng Zhang¹, Cheng Chen¹,
Hao Yang¹
¹Department of Urology, Affiliated Hospital to Guiyang Medical College, (China)

VP12-03 A NOVEL LAPAROSCOPIC TENCKHOFF CATHETER INSERTION VIA HYDRO-PERITONEAL TECHNIQUE IN PATIENTS WITH END STAGE RENAL DISEASE
Liang-Hung Ou¹, Chin-Chang Kou², Shen-Jen Chen¹, Mu-Chi Hsiao³, Chen-Sung Lin³,
Shoei-Loong Lin³, Wen-Hsiang Chiu³
¹Taipei Hospital, Ministry of Health and Welfare (Taiwan)
²School of Medicine, National Yang-Ming University (Taiwan)
³Taipei Veterans General Hospital (Taiwan)

VP12-04 A TECHNIQUE TO ENHANCE BLADDER NECK DISSECTION BY USING A FOLEY CATHETER DURING EXTRAPERITONEAL LAPAROSCOPIC RADICAL PROSTATIC TECTOMY
Henry Yung-Yao Lin¹, Yu-Chi Chen¹,
¹Department of Urology, E-Da Hospital (Taiwan)
²School of Medicine for International Students, I-Shou University (Taiwan)

VP12-05 SIMPLE TECHNIQUE TO IDENTIFY STRicture SITE DURING LAPAROSCOPIC URETERECTOMY
Pao-Hwa Chen¹, Sheng-Hsien Huang¹, Bai-Fu Wang², Jensen Lin¹, Chang-Pao Chang⁴,
¹Portugal Urology Department (Portugal)

VP12-06 TOTALLY INTRACORPOREAL REPLACEMENT OF THE URETER USING WHOLE-MOUNT ILEUM
Allen Sim¹,², Tilman Todenhöfer¹, Stefan Aufferklamm¹,², Steffen Rausch³,
Johannes Mischinger³, Analf Stenzel³, Georgios Gakis³, Christian Schwentner¹
¹Eberhard-Karls University Tuebingen (Germany)
²Singapore General Hospital (Singapore)

VP12-07 LAPAROENDOSCOPIC SINGLE-SITE ADRENALECTOMY BY USING INTERNAL ORGAN RETRACTOR SYSTEM - INITIAL EXPERIENCES
Jung Jun Kim¹, Hyun Hwan Sung¹, Byong Chang Jeong¹, Seong Soo Jeon¹,
Seong Il Seo¹, Seol Ho Choo², Hyung Joon Kim³, Deok Hyun Han¹
¹Department of Urology, Samsung Medical Center, Sungkyunkwan University School of Medicine (South Korea)
²Department of Urology, Ajou University School of Medicine (South Korea)
³Department of Urology, Konyang University College of Medicine (South Korea)

VP12-08 STONE COBRA HEAD: URETEROCELES PRESENTING WITH MULTIPLE CALCULI
Jian-Ting Chen¹, Chang-Pao Chang¹, Bai-Fu Wang⁵, Jesun Lin¹, Meng-Yi Yan¹,
Herng-Jye Jiang¹, Sheng-Hsien Huang¹, JIAN-XIANG Chang¹
¹Divisions of Urology, Department of Surgery, Changhua Christian Hospital (Taiwan)

VP12-09 A LAPAROSCOPIC NEPHURETERECTOMY OF AN ECTOPIC KIDNEY WITH A TUMORAL MASS
Nuno Miguel Rocha Barbosa¹, Paulo Príncipe¹, Miguel Ramos², Avelino Fraga¹
¹Portugal Urology Department (Portugal)
VP13-01 ROBOTIC-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY-BLADDER NECK ANTERIOR WALL SUSPENSION
KunLin Hsieh¹, Steven K. Huan¹, Allen W. Chiu²
¹Divisions of Urology, Department of Surgery, ChiMei Medical Center (Taiwan)
²Department of Urology, School of Medicine, National Yang Ming University (Taiwan)

VP13-02 TOTALLY INTRACORPOREAL ROBOT ASSISTED VESICA ILEALE PADOVANNA (VIP): A STEP BY STEP TECHNIQUE
Rocco Papalia¹, Mariaconsiglia Ferriero¹, Salvatore Guaglianone¹, Riccardo Mastroianni², Giuseppe Simone¹, Michele Gallucci¹
¹Regina Elena National Cancer Institute (Italy)
²University Campus Biomedico (Italy)

VP13-03 COMBINED OPEN AND ROBOTIC NEO BLADDER: ADVANTAGES OF BOTH APPROACHES
Shashikant Mishra¹, Natania Otano¹, Ankush Jairath¹, Arvind Ganpule¹, Ravindra Sabnis¹, Mahesh Desai¹
¹Muljibhai Patel Urological Hospital (India)

VP13-04 A NOVEL APPROACH TO ROBOTIC SIMPLE PROSTATECTOMY USING THE INTUITIVE ENDOWRIST ONE VESSEL SEALER
Alon Y. Mass, MD¹, Ganesh Sivarajan, MD¹, Lee C. Zhao, MD¹, William C. Huang, MD¹
¹New York University School of Medicine (United States)

VP13-05 STEPWISE APPROACH TO ROBOTIC INTRACORPOREAL ORTHOTROPIC ILEAL NEobladder WITH STRICT ADHERENCE TO PRINCIPLES OF OPEN ORTHOTROPIC NEobladder CONSTRUCTION.
Amit Bhattu¹, Vinodh Murli¹, Jitendra Jagtap¹, Jaspreet Singh Chhabra¹, Shashikant Mishra¹, Arvind Ganpule¹, Ravindra Sabnis¹, Mihir Desai²
¹Muljibhai Patel Urological Hospital (India)
²USC Institute of Urology, Keck School of Medicine, University of Southern California (United States)

VP13-06 ROBOTIC ASSIST RECTAL GIST RESECTION WITH RADICAL PROSTATECTOMY
Po-Jen Hsiao¹, Guang-Heng Chen¹, Yi-Huei Chang¹, Cheng-Kuang Yang², Tao-Wei Ke², Chao-Hsiang Chang³
¹Department of Urology, China Medical University Hospital (Taiwan)
²Divisions of Urology, Department of Surgery, Taichung Veterans General Hospital (Taiwan)
³Division of Colorectal Surgery, Department of Surgery, China Medical University Hospital (Taiwan)

VP13-07 VAGINAL SPARING ROBOT ASSISTED LAPAROSCOPIC RADICAL CYSTECTOMY
Samay Jain¹, Khaled Shahrour¹
¹University of Toledo Medical Center (United States)

VP13-08 ROBOTIC INFERIOR VENA CAVA THROMBECTOMY
Rocco Papalia¹, Salvatore Guaglianone¹, Mariaconsiglia Ferriero¹, Giuseppe Simone¹, Riccardo Mastroianni², Michele Gallucci¹
¹Regina Elena National Cancer Institute (Italy)
²University Campus Biomedico (Italy)

VP13-09 POSTERIOR APPROACH TO ROBOTIC SIMPLE PROSTATECTOMY
Andrew C. Harbin¹, Blake W. Moore¹, Brian R. Cronson¹, Laura L. Giusto¹, Daniel D. Eun¹
¹Temple University School of Medicine (United States)

VP13-10 OMITTING CORTICAL RENORRHAPHY DURING PARTIAL NEPHRECTOMY
Clinton D. Bahler¹, Spencer J. Knapp¹, Chandru P. Sundaram¹
¹Indiana University School of Medicine (United States)

VP13-11 NOVEL USE OF TACHOSIL IN HAEMOSTASIS IN NERVE-SPARING ROBOT-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY
Kwun Chung Cheng¹, Wai Kit Ma¹, Hok Leung Tsa¹, Kwan Lung Ho¹, Ming Kwong Yiu¹
¹Queen Mary Hospital (Hong Kong)

VP13-12 ROBOTIC NEPHROURETERECTOMY WITH BLADDER CUFF EXCISION IN THE MORBIDLY OBSESE PATIENT: TIPS FOR POSITIONING, PORT PLACEMENT AND DOCKING
Khurshid Ghani¹,², Duncan Morhardt¹, Ted Skolarus¹,², Jeffrey Montgomery¹,², Khaled Hafez¹,²
¹University of Michigan (United States)
²Ann Arbor Veterans Administration Hospital (United States)
Video Poster Session (VP14) 03:45 pm–05:45 pm

Robotic Surgery New Technology 2

Room: RM 103

Moderator: Chia-Hsiang Lin, Lee Richstone, Gang Zhu

VP14-01 ROBOTIC SIMPLE PROSTATECTOMY FOR MASSIVELY ENLARGED PROSTATE: A DESCRIPTION OF TECHNIQUE

Mark V. Silva1, Michael B. Roithberg1, Gina M. Badalato1, Ruslan Korets1, Ketan K. Badani1

1Columbia University Medical Center (United States)

VP14-02 ROBOT-ASSISTED NEPHROURETERECTOMY AND BLADDER CUFF EXCISION WITHOUT PATIENT OR ROBOT REPOSITIONING: DESCRIPTION OF MODIFIED PORT PLACEMENT AND TECHNIQUE

Ketan K. Badani1, Michael B. Roithberg1, Ari Bergman2, Mark V. Silva2, Edan Y. Shapiro2, Alan Neider2, Trushar Patel2, Akshay Bhandari2

1Columbia University Medical Center (United States)
2Mt. Sinai Medical Center (United States)

VP14-03 ROBOTIC ASSISTED LAPAROSCOPIC MEGA-BOARI URETERAL REIMPLANTATION–A NOVEL SURGICAL APPROACH TO LONG URETERAL DEFECTS

Sammy Elsamra1, Soroush Rais-Bahrami1, Arvin George2, David Leavitt1, Salvatore Micari2, Louis Kavoussi1, Lee Richstone1

1Smith Institute for Urology (United States)
2University of Modena and Reggio Emilia (Italy)

VP14-04 RETROPERITONEAL ROBOTIC PARTIAL NEPHRECTOMY FOR POSTERIOR RENAL TUMORS AS COMPARED TO THE TRANSPERITONEAL APPROACH

Susan Marshall1, Daniel Wollin1, Samir Taneja1, William C. Huang1, Michael Stifelman1

1New York University Langone Medical Center (United States)

VP14-05 ROBOTIC REPAIR OF RECTOVESICAL FISTULA: COMBINED ANTERIOR AND POSTERIOR APPROACH WITH OMENTAL FLAP INTERPOSITION

Li-Ming Su1, Rishi Modhi1, Katherine Corbyons1, Sandra Tan1, Lawrence Yeung1

1University of Florida Health, Department of Urology (United States)
2University of Florida Health, Department of Surgery (United States)

VP14-06 ROBOTIC BUCCAL MUCOSA GRAFT URETEROPLASTY

Daniel Wollin1, Sarah Mitchell1, Michael Stifelman1, Lee Zhao1

1NYU Langone Medical Center (United States)

VP14-07 RECTOVESICAL FISTULA: ROBOT ASSISTED LAPAROSCOPIC MANAGMENT

Christopher Keel1, Michael Maddox1, Raju Thomas1

1Temple University School of Medicine (United States)

VP14-08 ROBOTIC INTRACORPOREAL ILEAL CONDUIT USING THE INTUITIVE ENDOWRIST ONE ROBOTIC STAPLER

Alon Y. Mass1, Lee C. Zhao1, William C. Huang1

1New York University School of Medicine (United States)

VP14-09 THE FIRST REPORT OF ROBOTIC ASSISTED RADICAL NEPHRECTOMY WITH RETROHEPATIC VENA CAVAL TUMOR THROMBECTOMY (LEVEL III) AND EXTENDED RETROPERITONEAL LYMPH NODE DISSECTION

Jed-Sian Cheng1, Gennady Bratslavsky2

1Massachusetts General Hospital (United States)
2SUNY-Upstate Medical Center (United States)

VP14-10 ROBOTIC TRAPDOOR PARTIAL NEPHRECTOMY FOR COMPLETELY ENDOPHTHIC TUMORS

Laura L. Giusto1, Blake W. Moore1, Zihoo Lee1, Andrew C. Harbin1, Daniel D. Eun1

1Temple University School of Medicine (United States)

VP14-11 USE OF INDOCYANINE GREEN (ICG) FOR COMPLEX ROBOTIC RECONSTRUCTION INVOLVING BOWEL URINARY DIVERSIONS

Laura L. Giusto1, Blake W. Moore1, Zihoo Lee1, Andrew C. Harbin1, Christopher Reilly1, Daniel D. Eun1

1Temple University School of Medicine (United States)

VP14-12 POSTERIOR RECONSTRUCTION WITH SUSPENSION TECHNIQUE TO IMPROVE EARLY CONTINENCE AFTER ROBOTIC-ASSISTED RADICAL PROSTATECTOMY

Kau Han Lee1, Wei-Hong Lai1, Chien-Liang Liu1, Shun-Hsing Hung1, Steven Kuan-Hua Huang2

1Division of Urology, Department of Surgery, Chi-Mei Medical Center (Taiwan)
2Division of Urological Oncology, Department of Surgery, Chi-Mei Medical Center (Taiwan)

VP14-13 CONTEMPORARY TRENDS OF IMPATIENT SURGICAL MANAGEMENT OF STONE DISEASE IN A DEVELOPING COUNTRY

Giovanni S Marchini1, Marcos F Melio1, Renata Levi1, Jose Elaf Neto1, Fabio C Vicentini1, Alexandre Danilovic1, Fabio CM Torricelli1, Artur H Brito1, Cesar Camara1, Eduardo Mazzucchelli1, Miguel Srougi1

1Hospital das Clinicas, University of Sao Paulo Medical School (Brazil)
# YOUNG UROLOGIST FORUM

Friday, September 5  
Young Urologist Forum  
01:30 pm–04:45 pm  
Room: RM 202

**Young Urologist Forum Sponsor by: Boston Scientific**

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<td>Ben Chew, M.D.</td>
<td>Opening Remark</td>
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<tr>
<td>01:40 pm–01:55 pm</td>
<td>Anup Patel, M.D.</td>
<td>What is the Optimal Treatment for Patients? The Adjustment between New Technology and Patient’s Benefit</td>
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<tr>
<td>01:55 pm–02:10 pm</td>
<td>Stephen Nakada, M.D.</td>
<td>The Relationship between Industry and Urologists</td>
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<td>02:10 pm–02:25 pm</td>
<td>James Lingeman, M.D.</td>
<td>The Symphony of Clinical Services and Academic Achievement</td>
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<td>02:25 pm–02:40 pm</td>
<td>Panagiotis Kallidonis, M.D.</td>
<td>How to Start a Research in a Daily Practice Basis?</td>
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<td>02:40 pm–02:55 pm</td>
<td>Ralph Clayman, M.D.</td>
<td>The Infrastructure of Academic Research Team</td>
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<td>02:55 pm–03:10 pm</td>
<td>Gyung Tak Sung, M.D.</td>
<td>How to Setup a Laboratory?</td>
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<td>03:10 pm–03:25 pm</td>
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<td>Coffee Break</td>
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<tr>
<td>03:25 pm–03:40 pm</td>
<td>Sonya Nersessian</td>
<td>How to Face Attorney and Judge?</td>
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<tr>
<td>03:40 pm–03:55 pm</td>
<td>Kay Smith</td>
<td>How to Capitalize on Your Idea/Invention?</td>
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| 03:55 pm–04:10 pm | Kay Smith  
Sonya Nersessian | Panel Discussion: Medical Legal Issues in Endourology and New Technology |
| 04:10 pm–04:25 pm | Thomas Y. Hsueh                | How to Teach and Mentor Our Residents?                                |
| 04:25 pm–04:40 pm | Julie Riley                    | Challenges of Transitioning from Fellowship to Academic Practice      |
| 04:40 pm–04:45 pm | Brian Matlaga                  | Closing Remark                                                        |
# NURSING & TECHNICIAN FORUM

**Saturday, September 6**  
**01:30 pm–04:30 pm**  
**Room: RM 402**

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<tr>
<th>Time</th>
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<tr>
<td>01:30 pm–01:40 pm</td>
<td>Opening Remark</td>
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<tr>
<td>01:40 pm–02:00 pm</td>
<td>Robert Lee</td>
<td>Latest Technological Innovation in da Vinci Surgical Systems</td>
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<tr>
<td>02:00 pm–02:20 pm</td>
<td>Koon Rha</td>
<td>Past, Present and Future of Robotic Surgery</td>
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<td>02:20 pm–02:40 pm</td>
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<td>Coffee Break</td>
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<tr>
<td>02:40 pm–03:00 pm</td>
<td>Yen-Chuan Ou</td>
<td>Preoperative Evaluation and Preparation for Patients</td>
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<td></td>
<td>Receiving Robotic Surgery</td>
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<tr>
<td>03:00 pm–03:20 pm</td>
<td>Suzannah Sorin</td>
<td>Robotic Setups in the Operation Room</td>
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<tr>
<td>03:20 pm–03:40 pm</td>
<td>Matthew Gettman</td>
<td>How to Develop a Robotic Team in a Naïve Operating Room</td>
</tr>
<tr>
<td>03:40 pm–04:00 pm</td>
<td>Sheng-Tang Wu</td>
<td>Perioperative Care for Patients Undergoing Robotic Surgery</td>
</tr>
<tr>
<td>04:00 pm–04:20 pm</td>
<td>Hsiao-Jen Chung</td>
<td>Troubleshooting in Robotic Surgery</td>
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<tr>
<td>04:20 pm–04:25 pm</td>
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<td>Discussion</td>
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<td>04:25 pm–04:30 pm</td>
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<td>Closing</td>
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</table>
CONCLUSIONS:
We demonstrated a decrease of mtDNA copy number, transwell migration activity as compared with NT.

MP01-02 TREATMENT OF RENAL CELL CARCINOMA WITH A NOVEL NANOPLATE: INITIAL IN VITRO RESULTS
Cameron Callaghan1, Michael Maddox1, Donna Peralta2, James Liu1, See Harsha Mandava1, Matthew Tarr2, Benjamin Lee1
1Tulane University School of Medicine (United States)
2University of New Orleans (United States)

INTRODUCTION AND OBJECTIVES:
To investigate the alteration of mitochondrial DNA (mtDNA) copy number and glucose metabolism shift in human renal cell carcinoma (RCC). A decrease of mtDNA copy number and glucose metabolism shift may play a role in the aggressiveness of human RCCs. Moreover, mitochondrial impairment with glucose metabolism shift may play a role in the aggressiveness of human RCCs.

SOURCE OF FUNDING: None

REFERENCES:
1Faculty of Medicine, National Yang-Ming University (Taiwan)
2Institute of Biochemistry and Molecular Biology, National Yang-Ming University (Taiwan)
3Division of Thoracic Surgery, Department of Surgery, Taipei Hospital, Ministry of Health and Welfare (Taiwan)
4Department of Urology, Taipei Veterans General Hospital (Taiwan)
5Department of Medicine, Mackay Medical College (Taiwan)

INTRODUCTION AND OBJECTIVES: To investigate the alteration of mitochondrial DNA (mtDNA) copy number and glucose metabolism shift in human renal cell carcinoma (RCC).

METHODS: Paired cancer and non-cancer tissues from resected kidney of 5 RCC patients were subjected to mtDNA copy number determination by Q-PCR. RCC cell line, 786-o, was infected by virus particles of 5 MOI (multiplicity of infection) to knock down TFAM (mitochondrial transcriptional factor A), which controls mtDNA replication and transcription. NT represents control and TFAM-KD indicates TFAM knockdown. The mRNA expression levels of mtDNA-encoded genes, ND1 (NADH dehydrogenase subunit 1) and ND6, HK-II (hexokinase-II, a target of PET scan), GPI (glucose-6-phosphate isomerase), PFKa (phosphofructokinase subunit 1) and ND6, HK-II (hexokinase-II, a target of PET scan), and LDHas (lactate dehydrogenase), and HIF (hypoxia inducible factor) pathway proteins, HIF-1a, PDK1 (pyruvate dehydrogenase kinase) and PDHa (pyruvate dehydrogenase) were analyzed by Q-PCR. TFAM-KD expressed higher levels of mRNAs of ND1 (p = 0.005) and ND6 (p = 0.005) than those of NT. Consequently, TFAM-KD expressed higher levels of mRNAs of HIF-1a (p = 0.005) and HK-II (p = 0.005) and exhibited a higher transwell migration activity as compared with NT.

CONCLUSIONS: We demonstrated a decrease of mtDNA copy number, indicating lower mitochondrial biogenesis, and increase of expressions of HK-II and HIF-1a, suggesting enhanced glycolysis in human RCCs. Moreover, mitochondrial impairment with glucose metabolism shift may play a role in the aggressiveness of human RCCs.

SOURCE OF FUNDING: None

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3Division of Thoracic Surgery, Department of Surgery, Taipei Hospital, Ministry of Health and Welfare (Taiwan)
4Department of Urology, Taipei Veterans General Hospital (Taiwan)
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INTRODUCTION AND OBJECTIVES:
We demonstrated a decrease of mtDNA copy number, transwell migration activity as compared with NT.

SOURCE OF FUNDING:
None

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4Department of Urology, Taipei Veterans General Hospital (Taiwan)
5Department of Medicine, Mackay Medical College (Taiwan)

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3Division of Thoracic Surgery, Department of Surgery, Taipei Hospital, Ministry of Health and Welfare (Taiwan)
4Department of Urology, Taipei Veterans General Hospital (Taiwan)
5Department of Medicine, Mackay Medical College (Taiwan)
toxicity. The aim of this investigation was to develop a biodegradable (poly (lactic-co-glycolic acid) or PLGA) nanoparticle (NP) model loaded with Sorafenib to improve drug delivery and tumor cell kill due to passive uptake with subsequent steady drug release.

METHODS: Particles were developed with specific characteristics including particle size, drug entrapment, and fluorescent particle drug uptake in an in vitro model. Sorafenib-loaded NPs were formulated by a oil-in-water emulsion and solvent evaporation technique. The NPs were labeled with Coumarin-6 and incubated with the RCC 786-O cell line, and fluorescent microscopy was used to confirm cellular uptake. % Entrapment efficiency was measured using UV spectrometer at absorption bands of 270.6 nm. Cytotoxicity of NP versus Sorafenib was calculated from MTT assay.

RESULTS: Particle sphere size on SEM is 100–200 nm. Sorafenib and PLGA conjugation demonstrated 101.2 ±1.3% entrapment efficiency based on UV spectrometer. Fluorescent and confocal microscopy consistently confirmed NP uptake by the RCC 786-O. PLGA control exhibits no cellular toxicity. MTT assay showed 19.8% and 18.6% increase tumor cell kill by PLGA- Sorafenib over Sorafenib alone for 24 and 72 hours respectively (p <0.05).

CONCLUSIONS: Results of our initial in vitro studies show significant promise in the treatment of RCC compared to conventional chemotherapy. Animal studies are currently underway in our lab to confirm PLGA-sorafenib as a potential novel nanotechnology treatment of RCC.

SOURCE OF FUNDING: None

MP01-04 TWO-PART SILICONE MOLD: A NEW TOOL FOR FLEXIBLE URETEROSCOPY SURGICAL TRAINING

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INTRODUCTION AND OBJECTIVES: Flexible ureteroscopy is a common procedure nowadays. Most of the training programs use virtual reality simulators. The aim of this study was to standardize the building of a three-dimensional silicone mold (cavity) of the collecting system, on the basis of polyester resin in endocasts, which can be used in surgical training programs.

METHODS: A yellow polyester resin was injected into the ureter to fill the collecting system of 10 cadaveric fresh human kidneys. After setting off the resin, the kidneys were immersed in hydrochloric acid until total corrosion of the organic matter was achieved and the collecting system endocasts obtained. The endocasts were used to prepare white color two-part silicone molds, which after endocasts withdrawn, enabled a ureteroscope insertion into the collecting system molds (cavities). Also, the minor calices were painted with different colors in order to map the access to the different caliceal groups.

RESULTS: Flexible ureteroscope could be inserted into all molds and the entire collecting system could be examined. Some anatomical features as infundular length, acute angle, and perpendicular minor calices would difficult the access to some minor calices, especially in the lower caliceal group.

CONCLUSIONS: The two-part silicone mold is feasible, cheap and allows its use for flexible ureteroscopy surgical training.

SOURCE OF FUNDING: CAPES, FAPERJ

MP01-05 A HIGH-THROUGHPUT MINIMALLY-INVASIVE, ULTRASOUND-GUIDED MODEL FOR THE STUDY OF CATHETER ASSOCIATED URINARY TRACT INFECTIONS AND DEVICE ENCRUSTATION IN MICE

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INTRODUCTION AND OBJECTIVES: Catheter-associated urinary tract infections (CAUTI) are one of the most common healthcare-associated infections frequently complicated by encrustation, causing blockage of the catheter lumen. Preclinical research is limited by the lack of relevant high-throughput and cost effective animal models. Current models are restricted to female mice, associated with major transurethral loss of catheter materials during micturition, highly invasive and complex. We present an ultrasound-guided, minimally-invasive model enabling CAUTI and catheter encrustation studies in both genders of mice.

METHODS: Implantation of 4 mm catheter segments into murine bladders was performed percutaneously (n =15 males; n =5 females) or transurethrally (n =15 females) using the Seldinger technique under ultrasound guidance. Proteus mirabilis was instilled intraluminally. Catheter encrustation was monitored by ultrasound. Bacteria were quantified from urine and catheters and encrustation analyzed on days 6 or 21.

RESULTS: Percutaneous and transurethral catheter implantations were performed efficiently (mean time: 3.6±0.8 min vs 2.5±0.5 min) in all animals. Ultrasound confirmed that 100% vs 66%, of implanted catheters remained indwelling over the study period. Catheter encrustation developed in P.mirabilis-infected urine 48 h post instillation and its increase over time was detectable with ultrasonography. FTIR analysis of the encrustation confirmed a typical struvite spectrum. Control catheters remained sterile over 21 days.

CONCLUSIONS: Our minimally-invasive and reproducible percutaneous technique is suitable to study CAUTI in both genders. Infected urine with P.mirabilis generates a preclinical model of catheter encrustation within 3 days. The progression of encrustation can be monitored in vivo using ultrasonography, making this image-based model suitable to assess novel antibacterial and anti-encrustation therapies.

SOURCE OF FUNDING: None

MP01-06 EVALUATION OF THE TENSILE STRENGTH OF THE HUMAN URETER - PRELIMINARY RESULTS

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INTRODUCTION AND OBJECTIVES: Ureteral injuries such as avulsion are directly related to mechanical damage of the ureter. Understanding the tensile strength of this tissue may assist in prevention of iatrogenic injuries. Few published studies have looked at the mechanical properties of the animal ureter, and of those none have determined the tensile strength of the human
ureter. Therefore, the purpose of this work was to determine the tensile strength of the human ureter.

**METHODS:** We harvested 11 human proximal ureters from patients who were undergoing nephrectomy for either kidney tumors or non-functioning kidney. The specimens were then cut into multiple circumferentially and longitudinally-oriented tissue strips for tensile testing. Strips were uniaxially stretched to failure in a tensile testing machine. The corresponding force and displacement were recorded. Finally, stress at failure was noted as the tensile strength of the sample. Circumferential tensile strength was also compared in the proximal and distal regions of the specimens.

**RESULTS:** The tensile strength of the ureter in circumferential and longitudinal orientations was found to be 457.52 ± 33.74 Ncm-2 and 902.43 ± 122.08 Ncm-2, respectively (p < 0.001). The circumferential strength in the proximal portion of the ureter was 409.89 ± 35.13 Ncm-2 in comparison to 502.89 ± 55.85 Ncm-2 in the distal portion (p = 0.08).

**CONCLUSIONS:** The circumferential tensile strength of the ureter was found to be significantly lower than the longitudinal strength. Circumferential tensile strength was also lower with more proximal parts of the ureter. This information may be important for the design of “intelligent” devices and simulators in order to prevent complications.

**SOURCE OF FUNDING:** None

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**MP01-07 INCIDENCE, CLINICAL CHARACTERISTICS, AND MAJOR LIFESTYLE FACTORS ASSOCIATED WITH UPPER TRACT UROTHELIAL CARCINOMA IN TWO PROSPECTIVELY FOLLOWED COHORTS OF MEN AND WOMEN**

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**INTRODUCTION AND OBJECTIVES:** Upper tract urothelial carcinoma (UTUC) is a rare disease characterized primarily by retrospective studies. In this study, we investigate the association of smoking, diabetes (DM), and body mass index (BMI) with risk of UTUC in two long term, prospectively followed cohorts.

**METHODS:** The Nurses’ Health Study (NHS) was started in 1976 with 121,577 nurses aged 30–55, and the Health Professionals Follow-up Study (HPFS) was started in 1986 with 51,529 men aged 40–75. Medical records were reviewed for participants who reported renal or ureteral tumors, and data was collected for pathology-confirmed cases. Lifestyle factors were reported by participants every two years, and Cox proportional hazards models were used to study possible risk factors for UTUC.

**RESULTS:** We confirmed 104 cases of UTUC, 71 in NHS and 33 in HPFS. This represents 15.1% of all renal and ureteral tumors (690 cases). Age adjusted incidence in women was 0.96 per 100,000 person-years in our cohorts and age adjusted incidence in men was 0.83 per 100,000 person-years. In both women and men, respectively, current smoking was associated with a significantly increased risk of UTUC compared to never having smoked (RR 6.65 [3.52–12.57]; RR 7.11 [2.32–21.80]), while BMI > 25 (RR 1.14 [0.71–1.83]; RR 1.07 [0.53–2.16]) and type 2 diabetes (RR 1.35 [0.61–2.96]; RR 1.00 [0.25–4.05]) were not significantly associated with increased risk of UTUC.

**CONCLUSIONS:** To our knowledge, this represents the first descriptive statistics on UTUC in prospectively followed cohorts of men and women. Current smoking was significantly associated with risk in both men and women.

**SOURCE OF FUNDING:** None

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**MP01-08 REFERRED PAIN IN KIDNEY STONE DISEASE: SENSORY AND TROPHIC CHANGES**

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**INTRODUCTION AND OBJECTIVES:** The aim of this study was to evaluate sensory and trophic changes in the flank corresponding to the referred pain area in patients with kidney stone disease.

**METHODS:** A total of 24 patients with unilateral pain-causing kidney stone disease were studied before and after percutaneous kidney stone surgery. Trophic changes and sensitivity on the affected and on contra-lateral side in the pain free period were investigated. For this purpose we used standardized experimental sensory testing including pressure stimulation and electrical (single and repeated) skin stimulation. To investigate trophic changes ultrasound and CT were used.

**RESULTS:** The pain tolerance thresholds to pressure and pain thresholds to electrical stimulation were not significantly different on the two sides (all P > 0.1). After surgery no significant alterations in sensitivity were detected, but there was a tendency to higher pain thresholds to electrical stimuli on the affected side (single stimuli P = 0.06; repeated stimuli P = 0.09). No trophic changes were observed (all P > 0.3), and there were no relations between pain thresholds or trophic findings and the number of colics (all P > 0.08).

**CONCLUSIONS:** In patients with unilateral pain-causing kidney stone disease the pain to experimental pressure and electrical stimuli were comparable on the affected and contra-lateral side. No trophic changes were seen in the muscle or subcutaneous tissue at the affected side, and there were no correlations between the pain thresholds or trophic findings and the patients history of number of colics. After the operation no significant alterations in sensitivity were detected.

**SOURCE OF FUNDING:** None

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**MP01-09 CO-TARGETING OF NFKB AND SURVIVIN BY YM155 RESULTS IN PROFOUND IN VITRO GROWTH INHIBITION OF RENAL CELL CARCINOMA (RCC)**

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**INTRODUCTION AND OBJECTIVES:** The deregulation of the NFkB signaling cascade has been associated with human cancers including RCC. YM155 is a known survivin inhibitor that possesses potent anti-RCC activity. The objective of this study is to investigate whether the anti-RCC activity of YM155 is mediated by the NFkB signaling pathway, in addition to survivin inhibition.
MP01-10 OPTIMAL HOLMIUM LASER LITHOTRIPSY SETTINGS FOR THE INTRARENAL AND URETERIC CALCULI

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INTRODUCTION AND OBJECTIVES: The efficiency of Ho:YAG laser lithotripsy depends on an interplay between laser pulse energy, pulse frequency, and stone retropulsion. The purpose of this study was to compare conventional and stone dusting settings for ureteroscopic lithotripsy in a bench-top calyceal and ex vivo ureteral model.

METHODS: Pure human calcium oxalate monohydrate stones were fragmented using a 200μm Holmium laser fiber deployed in a flexible ureteroscope using an in-vitro calyeal and ex-vivo porcine ureteral model. In the calyceal model, stone fragmentation was performed as 0.6 J/5 Hz, 0.2 J/15 Hz, and 0.2 J/50 Hz settings were compared. In the ureter, the fragmentation time, retropulsion rate, fragmentation rate, and stone weight fragmented using settings of 0.6 J/5 Hz and 0.2 J/15 Hz were compared. Stone retropulsion forces generated by the 0.6 J/5 Hz, 0.2 J/15 Hz, and 0.2 J/50 Hz settings were also measured and compared. Statistical analysis was performed using the Mann-Whitney U test.

RESULTS: In the calyceal model, the 0.6 J/5 Hz and the 0.2 J and 50 Hz setting had similar fragmentation rates, (p = 0.413). In the ureteral model, the 0.6 J/5 Hz setting produced greater retropulsion and 20/20 (100%) of stones migrated outside the ureter, compared to 12/20 (60%); p = 0.003) using 0.2 J/15 Hz which subsequently resulted in greater fragmented volume (16.8 mg vs 25.5 mg; p = 0.009). Increasing the energy was noted to increase retropulsion, but increasing the frequency did not.

CONCLUSIONS: Laser lithotripsy in the ureter was most effective using the 0.2 J/15 Hz setting due to decreased retropulsion, while the 0.6 J/5 Hz and 0.2 J/50 Hz settings performed similarly in the calyceal model.

SOURCE OF FUNDING: None

MP01-11 RISK FACTORS OF UPPER TRACT CHANGES IN RECREATIONAL DRUG USERS PRESENTING WITH LUTS

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INTRODUCTION AND OBJECTIVES: Recreational drugs especially ketamine is well known to be associated with lower urinary tract symptoms. Some also reported the involvement of upper tract changes. We aim to identify the risk factors of upper tract involvement among the recreational drug users presenting only with lower urinary tract symptoms.

METHODS: We retrospectively examined the records of 37 consecutive patients with a significant background of recreational drug use (ketamine and heroin) presenting to us for lower urinary tract symptoms from January–June 2013.

RESULTS: Mean age of patients is 43.6 (SD 9.6) years, 36 are male and one is female. All except two patients underwent upper tract imaging studies (CT urogram, ultrasound kidneys, or intravenous urography). Total drug consumption of more than 10 years was significantly at risk of having upper tract abnormality compared to less than 10 years, with 2/8 (25%) vs 0/17 respectively (p = 0.032). All patients were asymptomatic clinically for urinary tract infection. 1/3 (33.3%) with significant pyuria (>5 WBC/hpf) were detected to have upper urinary tract involvement compared to 1/32 (3.1%) without significant pyuria (p = 0.031). 2/21 (9.5%) without significant microscopic hematuria were associated with upper tract involvement vs 0/14 with microscopic hematuria (p = 0.234). 1/21 (4.8%) with voiding symptoms and 1/14 (7.1%) without were found to have upper tract changes (p = 0.766). 2/29 (6.9%) with storage symptoms and 0/6 patients without were to have upper tract changes (p = 0.508).

CONCLUSIONS: Patients with chronic recreational drug consumption of more than 10 years and significant pyuria were found to be significantly associated with upper urinary tract changes. Upper tract imaging may not be cost effective in the absence of these indications.

SOURCE OF FUNDING: None

MP01-12 CONCOMITANT RENAL CELL CARCINOMA AND HEMATOLOGIC MALIGNANCY, A CASE SERIES

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INTRODUCTION AND OBJECTIVES: Introduction: The presence of simultaneous primary malignancies is rare. However, published data suggests that patients with renal cell carcinoma are at increased risk of a second primary cancer. We have treated several patients with a renal malignancy who were also being treated for a hematologic malignancy. Objectives: To review our experience with patients who had concomitant renal and hematologic malignancies and to review published literature on the subject.

METHODS: Retrospective chart review of patients with a history of renal malignancy and hematologic malignancy at our institution. Data collected including patient demographics (age, sex, race, smoking status, family history, occupational exposures), renal tumor characteristics (size, pathologic subtype, time of diagnosis, manner by which patient was diagnosed with renal mass) and hematologic malignancy characteristics (type, treatment, time of diagnosis).
RESULTS: Six patients were identified with renal cell carcinoma and a hematologic malignancy. The mean age of patients was 63. A majority (83%) of the patients were male. A majority (83%) of the kidney tumors were stage I and all reported tumor grades were Fuhrman grade II. There was equal distribution of clear cell and papillary type RCC in the cohort. Five of the hematologic malignancies were leukemias and one was multiple myeloma. The patients were all treated for their renal masses during the treatment of the hematologic malignancy.

CONCLUSIONS: We present our data of patients with concurrent RCC and a hematologic malignancy. The literature suggests that patients with RCC are at a higher than expected risk for the development of other primary malignancies.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: To determine if remote ischemic preconditioning (R-IPC) can prevent renal injury in a large animal (porcine) solitary-kidney model.

METHODS: Twelve pigs were assigned to two groups: each underwent a right nephrectomy followed by a week of recovery. Group 1 (No-IPC) underwent left renal hilar clamping for 90 minutes. Group 2 (R-IPC) underwent right and left iliac artery clamping for 10 minutes each, followed by reperfusion for 30 min and left hilar clamping for 90 minutes. Serum creatinine was drawn for both groups prior to ischemia (pre-op), then at 6 hours, 24 hours, 3 days and 7 days. Kidneys were harvested at 24 hours or 7 days for histologic analysis and the degree of ATN and lymphocyte infiltrate was quantified.

RESULTS: Paired serum creatinine values were analyzed between time points. For Group 1, paired differences existed at 24 hours (p = 0.008) but not at 3 days or 7 days. For Group 2, paired differences existed at 24 hours (p = 0.006) but not at 3 days or 7 days. Mean pre-operative serum creatinine was similar between groups (p > 0.05). The change in serum creatinine was not significantly different between groups at any time point. Histologic analysis revealed rare evidence of ATN at 24 hours in Group 2, but not in Group 1. At 7 days, neither group showed ATN and both showed 1–2+ evidence of lymphocytic infiltrates.

CONCLUSIONS: R-IPC in a solitary-kidney porcine model does not confer renal protection from warm ischemia either as evidenced by renal function measures or on histologic analysis.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Percutaneous Nephrolithotomy (PCNL) is a commonly performed urological procedure and is the first line treatment large and/or multiple renal calculi. Complications of PCNL include extravasation, renal haemorrhage, fever, sepsis, pleural injury, colonic injury and acute pancreatitis.

METHODS: This was a retrospective study of 79 patients from 2010–2014 who underwent PCNL at Kent and Canterbury Hospital. Information was collated from patient discharge summaries to establish 1) Presence of post operative infection 2) antibiotics given post operatively 3) rates of readmission. Information was recorded and analysed using Microsoft Excel.

RESULTS: The post-operative infection rate was 3%, treatment of infection varied between Gentamicin (50%) and Augmentin with Trimethoprim (50%). The readmission rate for post-operative infections was 33%. Post PCNL 35% of patients were discharged on prophylactic antibiotics, type of antibiotic varied considerably with Trimethoprim (21%) Augmentin (43%) and Ciprofloxacin (25%) most commonly used. Antibiotic usage did not appear to concord with stent insertion or removal, with 25% of PCNL patient undergoing stent removal/insertion/ change, but only 4% of this cohort being discharged with prophylactic antibiotics.

CONCLUSIONS: Broad heterogeneity of use and type of antibiotic administration post PCNL suggests the need for established guidelines for 1) Treatment of post PCNL infection and 2) Use of prophylactic antibiotics post PCNL.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: High intrapelvic pressures (IPP) may cause possible spread of infection through pyelo-venous backflow while low pelvic pressures may decrease venous tamponade, increase bleeding and worsen visualization. The purpose of this study is to characterize IPP during percutaneous nephrolithotomy with single and multiple tracts.

METHODS: A porcine model was utilized to test IPP during rigid and flexible nephroscopy. Pressures were compared with single and two-tract access, rigid versus flexible nephroscopy and with and without suction. Twenty trials were performed for each condition. A Mann-Whitney U test was used to compare parameters, with p < 0.05 considered significant.

RESULTS: In the single tract model, rigid nephroscopy resulted in significantly higher mean pressure (31.35 mmHg) compared to flexible nephroscopy (10.7 mmHg; p < 0.001). The pressure was higher when using a rigid nephroscope in a single tract (31.35 mmHg) compared to when two tracts were present (9.35 mmHg; p < 0.001). In contrast, there was no difference between the flexible nephroscope in one (10.7 mmHg) versus two tracts (10.9 mmHg; p = 0.63). Use of suction with the rigid nephroscope resulted in lower pressure with one tract (– 1.3 mmHg) compared to two tracts (1.8 mmHg; p = 0.004).

CONCLUSIONS: The addition of a second PCNL tract may result in significant alterations in renal IPP, with lower pressures when using irrigation but higher pressures when using suction compared to a single tract. This may explain in part why transfusion rates are significantly higher with multiple accesses during PCNL.

SOURCE OF FUNDING: None
MP01-16  LOWER POLE ANATOMY APPLIED TO FLEXIBLE URETEROSCOPY: EXPERIMENTAL STUDY USING HUMAN THREE-DIMENSIONAL ENDOCASTS

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INTRODUCTION AND OBJECTIVES: The aim of this study is to analyze the anatomy of the inferior pole collecting system in human endocasts applied to flexible ureteroscopy.

METHODS: 170 three-dimensional polyester resin endocasts of the kidney collecting system, obtained from 85 adult cadavers. Endocasts were divided into 4 groups according to kidney midzone (KM) drainage: A1 – minor calices (mc) that are dependent on superior or inferior caliceal groups; A2 – crossed calices, one draining into the superior caliceal group and another into the inferior caliceal group; B1 – major caliceal group independent of both the superior and inferior groups; and B2 – mc entering directly into the renal pelvis. Anatomical parameters were analysed as shown in results. Means were compared using ANOVA and the unpaired T-test (p < 0.05).

RESULTS: We found 57 (33.53%) endocasts of group A1; 23 (13.53%) of group A2; 59 (34.71%) of group B1; and 31 (18.23%) of group B2. The angle between lower infundibulum and renal pelvis (LIP) was > 90° in 70 endocasts (29.4%); ≤ 60° in 21 (12.35%) and between 61 and 90° in 120 (70.6%). The inferior pole was drained by 4 or more calices in 84 cases (49.41%), most of them (41.67%) belonged to group A1. Perpendicular mc were observed in 15 cases (8.82%). No differences was noticed between the angle formed by lower infundibulum and inferior mc in the studied groups. Infundibular length measurements showed that, in general, type A caliceal groups are longer than type B caliceal groups.

CONCLUSIONS: Group A collecting systems presented at least two restrictive anatomical features: number of cállices and infundibular length.

SOURCE OF FUNDING: None

MP01-17  BIOMECHANICS OF UPPER URINARY TRACT PAIN

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INTRODUCTION AND OBJECTIVES: The pathogenesis of symptoms in urolithiasis is poorly understood. Traditionally increased endoluminal pressure is considered the main mechanism causing pain in the upper urinary tract but clinical data are sparse. The aim of this study was to develop a new model related to mechanosensation in order to describe geometric and mechanical properties of the renal pelvis in patients with kidney stone disease.

METHODS: Studies were performed in five adult patients who underwent CT-pyelography after percutaneous nephrolithotomy. Contrast was injected via the nephrostomy-catheter to the renal pelvis causing pelvis distension. Sensory intensity during distension was registered using a visual analogue scale. A CT-scan was recorded at the sensation threshold and at the pain threshold.

The CT-scan data were used to reconstruct the three-dimensional (3D) geometries of the kidney pelvis. 3D distribution of curvatures and tissue deformation were calculated using computer programs.

RESULTS: The pelvis surface area and volume increased 17% and 36% from the sensation threshold to pain threshold, respectively. The pelvis deformed 13% longitudinally and 15% circumferentially from the sensation threshold to pain threshold. However, the deformation of pelvis during distension was not uniform due to the complex geometry.

CONCLUSIONS: This study provides a method for describing the mechanosensory properties and 3D deformation of the renal pelvis. The non-homogenous tissue deformation distribution suggests that simple estimates of wall tension based on pressure and volume do not reflect the 3D biomechanical properties of the renal pelvis. Hence, this model can be used in future studies to explain pathophysiology of the upper urinary tract pain.

SOURCE OF FUNDING: None

MP01-18  NOVEL MECHANISM OF ANDROGEN IN MODULATING EPITHELIAL-TO-MESENCHYMAL TRANSITION IN PROSTATE CANCER CELLS

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INTRODUCTION AND OBJECTIVES: Androgen deprivation therapy (ADT) is a widely used regimen to treat advanced PCAs. However, in some patients, antiandrogen agents accelerate disease progression. This project is to delineate novel mechanism of androgen function on epithelial-to-mesenchymal transition (EMT), a key step leading to PCa metastasis, which is associated with the failure of ADT.

METHODS: PCa cells with or without androgen receptor (AR) expression were cultured in phenol red-free RPMI 1640 with 1% charcoal-stripped fetal bovine serum (1% CSF) and 10 nM of 5α dihydrotestosterone (DHT) for 3 days. The cells were then split into two conditions (i.e., with or without DHT) for 3 days. EMT was determined based on 1) biomarker expression: the epithelial markers E-Cadherin, and the mesenchymal markers N-Cadherin, Fibronectin or Vimentin; 2) cell migration; and 3) homeobox transcription factor expression.

RESULTS: Our results demonstrated that androgen withdrawal in three AR-positive PCa cells (i.e., C4-2, LNCaP and LAPC-4) resulted in decreased E-Cadherin expression but increased N-Cadherin, Fibronectin or Vimentin expression. In addition, these cells became more mobile under androgen-deprived condition, in which cells undergo EMT. Androgen withdrawal can’t induce EMT in AR negative cells. We demonstrated that elevated ZEB1, ZEB2, Snail, Twist gene expression were detected in PCa cells after androgen withdrawal.

CONCLUSIONS: These data demonstrate that androgen is able to delay the onset of EMT by suppressing several transcription factors. These factors can be used as predictive markers for the possible failure of ADT or metastatic potential of PCa in patients.

SOURCE OF FUNDING: The National Natural Science Foundation
**MP01-19 HIGHER LEVELS OF SECRETED S100 A8/9 LEVELS FROM PERITUMOR PERIRENAL ADIPOSE TISSUES ARE ASSOCIATED WITH RENAL CELL CARCINOMA (RCC)**

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**INTRODUCTION AND OBJECTIVES:** To define the relationship between obesity and RCC, we studied the interaction between perirenal adipose tissues (PAT) and RCC.

**METHODS:** PAT directly over tumors, PAT away from tumors, subcutaneous adipose tissues (AT) and renal sinus AT were collected and conditioned medium (CM) was generated from 90 patients undergoing surgery for renal cortical neoplasms. We evaluated the CM for its effect on proliferation and migration of ccRCC cell line Caki-2 by MTT assay and Boyden chamber cell migration assay, respectively, and for secreted levels of S100 A8/9 by ELISA.

**RESULTS:** Compared to patients with benign histopathology, peritumor PAT CM from pT3 ccRCC patients significantly increased CaKi-2 cell migration (P < 0.05), but did not affect the proliferation (P > 0.05). Patients with ccRCC at stage pT2 and pT3 had higher levels of S100 A8/9 in peritumor PAT and sinus AT CM than those with benign pathology or ccRCC at stage pT1. Sinus AT CM exhibits the highest level of S100 A8/9 (9.13 ± 2.75 ng/ml), followed by peritumor PAT CM (2.40 ± 0.64 ng/ml), Skin AT CM (0.71 ± 0.22 ng/ml) and PAT away from tumors (0.70 ± 0.20 ng/ml). The mean BMI values from ccRCC patients at stage pT1, pT2 and pT3 are not significantly different, which are 30.1 ± 7.3, 28.9 ± 4.6 and 28.9 ± 4.0 kg/m², respectively (P > 0.05).

**CONCLUSIONS:** The higher S100 A8/9 levels in peritumor PAT and sinus AT CM associated with higher stage ccRCC may have potential prognostic value. Further studies are in progress to determine cellular mechanisms of S100 A8/9’s action. Fat specific metrics will likely be superior to BMI for predicting tumor status and behavior.

**SOURCE OF FUNDING:** None

**MP01-20 CRMP4 METHYLATION AS A SIGNATURE FOR PREDICTION OF BIOCHEMICAL RECURRENCE AFTER RADICAL PROSTATECTOMY OF CLINICALLY LOCALIZED PROSTATE CANCER**

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**INTRODUCTION AND OBJECTIVES:** Diagnostic and prognostic tools for prostate cancer (PCa) are suboptimal, which causes overtreatment of indolent PCa and risk of delayed treatment of aggressive PCa. Here, we identify CRMP4 methylation as a marker for PCa with promising prognostic potential.

**METHODS:** Bisulfite sequencing of 80 cases with PCa were used to identify CRMP4 methylation as a predictor for biochemical recurrence. Prognostic potential was evaluated in 339 radical prostatectomy (RP) samples (cohort 1, training), and 328 malignant RP samples (cohort 2, validation) collected in China. Sensitivity and specificity for PCa were evaluated by receiver operating characteristic analyses. Correlations between CRMP4 methylation levels and biochemical recurrence were assessed using log-rank tests and univariate and multivariate Cox regression analyses.

**RESULTS:** The median follow-up was 45 months (interquartile range, 39 to 73) for all patients. CRMP4 methylation was highly cancer specific (AUC, 0.88 to 0.97). Furthermore, high CRMP4 methylation was significantly (P < 0.05) associated with biochemical recurrence in multivariate analysis in cohort 1 (hazard ratio [HR], 4.20; 95% CI, 1.66 to 7.49) and was successfully validated in cohort 2 (HR, 3.97; 95% CI, 1.03 to 8.72). In cohort 1, 3-year biochemical recurrence-free survival was 93.6% (95% CI 90.2–97.7) for patients with non-hypermethylated CRMP4 tumors and 62.8% (37.6–76.4) for those with hypermethylated CRMP4 tumors (P < 0.05). In cohort 2, 3-year biochemical recurrence-free survival was 91.3% (95% CI 89.1–98.4) for patients with non-hypermethylated tumors and 58.6% (38.3–79.5) for those with hypermethylated tumors (P < 0.001).

**CONCLUSIONS:** We identified CRMP4 methylation as an independent predictor of time to biochemical recurrence after RP in two PCa patient cohorts.

**SOURCE OF FUNDING:** Program of 5010 of Sun-Yat Sen University (2007028), National Key Basic Research and Development Plan of China (973 Program, 2012CB518303), National Natural Science Foundation of China (30973011, 81001139).

**MP01-21 DILTIAZEM EFFECTS ON FUNCTION OF TRANSPLANTED KIDNEY AND CYCLOSPORINE A BLOOD LEVEL**

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1 Mashhad University of Medical Sciences (Iran)

**INTRODUCTION AND OBJECTIVES:** Better function of transplanted kidney with less immunosuppressive drugs are very important for kidney transplanted recipients. Diltiazem (calcium channel blocker) is used for some recipients to protect them from hypertension and decreasing the toxicity of cyclosporine A (CSA). We evaluated effects of Diltiazem on two groups of kidney transplanted recipients.

**METHODS:** Since June 2009 till October 2012 we evaluated 75 kidney transplanted recipients that had at least six months stable graft function. They divided into two groups, group A (n = 31) received daily oral Diltiazem (30–60 mg) with immunosuppressives and group B (n = 44) received only their routine immunosuppressive drugs for at least six months (all the patients had systolic blood pressure 110 mmHg or more.

**RESULTS:** We compared Two groups for serum creatinine-CSA blood levels and CSA daily dose. In group A mean creatinine was 1.62 mg/dl and in group B was 1.85 mg/dl (P < 0.05). The daily dose of CSA for group A was about 10% less that group B with approximately the same CSA blood level.

**CONCLUSIONS:** Using daily oral Diltiazem is effective for better function of transplanted kidney and reduces the CSA daily dose with the same blood level.

**SOURCE OF FUNDING:** Mashhad University of Medical Sciences, Mashhad-Iran

**MP01-22 HIGH CORRELATION BETWEEN URINE CRYSTAL COMPONENT AND STONE COMPOSITIONS AFTER URSL USING MICRO-RAMAN SPECTROSCOPIC ANALYSIS**

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**INTRODUCTION AND OBJECTIVES:** To define the relationship between obesity and RCC, we studied the interaction between perirenal adipose tissues (PAT) and RCC.

**METHODS:** PAT directly over tumors, PAT away from tumors, subcutaneous adipose tissues (AT) and renal sinus AT were collected and conditioned medium (CM) was generated from 90 patients undergoing surgery for renal cortical neoplasms. We evaluated the CM for its effect on proliferation and migration of ccRCC cell line Caki-2 by MTT assay and Boyden chamber cell migration assay, respectively, and for secreted levels of S100 A8/9 by ELISA.

**RESULTS:** Compared to patients with benign histopathology, peritumor PAT CM from pT3 ccRCC patients significantly increased CaKi-2 cell migration (P < 0.05), but did not affect the proliferation (P > 0.05). Patients with ccRCC at stage pT2 and pT3 had higher levels of S100 A8/9 in peritumor PAT and sinus AT CM than those with benign pathology or ccRCC at stage pT1. Sinus AT CM exhibits the highest level of S100 A8/9 (9.13 ± 2.75 ng/ml), followed by peritumor PAT CM (2.40 ± 0.64 ng/ml), Skin AT CM (0.71 ± 0.22 ng/ml) and PAT away from tumors (0.70 ± 0.20 ng/ml). The mean BMI values from ccRCC patients at stage pT1, pT2 and pT3 are not significantly different, which are 30.1 ± 7.3, 28.9 ± 4.6 and 28.9 ± 4.0 kg/m², respectively (P > 0.05).

**CONCLUSIONS:** The higher S100 A8/9 levels in peritumor PAT and sinus AT CM associated with higher stage ccRCC may have potential prognostic value. Further studies are in progress to determine cellular mechanisms of S100 A8/9’s action. Fat specific metrics will likely be superior to BMI for predicting tumor status and behavior.

**SOURCE OF FUNDING:** None

**MP01-21 DILTIAZEM EFFECTS ON FUNCTION OF TRANSPLANTED KIDNEY AND CYCLOSPORINE A BLOOD LEVEL**

Amir Abbas Asadpour1, Mohamad Aslziare2, Mahmoud Tavakoli1, Alireza Ghoreifil1

1 Mashhad University of Medical Sciences (Iran)

**INTRODUCTION AND OBJECTIVES:** Better function of transplanted kidney with less immunosuppressive drugs are very important for kidney transplanted recipients. Diltiazem (calcium channel blocker) is used for some recipients to protect them from hypertension and decreasing the toxicity of cyclosporine A (CSA). We evaluated effects of Diltiazem on two groups of kidney transplanted recipients.

**METHODS:** Since June 2009 till October 2012 we evaluated 75 kidney transplanted recipients that had at least six months stable graft function. They divided into two groups, group A (n = 31) received daily oral Diltiazem (30–60 mg) with immunosuppressives and group B (n = 44) received only their routine immunosuppressive drugs for at least six months (all the patients had systolic blood pressure 110 mmHg or more.

**RESULTS:** We compared Two groups for serum creatinine-CSA blood levels and CSA daily dose. In group A mean creatinine was 1.62 mg/dl and in group B was 1.85 mg/dl (P < 0.05). The daily dose of CSA for group A was about 10% less that group B with approximately the same CSA blood level.

**CONCLUSIONS:** Using daily oral Diltiazem is effective for better function of transplanted kidney and reduces the CSA daily dose with the same blood level.

**SOURCE OF FUNDING:** Mashhad University of Medical Sciences, Mashhad-Iran
INTRODUCTION AND OBJECTIVES: Urine crystal is regarded as a sentinel prediction of the urinary stone formation. With the improvement of the stone management, less stone fragments could be collected after minimal invasive management (ex. URSL or ESWL). We applied the quantitative micro-raman spectroscopy (MRS) to detect the minute/micro stones in the urine after the URSL and the morning urine crystal before URSL.

METHODS: In 30 patients receiving URSL, urine sample was collected as one shot (within 1 hour) after the URSL and one shot morning urine on the day before the URSL. Then we compared the result of the micro/minute stone in urine sample with micro-collected from the patient if possible. Then we compared the results of the stone components analyzed by MRS-based method and the subsequent basket - grasped stones were analyzed by both FTIR and MRS-based method.

RESULTS: 30 post-URSL urine samples from these patients were analyzed, including 20 single composition and 10 binary composition samples. There are 12 COMs, 4 CODs, 4 Uric acids, seven COM/COD samples, one HAP/COM sample, and two HAP/Uric acid samples. Pre-URSL urine crystal analysis revealed 86% correlation with the analysis of subsequent stone composition after the URSL.

CONCLUSIONS: This research disclosed 86% correlation between urine crystal in one shot morning urine before URSL and the subsequent stone components analyzed by MRS-based method.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: The dust generated during laser stone pulverization; impairs endoscopic vision. We studied the impact of irrigant viscosity on the same.

METHODS: Construction of an invitro hands free bench using a fish tank, phantom stone slab, two endoscopes and a 800 µ laser fiber (fig 1) was achieved. The laser fiber was adjusted in contact with the phantom stone at the bottom of the tank. For each energy cohort, the fish tank was successively filled with distilled water (viscosity = 1.022 mPa.s), normal saline (viscosity = 1.018 mPa.s) and glycine viscosity = 1.07 mPa.s). Single impulse of 800, 2000 and 3000 mj of Holmium laser were delivered to the phantom in each media. The volume of dust cloud formed was then measured using calibrated monitor screens.

RESULTS: Holmium energy (mj) Irrigant Stone dust volume (cm3) p value (SPSS analysis) 800 Water 12.60 (10.14–14.57) < 0.001* Glycine 14.17 (11.09–16.41) 0.09** 2000 Water 30.29 (18.74–39.57) NA Saline 13.77 (10.34–13.77) < 0.001** Glycine 3.80 (3.62–5.22) < 0.001** 3000 Water 36.99 (34.11–39.57) NA Saline 17.21 (12.93–21.36) < 0.001* Glycine 14.17 (11.09–16.41) 0.09**

CONCLUSIONS: Volume of stone dust was proportional to the laser energy and inversely proportional to irrigant viscosity. Manipulating the irrigant viscosity may open newer avenues for tackling pulverization dust.

SOURCE OF FUNDING: Nil

INTRODUCTION AND OBJECTIVES: Tipless nitinol stone retrieval devices facilitate stone extraction during flexible ureteroscopy (FURS) but may compromise ureteroscope deflection and irrigation flow. We evaluated the calicical stone capture times of five nitinol stone retrieval devices using a renoscope.
MP01-26 FACTORS PREDISPOSING TO EMERGENCY PERCUTANEOUS NEPHrostomy (PCn) IN FEBRILE PATIENTS WITH OBSTRUCTING UROLithIASIS

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INTRODUCTION AND OBJECTIVES: PCn cannula insertion is an effective emergency procedure to relieve obstruction in the urinary system in septic patients. At our institution, febrile patients with obstructive urolithiasis are given a trial of antibiotics for 24–48 h, failing which they would then undergo a PCn. A literature review identified female sex, age >75, paralysis and thrombocytopenia as risk factors for patients failing antibiotic therapy and requiring emergency PCn. Our study aims to identify risk factors in patients who fail antibiotic therapy and subsequently require a PCn.

METHODS: A retrospective review of 111 patients admitted in 2012–2013 for fever and urolithiasis was performed, and risk factors for failure of antibiotic therapy were then identified. Patients with bilateral obstructing urolithiasis and those with urolithiasis in a single functioning kidney were excluded from the study.

RESULTS: The mean age of our patients was 52.3 years. Out of 111 patients, 36 patients underwent emergency PCn (32.4%). 9 patients (8.1%) had shock requiring inotropes, out of which 8 went to high dependency (7.2%). There were no mortalities. Risk factors that predisposed to emergency PCn were identified. Each risk factor that predisposed to emergency PCn were the presence of shock, degree of hydronephrosis, stone size > 10 mm, total white cell count, C-reactive protein, creatinine (p < 0.05). Other factors that were studied but were not significant included age, sex, race, presence of diabetes mellitus, use of immunosuppressants, paralytic ileus, thrombocytopenia and deranged coagulation profile.

CONCLUSIONS: Most febrile patients with obstructing urolithiasis respond well to antibiotics. However, those patients who have severe hydronephrosis, stone size > 10 mm, raised white cell count, CRP and creatinine should have a lower threshold for emergency PCn insertion.

SOURCE OF FUNDING: None

MP01-27 EVALUATION OF THE DISTRIBUTION OF PaCLITAXEL BY IMMUNOHISTOCHEMISTRY AND NUCLeAR MAGNETIC RESONANCE SPECTROSCOPY AFTER THE APPLICATION OF DRUG-ELUTING BALLOON IN PORCINE URETER

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INTRODUCTION AND OBJECTIVES: Paclitaxel represents “the tightest and most impermeable barrier in the body”1. We investigated the penetration and distribution of paclitaxel in the ureteral wall after the dilation of a paclitaxel-eluting balloon (PEB) in an attempt to elucidate the possibility of clinical application of PEBs in the ureter.

METHODS: Nine domestic pigs were used. 9 PEBs and 9 conventional percutaneous angioplasty balloons (CB) were dilated in the right and left ureter of each animal, respectively. The ureter treated by CB was the control for the contralateral ureter. Specimens were removed at: immediately after dilation (Group A), after 12 hours (Group B) and after 24 hours (Group C). Two samples are obtained from each ureter of the Groups A, B and C. One sample is investigated by Nuclear Magnetic Resonance Spectroscopy (NMR). The other by histology and Immunohistochemistry (IHC) using a specific for paclitaxel polyclonal antibody.

RESULTS: Reduced inflammation was observed in the Group B and C samples in comparison to their controls. Paclitaxel was distributed mostly in the urothelium and submucosal layer in Group A (IHC). The agent was present in the urothelial, submucosal and muscle layer in Groups B and C. The concentration of the paclitaxel (NMR) has been reduced in Group C compared to the tissue extracts of Group B.

CONCLUSIONS: Paclitaxel penetrates the urothelial barrier of the porcine ureter. Its distribution includes the urothelial, submucosal and smooth muscle layers. Inflammation was reduced in the case of DEB. The application of PEB in the ureter represents a promising option for investigation.

SOURCE OF FUNDING: None

MP01-28 A RARE CAUSE OF BLADDER DYSFUNCTION: GIANT BLADDER WITH DIABETES INSIPITUS

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INTRODUCTION AND OBJECTIVES: Bladder dysfunction in younger age group is not a common situation. It can be regarded organic and metabolic causes for this pathology which one of them is diabetes insipitus (DI). In this case, we present a DI patient with giant bladder.

METHODS: A 19-year-old male patient was admitted to our clinic for a routine check. In his medical history it was learned that his voiding regime is very infrequent which is approximately once a day or every other day. On physical examination, mild stiffness extending down below the umbilicus was palpated. In his non-contrast-enhanced computed tomography and urinary system ultrasound (USG) the bladder was observed covering the lower
RESULTS: Frequency of urination at the younger age group is important as an indicative of metabolic stability. In DI the main cause of urinary tract dilatation is persistance of the polyuria.

CONCLUSIONS: Urine volume control and reduced post voiding residual volume are important in treating DI patients with urinary tract dilatation.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Urolithiasis is a major health burden, with a complex and poorly understood pathophysiology. Malpighian tubules in Drosophila has been shown to have similar functions to human renal tubules. We have introduced Drosophila a genetic model for stone disease. Our objective is to study the stone formation in Drosophila Malpighian tubules in response to dietary manipulation and related transcriptional response.

METHODS: Wild-type male Drosophila were fed in parallel groups with addition of lithogenic agents: control, 0.05% Na Oxalate, 0.5% Ethylene Glycol (EG), 0.05% Na Oxalate plus 2% potassium citrate. The Malpighian tubules were dissected after 3 weeks to visualize crystals with polarized light microscopy. The degree and percentage of crystallization were recorded. The parallel group was dissected for RNA extraction and subsequent sequencing.

RESULTS: Crystal formation was visualized in ~23% of flies fed with control diets, 67% in Na Oxalate diets, 56% in EG diets and 44% in diets with potassium citrate. Stone formation in flies fed with Na Oxalate diet tend to be smaller and numerous, whereas in EG group the stones tend to be more sizable and polygonal. There was an inverse relationship between the dose of lithogenic agents and Drosophila life span.

CONCLUSIONS: Stone formation in Drosophila Malpighian tubules could be manipulated by dietary modification and visualized in vitro. Drosophila model could be potentially used to identify the candidate genes that influence stone risk.

SOURCE OF FUNDING: Oxford University Hospitals, Weatherall Institute of Molecular Medicine, Oxford

INTRODUCTION AND OBJECTIVES: The mucosa of tongue, buccal and bowel can be used as the replacement for the reconstruction of urethras. However, the complications which involve sclerosis, infection, and the formation of stones may decrease the successful rate. This study will discuss a poly (lactic-co-glycolic acid, 80:20)(PLGA) tissue engineered urethral tubular scaffold.

METHODS: A degradable poly (lactic-co-glycolic acid, 80:20)(PLGA) urethral tubular scaffold was fabricated by electrospinning. In order to enhance the mechanical property, the scaffold was crosslinked by glutaraldehyde. The structure and properties of the composites were subsequently investigated by the mechanical property testing, the scanning electron microscopy (SEM), degradability test in vitro and MTT.

RESULTS: The results exhibited that the scaffold had the nano-structure, the porosity before crosslinking was 89.1%, and the value was decreased to 87.6% after crosslinking, but no differences was observed (P<0.05). The tensile strength of the scaffold increased to 2.52 MPa after crosslinking compared with 1.38 MPa before crosslinking. The elongation at break of the scaffold was above 45% after crosslinking compared with 23% before crosslinking. The scaffold can completely degrade within 10 weeks. The results of biocompatibility test showed that the PLGA scaffold has no cytotoxicity.

CONCLUSIONS: The PLGA scaffold which fabricated by electrospinning and crosslinked by glutaraldehyde can satisfied the demand of a tissue engineered urethral stent. Animal experiments should be performed to confirm the results.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: About 1%-4% of all inguinal hernias involve the urinary bladder. The diagnosis of urinary bladder involvement is often difficult to define at the time of presentation and may only become apparent at the time of herniorrhaphy. Surgical management pertaining to the approach, laparoscopic herniorrhaphy may challenge the urologist. We report total extraperitoneal (TEP) laparoscopic herniorrhaphy of a recurrent inguinal hernia with incarcerated urinary bladder.Our objective is to highlight the clinical presentation and the decisive issues surrounding the diagnosis and laparoscopic management of this condition.

METHODS: A 72 year-old man had left recurrent inguinal hernia with incarcerated urinary bladder who was incidentally found out and underwent laparoscopic herniorrhaphy.

RESULTS: After laparoscopic herniorrhaphy, the herniated bladder was free from the structures within the inguinal canal and
returned to its normal pelvic position. The lower urinary symptoms of the patient got improved.

CONCLUSIONS: Diagnosis of such cases often required not only clinical examination but also specialized radiological investigations to show the incarcerated urinary bladder. Laparoscopic herniorrhaphy in these patients is real challenge for urologist.

SOURCE OF FUNDING: None

MP02-02 ACUTE BLEEDING REQUIRING RE-OPERATION IN MINIMALLY INVASIVE UROLOGIC SURGERY

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INTRODUCTION AND OBJECTIVES: Postoperative bleeding is a known risk of any surgery. Although this risk is recognized, there is limited characterization of the rate of this occurrence in laparoscopic and robotic surgery. This study assessed the risk and presentation of post-operative take-back after minimally invasive urologic surgery.

METHODS: All complications following adult laparoscopic or robotic urologic surgeries performed by three experienced Urologists at a single institution were retrospectively reviewed over a four year time period (2008–2012).

RESULTS: A total of 2380 laparoscopic/robotic surgeries were performed during this time period. There were 5 cases (0.21%, 4 laparoscopic, 1 robotic) in which the patient required re-operation for postoperative bleeding. The laparoscopic cases were a retroperitoneal lymph node dissection, partial nephrectomy, radical nephrectomy and nephroureterectomy. The robotic case was a radical prostatectomy. Summary of initial patient characteristics and original surgery are in Table 1. While estimated blood loss varied, none of the patients required transfusion during original surgery. All reoperations occurred within the first 24 hours postoperatively and indications for reoperation included hemodynamic instability in all cases. A summary of resuscitative measures and take-back findings is within Table 2.

CONCLUSIONS: Bleeding requiring re-operation is a recognized rare complication of minimally invasive surgery, even in experienced hands. Hemodynamic instability and significant acute blood loss anemia are universally seen in these patients and drive return to the operating room.

SOURCE OF FUNDING: None

MP02-03 PRESERVATION OF RENAL FUNCTION IN CHRONIC KIDNEY DISEASE PATIENTS AFTER PARTIAL NEPHRECTOMY

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INTRODUCTION AND OBJECTIVES: Preservation of maximal renal function is important for all partial nephrectomy (PN) patients, and in particular for those with medical renal disease (MRD). The purpose of this study was to determine the change in renal function in patients with MRD undergoing partial nephrectomy and to compare these outcomes to a cohort with normal renal function.

METHODS: 256 patients undergoing PN were retrospectively reviewed to identify 126 with follow-up serum creatinine on discharge, during 1–7 months postoperatively and at the last follow-up. Baseline patient characteristics including preoperative eGFR as calculated by the MDRD formula, renal mass diameter, and follow-up eGFR were recorded. The percentage change in eGFR was calculated and compared using the Student’s t-test.

RESULTS: Thirty patients had preexisting MRD (mean eGFR = 44.1 mL/min/1.73 m2) as defined by eGFR < 60 while 96 did not (mean eGFR = 86.8). There were higher incidences of preoperative hypertension (87% vs. 56%, p=0.002) and diabetes (53% vs. 17%, p<0.001) among the MRD patients. The mean tumor size was similar between groups (3.3 cm vs. 3.8 cm, p=0.16). Upon discharge, MRD patients had improved eGFR (+ 8.7%), while the non-MRD patients suffered a decline (~ 7.1%) (P=0.009). As expected, the eGFR deteriorated at a faster rate in the MRD group, equalizing the % change observed at the 1–7 month and latest follow-up visits between groups.

CONCLUSIONS: Patients with CKD due to MRD tolerate warm renal ischemia as well or better than those with normal renal function. Moderate levels of medical renal disease should not be viewed as a contraindication for partial nephrectomy using warm renal ischemia.

SOURCE OF FUNDING: None

MP02-04 THE OUTCOME OF SOFT SILICONE DRAINS IN REDUCING THE SHOULDER TIP PAIN AFTER LAPAROSCOPIC ADRENALECTOMY

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INTRODUCTION AND OBJECTIVES: Intraabdominal CO2 gas following laparoscopic adrenalectomy results in postoperative shoulder tip pain. Many methods reducing shoulder tip pain have been used to reduce this pain. The aim of this study was to evaluate the efficacy of soft silicone drain in reducing the shoulder tip pain after laparoscopic adrenalectomy.

METHODS: In our previous observational study, about pain score from 10 post-laparoscopic adrenalectomy patients. We found out that those with drain have significantly lower mean pain score. Therefore, we studied a total of 38 patients undergoing laparoscopic adrenalectomy were randomized prospectively into two groups. Nineteen patients in group A underwent laparoscopic adrenalectomy with soft silicone drains and nineteen patients in group B without soft silicone drains. Shoulder-tip pain was recorded on a VAS 4, 8, 12, 24, and 48 hours after operation and the quantity of analgesics was recorded on the first and second day postoperatively.

RESULTS: Twelve patients in group A (63.2 percent) and 14 patients in group B (73.68 percent) complained of shoulder-tip pain. There was no significant difference in the frequency and intensity of shoulder-tip pain between groups A and B. The postoperative shoulder-tip pain scores were insignificantly different in both groups. The quantity of analgesics required by the patients in two groups was not significantly different.

CONCLUSIONS: Although our observational studies found that drains help reducing shoulder tip pain, our randomized control trial found that they cannot significantly reduce shoulder tip pain. Further studies to reduce shoulder tip pain should be conducted.

SOURCE OF FUNDING: Urology division, Department of surgery, Faculty of medicine, Chulalongkorn university, Bangkok, Thailand
MP02-05 THE SAFETY AND EFFICACY OF LAPAROSCOPIC LIVE DONOR NEPHRECTOMY WITH MULTIPLE RENAL ARTERIES

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INTRODUCTION AND OBJECTIVES: Nowadays, it is considered that laparoscopic donor nephrectomy is a gold standard procedure for live kidney transplantation even if the graft has multiple renal arteries (MA). The aim of this study is to compare the surgical complications and short term outcome of renal transplants with single and multiple renal artery grafts, and to clarify the usefulness of laparoscopic procedure for MA cases.

METHODS: From September 2001 to March 2014, 288 retroperitoneal laparoscopic live donor nephrectomies were performed and 18.4% cases had MA. In this study, the cases of intraperitoneal laparoscopic procedure were excluded. We examined demographics, the risk of slow and delayed graft function, the incidence of intra- and post-surgical complications, post-transplant hypertension, acute graft rejection, mean serum creatinine level, and patient and graft survival of both MRA and single renal artery (SA) cases.

RESULTS: Donor and recipient outcomes and complication rates were not significantly different. Only mean cold ischemia time in MA cases was significantly longer than those of SA cases. Especially in MA cases, resistive index (RI) of each graft area was almost same, and the average of RI was significantly different comparing with SA cases.

CONCLUSIONS: In conclusion, kidney transplantation using MA grafts is equally safe as using grafts with SA, regarding graft function, intra- and post-surgical complications, and patient and graft survival. Kidney grafts with MA should not be considered as a relative contraindication.

SOURCE OF FUNDING: None

MP02-06 NATIVE NEPHRECTOMY DECREASES ANTI-HYPTERTENSIVE MEDICATION REQUIREMENTS IN AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE

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INTRODUCTION AND OBJECTIVES: The effect of native nephrectomy on blood pressure in autosomal dominant polycystic kidney disease (ADPKD) with renal transplantation is not well understood. Our goal was to evaluate how native nephrectomy affects control of blood pressure in ADPKD patients who have undergone renal transplantation.

METHODS: Blood pressure control was studied retrospectively in 143 ADPKD patients, 67 of whom underwent transplantation without nephrectomy and 76 underwent transplantation with concurrent unilateral nephrectomy from 2003 to 2013. Of the 76, 36 had a second nephrectomy at a median of 9.8 months post-transplantation. The number of antihypertensives and defined daily dose (DDD), a fixed unit of measurement independent of dosage form, of each antihypertensive was recorded at time of nephrectomy and up to 12 months post- nephrectomy.

RESULTS: Comparing pre-operative to post-operative medications, transplantation with concurrent unilateral nephrectomy had a greater decrease in number (−1.28 vs −0.45 medications, p=0.003) and DDD (−3.1 vs −0.8, p=0.0002) of antihypertensives than transplantation without nephrectomy. Of the 36 patients who eventually had second nephrectomy, we analyzed the 25 who required antihypertensives post-first nephrectomy. In this group, mean decrease in number of medications from post-first to post-second nephrectomy was −0.44 (p=0.03) and mean decrease in DDD was 0.32 (p=0.2). There was no difference in mean age at operation (p=0.95), gender (p=0.17), or ethnicity (p=0.06).

CONCLUSIONS: In ADPKD patients undergoing renal transplantation, concurrent unilateral nephrectomy significantly decreases the number and DDD of antihypertensives needed for blood pressure control. The second nephrectomy improves control of blood pressure to an even greater degree.

SOURCE OF FUNDING: None

MP02-07 DIRECT ZERO DEGREE TELESCOPE DISSECTION OF RETROPERITONEAL SPACE FOR RENAL CYST UNROOFING-TAIPEI CITY HOSPITAL EXPERIENCE

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INTRODUCTION AND OBJECTIVES: Bartel in 1969 first reported endoscopic visualization of the pelvic retroperitoneum. However, it is difficult to create retroperitoneal space before pneumo- retroperitoneum creation. It is necessary to break up the tough fibrous trabeculae, dense areolar, fibro-fatty retroperitoneal tissues. However, it may cause peritoneal perforation throughout the whole procedure.

METHODS: The patient was put in true lateral position. The first trocar was inserted along the posterior axillary line and 2 finger width above the iliac crest. The retroperitoneal space was created by blunt finger dissection. The two more 11 mm ports were inserted under videoscopic guidance and shaped in a isosceles triangular fashion among those three trocars. The zero degree telescope was used to dissect the retroperitoneal space along the dense areolar and fibro-fatty tissue via a gentle maneuver under direct vision.

RESULTS: From September 2011 to April 2014, retroperitoneoscopic renal cyst unroofing was performed in 15 patients. The size of renal cyst ranged from 2.0 to 8.6 cm via abdominal computed tomography. The mean operative time was 33.9±35.2 minutes. The mean blood loss was 61.1±12.3 ml. There was no open conversion in all 15 cases. The time to oral intake after surgery was 1.3±0.5 days. The mean visual analogue pain score was 2.5±1.7. Total hospital stay was 2.7±1.3 days. There was no complication and no peritoneum perforation.
CONCLUSIONS: Using zero degree telescope to dissect retroperitoneal space is a rapid, safe, cheap and effective minimally invasive procedure. It seems to be acceptable and a good start for the beginning of retroperitoneal laparoscopy.

SOURCE OF FUNDING: None

**MP02-08 REROPERITONEOSCOPIC NEPHRECTOMY FOR UPPER URINARY TRACT TUMOR WITH A HAND-ASSISTED APPROACH - AN COMMUNITY HOSPITAL EXPERIENCE REPORT**


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INTRODUCTION AND OBJECTIVES: To report our experience with hand assisted retroperitoneoscopic nephrectomy for patients with upper urinary tract urothelial carcinoma.

METHODS: From January 2011 to January 2014, we performed hand assisted retroperitoneoscopic nephrectomy in total 33 patients. All patients with upper urinary tract malignant tumor underwent standard retroperitoneal laparoscopic surgery. In our procedure, we employed a hand pole and a standard straight laparoscopic instrument. In laparoscopic nephroureterectomy, the distal ureter and bladder cuff were excised by using the open method from the Gibson’s incision wound.

RESULTS: One case of nephroureterectomy was converted to open nephrectomy because of severe adhesions and inadequate surgical access. We performed retroperitoneoscopic nephrectomy with a hand-assisted approach in 35 patients. Mean operative time was 68.9 ± 25.3 minutes. All 33 patients with upper tract urothelial carcinoma was treated nephroureterectomy. Mean operation time was 68.9 ± 25.3 minutes for nephroureterectomy. Blood loss was 101.0 ± 92.7 ml. The time to oral intake after surgery was 1.9 ± 0.9 days. The mean VAPS score was 2.3 ± 0.07. The hospital stay was 4.3 ± 1.2 days. No major perioperative complications were observed. One patient had postoperative delay bleeding and check bleeding again. The pathological report showed urothelial carcinoma in 34 patients and squamous cell carcinoma in one patient. 6 patients was noted urothelial carcinoma in urinary bladder via postoperative cystoscopy follow up.

CONCLUSIONS: In our experience hand assisted retroperitoneoscopic nephrectomy seem to be a technically feasible and safe procedure for upper urinary tract tumor.

SOURCE OF FUNDING: None

**MP02-10 NEPHRON-SPARING SURGERY (NSS) IN PATIENTS WITH RENAL FUNCTION AND PROGNOSIS**

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INTRODUCTION AND OBJECTIVES: To investigate the diameter greater than 4 cm nephron-sparing surgery, the prognosis and renal function after nephron-sparing surgery.

METHODS: We retrospectively reviewed our hospital during the period 2004–2013 for all patients with renal cancer patients who underwent NSS for tumors >4 cm. We analyzed tumor size, TNM stage, the occurrence of operative time, surgical margin, complications, mortality, recurrence and metastasis.

RESULTS: We identified significant differences between 1 and 2 set the following variables: the tumor size (2.8 to 8.5 cm, P = 0.03), the necessity of warning ischemia (15.3 vs. 51%, P = 0.001), average ischemic time (3.4 and 10.1 min, P = 0.002), require stent implantation (0.5% compared with 24.2%, P = 0.001) participation. Significantly less pT2 stage (12.7% compared with 27.9%, P = 0.03) and pT3 tumors (8.7% vs 12%, P = 0.05) was identified in Group 1 compared to Group 2. There were no significant differences regarding the specific stage of overall survival, cancer-specific survival and progression-free survival. There were no significant differences in survival between the NSS and radical nephrectomy.

CONCLUSIONS: NSS can be performed safely in the RCC >4 mm no treatment-related complications increase or decrease the frequency of cancer-specific survival.

SOURCE OF FUNDING: None
MP02-11 LAPAROSCOPIC RENAL PELVIS AND URETER ANGIOPLASTY: SURGICAL TECHNIQUE
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INTRODUCTION AND OBJECTIVES: To introduce some tips and tricks how to cut UPJ (UPJ) segment, trim ureter, precise anastomosis and ureteral stent implantation.

METHODS: June 2004 to April 2014, 67 UPJ patients in our department accepted ureteropelvic angioplasty laparoscopic resection PUJ, do not completely cut renal pelvis and ureter, renal pelvis and ureter will fit a needle, and then cut the renal pelvis and ureter, renal pelvis and ureter anastomosis part of a continuous suture, part sutured surgery before the start of first cystoscopy pelvis retrograde stent placement.

RESULTS: The mean operative time was 125 minutes (90–240). The average hospital stay was 5.0 days. We have three cases of conversion to open surgery, due to chronic inflammation part of the continuous suture, part sutured surgery before the start of first cystoscopy pelvis retrograde stent placement.

CONCLUSIONS: Laparoscopic renal pelvis and ureter angioplasty in experienced laparoscopic surgeon’s hands is safe and feasible. It has the advantages of less invasive; while it proved advantageous compared to traditional open surgery. For the sake of time and better results, the conventional techniques well-established techniques and precise manipulation of ureteral stent is necessary.

SOURCE OF FUNDING: None

MP02-12 CLINICAL ANALYSIS OF LAPAROSCOPIC RENAL PELVIS AND URETER CANCER RESECTION COMBINED WITH REGIONAL LYMPH NODE DISSECTION
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INTRODUCTION AND OBJECTIVES: To investigate the exact stage of the disease and treatment, we often implemented through the renal pelvis and ureter laparoscopic radical prostatectomy. This study was approved by the regional lymph node dissection (LND) to assess the ability of laparoscopic radical prostatectomy in the renal pelvis and ureter.

METHODS: A retrospective analysis of clinical data of 2000–2014 patients, including 42 patients who underwent laparoscopic radical prostatectomy with the renal pelvis and ureter area LND, 41 routine renal pelvis and ureter open radical prostatectomy with regional LND, we assessed resection. The number of lymph nodes, adverse events and survival data.

RESULTS: Laparoscopic removal of lymph nodes in the NU group median of 10 (range, 2–57), open NU group of 10 (range 1–65) (U-test, P=0.79), and pathological examination revealed four cases of positive lymph nodes (10.3%), three cases of patients received adjuvant chemotherapy. 8 patients chyle leak, 5-year overall survival PT2 is 100%, PT3 and PT4 disease was 55% 0%.

CONCLUSIONS: Laparoscopic radical prostatectomy renal pelvis and ureter LND combination is safe, effective, accurate staging is the key to survival.

SOURCE OF FUNDING: None

MP02-13 ADVANCED MULTICENTRIC BILATERAL RENAL CELL CARCINOMA IN A PATIENT WITH DE NOVO VON HIPPEL-LINDAU DISEASE: CASE REPORT AND LITERATURE REVIEW
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INTRODUCTION AND OBJECTIVES: Von Hippel-Lindau (VHL) disease is an autosomal dominant hereditary syndrome due to a germline mutation in the VHL gene, and characterized by hemangioblastoma of the central nervous system, retinal angiomas, visceral tumors and multiple visceral cysts. However, sporadic VHL disease with a de novo germline mutation is rare.

METHODS: Herein, we report the clinical case of a 33-year-old Asian male patient affected by bilateral multicentric renal carcinomas in both kidneys. The tumors with 15 centimeter in diameter in right kidney is extension into the inferior vena cava, and with ~ 3 centimeter in diameter in left kidney. He received an orthoplastic surgeon at 26 years because of retinal detachment due to bilateral retinal angiomatosis.

RESULTS: Genetic analysis showed a missense mutation, c.407C>G [p.Ser65Trp]. The genetic study of the unaffected parents and brothers confirmed the diagnosis of de novo VHL disease. He received a radical nephrectomy plus embolectomy for the treatment of T3b stage RCC in the right side. Following, he was successfully submitted to laparoscopic nephron sparing surgery in the left side 3 months later. Normal kidney function is showed in the postoperative examination.

CONCLUSIONS: The foundation to the management of patients with VHL disease continues to be early detection through genetic screening and regular clinical surveillance of both patients with VHL disease and their families. Laparoscopic nephron-sparing surgery is allowing management of RCCs at earlier stages, otherwise a radical nephrectomy and/or renal replacement therapy is required, thereby decreasing the morbidity and mortality associated with VHL disease.

SOURCE OF FUNDING: None

MP02-14 HOW A DONOR NEPHRECTOMY POPULATION CAN HELP CLARIFY WARM RENAL ISCHEMIA EFFECTS DURING PARTIAL NEPHRECTOMY
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INTRODUCTION AND OBJECTIVES: The most important modifiable risk factors for kidney function after partial nephrectomy (PN) are the quantity of parenchyma removed and the length of warm ischemia time (WIT). In this study, we further investigate the effects of WIT on renal function by comparing PN patients to completely healthy patients undergoing total donor nephrectomy (DN).

METHODS: We performed a retrospective review of 92 PN and 242 DN patients at a single academic institution. Baseline characteristics, WIT, and follow-up serum Creatinine (sCr) at discharge, 1–7 months and at last follow-up were compared. Estimated GFR
MP02-15  PRE-OPERATIVE MEDICAL MANAGEMENT FOR PHEOCHROMOCYTOMA RESECTION: A COMPARISON BETWEEN PHENOXYBENZAMINE AND SELECTIVE ALPHA-1 RECEPTOR BLOCKERS

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INTRODUCTION AND OBJECTIVES: Preoperative management with alpha-receptor blockade is necessary before resection of pheochromocytoma to prevent intraoperative hypertensive crises. The goal of this study was to compare intraoperative and postoperative courses of patients who underwent adrenalectomy for pheochromocytoma and were preoperatively managed with either selective alpha-1 receptor antagonist (doxazosin, prazosin) or non-selective alpha-receptor antagonist (phenoxybenzamine).

METHODS: A retrospective chart review of 53 patients who underwent either open or laparoscopic adrenalectomy for pheochromocytoma at Indiana University from 2002–2014 was performed. Data concerning intra-operative blood pressure changes, pressor use, and hospital course were collected and analyzed.

RESULTS: No significant differences existed between the groups preoperatively managed with phenoxycbenzamine versus selective alpha-receptor antagonist: age (55 vs. 50 yrs, p=0.25), male gender (53% vs. 50%, p=0.82), race (Caucasian 93% vs. 90%, p=0.68), open adrenalectomy (17% vs. 20%, p=0.76), tumor size (4.4 vs. 4.8 cm, p=0.61), and mean preoperative systolic (128 vs. 136 mmHg, p=0.41) and diastolic (74 vs. 80 mmHg, p=0.40) blood pressures. Intensive care stay was found to be lower in the selective alpha-blocker group (0.2 vs. 1.1 days, p<0.02). The mean low intraoperative diastolic blood pressure (49.3 vs. 45.6, p=0.12), necessity for postoperative pressor support (10% vs. 25%, p=0.16), and hospital length of stay (2.75 vs 4.15 days, p=0.11) were not statistically different between the selective alpha-blocker group and phenoxycbenzamine, respectively.

CONCLUSIONS: Preoperative pheochromocytoma management with selective alpha-1 receptor blockers resulted in a shorter length of intensive care stay than phenoxycbenzamine. Further studies comparing efficacy between alpha- blockers should be performed given the increased cost of phenoxycbenzamine.

SOURCE OF FUNDING: None

MP02-16  LAPAROENDOSCOPIC SINGLE SITE PERITONEAL DIALYSIS CATHETER INSERTION IN CIRRHOTIC PATIENTS REQUIRING DIALYSIS THERAPY

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INTRODUCTION AND OBJECTIVES: Laparoendoscopic Single Site Surgery was first reported in 2008 and was applied in various parts of urological surgery. Patients with liver cirrhosis might have intractable ascites requiring periodic intraabdominal fluid drainage. Herein we reported one cirrhotic patient received laparoendoscopic single site peritoneal dialysis catheter insertion which is used for both dialysis therapy and periodic intraabdominal ascites drainage.

METHODS: A 77 years-old male presented to our urologic clinic with the chief complaint of chronic kidney disease under uremic stage and massive ascites due to liver cirrhosis. Laparoendoscopic single site surgery was performed for peritoneal dialysis catheter insertion and massive ascites was found intraoperatively. 9000 ml turbid ascites was drained and peritoneal dialysis catheter was inserted simultaneously with uneventful convalescence. The patient was discharged under stable condition.

RESULTS: The incidence of hepatitis is high in Taiwan and more than 90% populations in Taiwan have received hepatitis virus vaccination. The incidence of liver cirrhosis in Taiwan was around 5.5% and might complicate with other systemic disease. For patients with liver cirrhosis, periodic intraabdominal drainage of intractable ascites is often required for symptomatic relief. Peritoneal dialysis is one of the treatment options for patients with chronic kidney disease under uremic stage and requires one dialytic catheter for adequate fluid inflow/outflow from the abdominal cavity.

CONCLUSIONS: In this patient, laparoendoscopic single site peritoneal dialysis catheter insertion was successfully performed in a patient with both liver cirrhosis and chronic kidney disease under uremic stage, which might provide a reasonable solution for patients requiring dialytic therapy and ascites drainage.

SOURCE OF FUNDING: None
MP02-18 EXPERIENCES OF REDUCED PORT SURGERY


INTRODUCTION AND OBJECTIVES: To compare the feasibility, safety and results of scarless laparoscopic pyeloplasty using single incision laparoscopic surgery port (SILS) and mini-laparoscopic technique (MLT).

METHODS: 32 SILS and 41 MLT pyeloplasties were performed by single surgeon (AS). We compared the results of the surgery with regard to age, symptoms and degree of obstruction. The SILS port was inserted in umbilicus, MLT was performed with 2 or 3 3.5 mm Storz troacars and one 5 mm for hd laparoscope always inserted through umbilicus. The Hynes-Anderson procedure was performed in all cases with antegrade insertion of stent. The anastomosis was performed by two continuous sutures monocryl 4-0 during SILS and 5-0 biosin in MLT cases. The drain was left for one day and urethral catheter for 4 days. Stent was removed in 6 weeks and renal scans were done in 3–6 months.

RESULTS: All cases were completed successfully with the only SILS case converted to standard laparoscopy. No difference was observed in operative time and shows that he can have a satisfactory learning curve for conventional laparoscopic pyeloplasty.

SOURCE OF FUNDING: None

MP02-19 LAPAROSCOPIC SCARLESS PYELOPLASTY IN ADULTS. COMPARISON OF SINGLE SITE AND MINI-LAPAROSCOPY TECHNIQUES

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INTRODUCTION AND OBJECTIVES: The aim of our study was to compare the feasibility, safety and results of scarless laparoscopic pyeloplasty using single incision laparoscopic surgery port (SILS) and mini-laparoscopic technique (MLT).

METHODS: 32 SILS and 41 MLT pyeloplasties were performed by single surgeon (AS). We compared the results of the surgery with regard to age, symptoms and degree of obstruction. The SILS port was inserted in umbilicus, MLT was performed with 2 or 3 3.5 mm Storz troacars and one 5 mm for hd laparoscope always inserted through umbilicus. The Hynes-Anderson procedure was performed in all cases with antegrade insertion of stent. The anastomosis was performed by two continuous sutures monocryl 4-0 during SILS and 5-0 biosin in MLT cases. The drain was left for one day and urethral catheter for 4 days. Stent was removed in 6 weeks and renal scans were done in 3–6 months.

RESULTS: All cases were completed successfully with the only SILS case converted to standard laparoscopy. No difference was observed in operative time and shows that he can have a satisfactory learning curve for conventional laparoscopic pyeloplasty.

SOURCE OF FUNDING: None

MP02-20 DOES THE METHOD OF DISTAL URETER EXCISION IN ASIANS AFFECT ONCOLOGIC OUTCOMES AFTER RADICAL NEPHRO-URETERECTOMY FOR UPPER URINARY TRACT TRANSITIONAL CELL CARCINOMA?

Kian-Tai Chong1, Zhenbang Liu1, Styie Yeow1, Sing-Joo Chia1

INTRODUCTION AND OBJECTIVES: Increasing use of minimally-invasive surgery (MIS) challenges the standard paradigm to open distal ureter excision during radical nephroureterectomy (RNU) for upper urinary tract transitional cell carcinoma (UUT-TCC). This study compares the oncologic outcomes on various distal ureter excision techniques in a cosmopolitan Asian society.

METHODS: Retrospective analysis was done on consecutive RNU using open or MIS laparoscopic (conventional or robotic-assisted) methods for UUT-TCC at a single Asian institution, from May 2008 to December 2013. We compared distal ureter excision by either the transvesical (open) or extravesical (open or MIS) approach, irrespective of the surgical approaches for the kidney and upper ureter. Clinico-pathological factors were analysed with methods to excise distal ureters to determine survival data.

RESULTS: Out of 42 patients analysed, the distal ureter were excised by MIS and open method in 83.3% (n = 35) and 16.7% (n = 7) respectively. Extravesical (open or MIS) and open transvesical resection of distal ureter occurred in 71.4% (n = 30) and 28.6% (n = 12) respectively, with the former done in those without distal ureteric tumours. In those who had extravesical
distal ureteric resection, only 60% (N = 18 of 30) achieved complete bladder cuff excision. Negative bladder cuff margins occurred in 80% (n = 24 of 30). Post-operative chemotherapy was given to 14 patients. Bladder recurrence was associated with pathological tumour multifocality (p < 0.05). Other clinico-pathological factors and methods to excise distal ureters did not affect recurrence-free survival and overall survival.

CONCLUSIONS: We conclude that our single-institution Asian study did not find any outcome difference in open or MIS, and transvesical or extravesical distal ureter excision.

SOURCE OF FUNDING: None

**MP02-21 SIMULTANEOUS RETROPERITONEOSCOPIC BILATERAL RADICAL NEPHRECTOMY FOR THE MANAGEMENT OF BILATERAL POLYCYSTIC KIDNEY DISEASE**

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INTRODUCTION AND OBJECTIVES: Autosomal dominant polycystic kidney disease is not a common disease and is one of the factors for the development of chronic renal disease. There were only a few reports evaluating the feasibility of laparoscopic bilateral radical nephrectomy in patients with autosomal dominant polycystic kidney disease. Herein we reported a case of autosomal dominant polycystic kidney disease underwent hand-assisted bilateral retroperitoneoscopic radical nephrectomy.

METHODS: A 70 year-old male with chronic kidney disease under peritoneal dialysis presented to our Nephrology ward due to poor appetite and general malaise for 2 weeks. Abdominal computed tomography was performed and bilateral polycystic kidney disease was found with the estimated size of 32.5 cm and 28.2 cm, respectively.

RESULTS: Retroperitoneoscopic hand-assisted bilateral radical nephrectomy was performed via one Pfannenstiel incision was performed. Total operative time was 155 min. Total intraoperative blood loss was 200 mL. Convalescence was uneventful and peritoneal dialysis was resumed 2 weeks after the operation.

CONCLUSIONS: Laparoscopic radical nephrectomy is the standard management for the treatment of benign or malignant kidney disease. It is still controversial to perform laparoscopic surgery in patients with large renal tumors or extremely dilated kidney. Transperitoneoscopic hand-assisted bilateral nephrectomy was reported for the management of adult polycystic kidney. However, it is controversial to perform transperitoneal surgery in patients under peritoneal dialysis therapy. Retroperitoneoscopic radical nephrectomy might be the only approach for those patients. To our knowledge, this is the first report using retroperitoneoscopid hand-assisted bilateral radical nephrectomy for the management in patients with polycystic kidney disease under peritoneal dialysis therapy.

SOURCE OF FUNDING: None

**MP02-22 SIMULTANEOUS ENDOSCOPIC HOLMIUM LASER NEPHROURETERECTOMY AND BLADDER ROSETTE EXCISION IN RENAL PELVIS AND URETER CARCINOMA**

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INTRODUCTION AND OBJECTIVES: Urinary tract tumours are not very common, 5–10% of all urothelial carcinomas, three times more common in men and in the 8th decade of life. Renal pelvis tumours are two times more common than ureter tumours. About 60% of those changes are at the advanced stage at the moment of the diagnosis, the tumours signs are very scarce.

METHODS: In the years 2000–2013, 131 nephroureterectomies were performed in 38 women and 93 men. The mean age was 67.6 years (47–86). The operations were done on the right side in 66 cases and left side in 65 cases. Surgical access included classical surgical of lumbar incision in 111 patients and laparoscopy in 20 patients. Bladder rosette and ostium of the sick ureter were done by classical surgical in 60 patients (45.8%) and by endoscopic holmium laser in 68 patients (52%) and with the Collins knife in 3 patients (2.5%).

RESULTS: In the study group, two patients died in the perioperative period due to sudden circulatory arrest. The remaining 131 left the hospital being healthy. The following lesions were found: in the years 2000–2008, TCC G1 in 23 patients, TCC G2 u 25 patients and TCC G3 in 6 patients. In the following years 2009–2013 TCC LG in 39 patients (60%) and TCC HG in 27 patients (40%).

CONCLUSIONS: Endoscopic laser resection of ureter ostium in the bladder accompanied by laparoscopic nephroureterectomy is the most favorable method for the patient.

SOURCE OF FUNDING: None

**MP02-23 MANAGEMENT OF SEVERE IATROGENIC URETERAL INJURIES BASED ON URETERAL ANASTOMOSIS TECHNIQUE**

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INTRODUCTION AND OBJECTIVES: Ureteral injuries are not common during abdominal or pelvic surgeries but some times they are severe and even in long time can damage ipsilateral renal function. We compared outcome of 18 patients with severe ureteral injuries that needed open or laparoscopic ureteral repairment and anastomosis with different spationulation diameter.

METHODS: For about 6 years (2001–2013) 18 patients with severe iatrogenic ureteral injury that needed end to end anastomosis of ureter to ureter or ureter to bladder flap (boary flap technique) evaluated for outcome of ureteral surgery. Patients divided in two groups based on ureteral anastomosis diameter. Group A (n = 11) had ureteral spatulation 10–14 mm and group B (n = 7) had ureteral spatulation between 6–9 mm. they followed up for 6–12 months after operation double j stent was used for all the patients and 4–6 weeks later removed by cystoureteroscopy.

RESULTS: In group A (n = 11) after six months of Dj removal 2 patients had mild to moderate hydrenephrosis with mild degree of pain that gradually subsided medically. In group B (n = 7) 3 patients after Dj removal had moderate to severe hydrenephrosis that needed second Dj replacement by ureteroscopy. In this group
the pain was moderate to severe and one patients needed nephrectomy for deterioration of kidney function and pain.

CONCLUSIONS: We strongly suggest wide ureteral spatulation (10–14 mm) for ureteral anastomosis when needed open or laparoscopic surgery in ueteral injuries.

SOURCE OF FUNDING: Mashhad University of Medical Sciences, Mashhad-Iran

MP02-24 PRELIMINARY EXPERIENCE OF LAPAROSCOPIC NEPHRECTOMY IN SAUDI ARABIA

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INTRODUCTION AND OBJECTIVES: Nephrectomy remained the same for several decades till the introduction of laparoscopic approach. The aim to demonstrate our preliminary experience on laparoscopic nephrectomy at the urology department of the armed forces hospital southern region (AFH-SR).

METHODS: During the period from April 2012 till March 2013, a total of 50 patients with renal pathology such as non-functioning kidney and renal tumor underwent laparoscopic trans-peritoneal nephrectomy. Laparoscopic nephrectomy has been performed by a specialised in laparoscopy surgery for the first time at AFH-SR. Data regarding individual characteristics, associated co-morbidities, duration of operation, hospital stay, intra-operative and postoperative complications were recorded.

RESULTS: A total of 50 patients underwent laparoscopic nephrectomy, 32 (64%) were male and 18 (36%) were female. Average age of those patients was 43 years (range 7–59). The main indications for nephrectomy were non-functioning kidney in 30 cases (60%) and renal mass in 12 cases (24%). The tumor cases included 8 cases of renal cell carcinoma and 4 cases of oncocytoma. Duration of operation ranged from 2 to 3 hours (average 2.5 hours). Average hospital stay was 4.5 days ranging between 3 and 5 days. Intraoperative blood transfusion was performed in six cases (60%) and renal mass in 12 cases (24%).

Average hospital stay was 4.5 days ranging between 3 and 5 days. Intraoperative blood transfusion was performed in six patients (12%). Conversion to open surgery was never deemed necessary in any case.

CONCLUSIONS: Laparoscopic nephrectomy is a minimally invasive procedure. It seems to offer improved cosmetic outcome to the patients. Our initial experience is associated with promising results. The accumulation of experience would eventually almost completely replace open nephrectomy at AFH-SR and would introduce the benefits of minimal invasive surgery.

SOURCE OF FUNDING: None

MP02-25 OFF-CLAMP LAPAROSCOPIC PARTIAL NEPHRECTOMY FOR A LOW RENAL NEPHROMETRY SCORED PATIENTS

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INTRODUCTION AND OBJECTIVES: Because of the impact warm ischemia time may have on renal function, various surgical techniques have been proposed to minimize or eliminate warm ischemia. The objective of this study is to evaluate our initial outcomes of trans or retroperitoneal partial nephrectomy (R/TLPN) performed by off-clamp excision.

METHODS: Between August 2012 and March 2014, 41 consecutive patients underwent off clamp R/TLPN at our institution. After excision of tumor, renorrhaphy plus biologic hemostatics FLOSEAL™ (Baxter Healthcare Corp., Deerfield, IL) were performed.

RESULTS: Majority of the patients (39) were noted to have a low (4–6) RENAL nephrometry score (RNS) and 2 patients had a moderate (7–9) RNS. No hilar location tumor was noted. The mean tumor size among this cohort was 33.1 (range, 2.0–6.0) cm, and the mean estimated blood loss was 266 (range, 70–500) mL. One patient required blood transfusion. Open conversion was needed in 1 patient. The mean hospital stay was 2.9 (range, 2–5) days. The mean percentage of postoperative estimated glomerular filtration rate change increased by 0.8%. Two patients with Grade III complication by the Clavien-Dindo classification were treated by endoscopic intervention. Surgical margin was noted positive in 3 patients.

CONCLUSIONS: Our initial experience with off-clamp LPN demonstrates encouraging results of minimal renal function loss and complications in patients with a low RNS.

SOURCE OF FUNDING: None

MP02-26 CLINICAL EFFECTIVENESS OF RENAL NEPHROMETRY SCORE IN PATIENTS UNDERGOING LAPAROSCOPIC PARTIAL NEPHRECTOMY

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INTRODUCTION AND OBJECTIVES: We evaluated the correlation between RENAL nephrometry score (RNS) and surgical outcomes for patients undergoing laparoscopic partial nephrectomy (LPN) in our institutions.

METHODS: RNS was evaluated in 53 consecutive patients who underwent LPN using preoperative computed tomography. Of the 5 components, 4 (Radius, Exophytic/endophytic properties, Nearness of the tumor to the collecting system or sinus, Location relative to polar lines) were scored on a 1, 2, or 3-point scale. Renal tumors were categorized by RNS complexity as low (RNS sum, 4–6), intermediate (sum, 7–9), and high (sum, 10–12).

RESULTS: Significant differences were seen between low and intermediate groups in overall operative time (229 min vs. 282 min; p=0.02) and estimated blood loss (121 ml vs. 258 ml; p=0.03). No difference was found between groups in warm ischemia time (p=0.94) or complication rate (p=0.84); however, a significant difference was observed in RNS (5.6 vs. 6.3; p<0.01) and warm ischemia time (38.3 min vs. 32.3 min; p<0.01) between patients undergoing LPN in the first (n=27) and second halves (n=26). RNS shows a situation in which LPN was selected for technically difficult tumors in the second half as the laparoscopic technique was stabilized.

CONCLUSIONS: RNS may stratify tumors based on the technical difficulty of LPN.

SOURCE OF FUNDING: None

MP02-27 MID-TERM OUTCOMES OF LAPAROSCOPIC RADICAL NEPHRECTOMY IN PATIENTS WITH LOCALIZED RENAL TUMOR

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INTRODUCTION AND OBJECTIVES: The aim of this study was to evaluate the results and long-term outcomes of purely laparoscopic radical nephrectomy (LRN) among patients with kidney cancer.

METHODS: A retrospective review of a series of 683 patients (1996 to 2012) who underwent LRN. The population was split in two match paired groups: Group 1 (G1) counted 341 patients treated in the period 1996–2005 and Group 2 (G2) counted 342 patients treated between 2005 and 2012. Groups were compared in terms of age, tumor size, intraoperative blood loss, operative time, complications and follow-up duration.

RESULTS: Mean overall patient age was 62.7 years (G1: 61.9 yr, G2: 63.4, p = 0.01) and mean tumor diameter was 59.8 mm (G1: 60.6, G2: 59.6 mm, p = 0.6). The G1 group had significantly higher mean blood loss (290 versus 194 ml, p = 0.004) and operative time (135 versus 117 minutes, p < 0.001) compared with G2 group. Cardiovascular post-operative events presented in 4 (0.6%) patients and 98 (14.3%) presented with postoperative deterioration in renal function, as measured by the percent increase in serum creatinine postoperatively (13% in G1, 24% in G2, p < 0.001). Median follow-up time was 37.6 months (range 1–190 months) and 183 patients had a FU ≥ 5 years. Overall mortality for cancer specific causes was 10.2% at 5 years.

CONCLUSIONS: Our long term evaluation of LRN shows that LRN is an effective option for treatment of localized kidney cancer. With increasing experience it is possible to significantly reduce operative time and blood loss. Oncologic outcomes show a limited cancer related mortality.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Small cell carcinoma of the genitourinary tract are rare systemic diseases, and there is no standard treatment strategy for patients with this malignancy. The purpose of the study was to report the management and outcome at our hospital from 2008 to 2014.

METHODS: In a chart review of all patients diagnosed with small cell carcinoma of the genitourinary tract between 2008 and 2014, data on demographics, clinical and pathologic characteristics, treatment, and patient outcomes were collected.

RESULTS: The 17 patients identified had SCC in the following primary sites: urinary bladder (n = 5), prostate (n = 6), and upper urinary tract (n = 6). In 12 patients (70%), the SCC was of pure histology; in the remainder, histology was mixed. Overall, 9 patients had limited-stage disease; 5 had extensive-stage disease; and staging was unknown in 3 patients.

CONCLUSIONS: Small cell carcinoma in the genitourinary tract is an aggressive cancer, with a poor prognosis overall. Although there is no standard of care, patients should be treated using a multimodality approach analogous to that used in the treatment of small cell lung cancer.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: The management of the distal ureter and ipsilateral bladder cuff remains controversial and challenging in retroperitoneoscopic radical nephroureterectomy. We compare outcomes following retroperitoneal laparoscopic radical nephroureterectomy for upper tract urothelial carcinoma using 3 forms of bladder cuff control.

METHODS: 214 patients with upper tract urothelial carcinoma underwent retroperitoneal laparoscopic nephroureterectomy between December 2002 and December 2012. Each kidney was retroperitoneoscopically dissected en bloc. The lower ureter was resected with the bladder cuff transected using 3 methods. Group A (n = 85): open iliac dissection with specimen retrieval from this original incision; Group B (n = 73): transurethral resection of bladder cuff with retrieval from the iliac incision and Group C (n = 98): transurethral resection of bladder cuff with retrieval from the lumbar incision ("pluck" technique).

RESULTS: Patient age ranged from 31 to 87 years (mean 65.5). Median follow-up was 49 months (4–96). Three groups were comparable in terms of demography, risk factors, perioperative characteristics except operative time, pathological characteristics. Median survival time of Group A–C was 48, 42 and 45 months, respectively, while there was no difference between these three groups. Overall survival was not associated with bladder recurrence (p = 0.03), upper tract urothelial carcinoma stage (p = 0.01) and lymph node involvement (p = 0.04). But overall survival was not associated with bladder cuff excision method (p = 0.09).

CONCLUSIONS: Retroperitoneal laparoscopic radical nephroureterectomy was efficient and safe for managing upper tract urothelial carcinoma with aggressive nature according the survival outcomes. With enough experience, either open dissection or transurethral resection of distal ureter and bladder cuff is good alternative for urologists.

SOURCE OF FUNDING: None
and improves in the postoperative period. However, the knowledge of pre-existing history hypertension and diabetes on kidney function after radical and partial nephrectomy is still insufficient. The aim of this study is to analyze the renal function of patients with renal cancer after nephrectomy.

METHODS: A cohort of 156 patients, mean age of 62.4 ± 11.9 years, with renal cancer who have undergone nephrectomy were included. Serum creatinine concentrations and glomerular filtration rate (GFR) were measured preoperatively and postoperatively. Additionally, the past medical history of the patients were reviewed for diagnoses of long-standing hypertension and diabetes prior to surgery.

RESULTS: At baseline, mean measured creatinine levels were 0.9, 1.2 and 1.8 in no diagnoses, one diagnosis and both diagnoses respectively. 1 week post-operatively, measured levels were 1.0, 1.5 and 2.0 respectively in the same groups (P < 0.05). Measurements of GFR pre-operatively and post-operatively were 81.5, 64.8 and 54.8; and 81.0, 52.0 and 51.8 respectively in the same groups (P < 0.05). A history of hypertension and/or diabetes not only displayed lower baselines values but greater decline post-operatively.

CONCLUSIONS: Lower baseline renal function was demonstrated in patients with a history of hypertension and/or diabetes. Postoperatively, decline of renal function after nephrectomy occurred in patients with prior history compared to no history of hypertension and/or diabetes. This may affect potential compensatory mechanisms.

SOURCE OF FUNDING: None

MP03-02 OPEN, LAPAROSCOPIC, AND ROBOT-ASSISTED RENAL SURGERY PRACTICE PATTERNS: THE IMPACT OF TECHNOLOGY ON ADOPTION CURVES FOR MINIMALLY INVASIVE PARTIAL NEPHRECTOMY – 12 YEAR EXPERIENCE

INTRODUCTION AND OBJECTIVES: Robot-assisted renal surgery is steadily gaining interest throughout the world. We report on practice patterns comparing open, laparoscopic, and robot-assisted nephrectomy trends at our institution over a twelve year period.

METHODS: A retrospective review was conducted of all nephrectomy procedures performed between January 2002 and December 2013 at our institution. Our medical center’s robotic surgery program was initiated in 2001 after the acquisition of 2 daVinci™ Surgical Systems.

RESULTS: A total of 2119 renal procedures were performed including 918 (43%) open, 839 (40%) laparoscopic, and 362 (17%) robot-assisted procedures. Radical nephrectomy comprised the majority of procedures from 2002 (66%) to 2006 (54%). Partial nephrectomy became the predominant procedure from 2007 (51%) to 2013 (56%). Amongst partial nephrectomies, the trend shifted from 2007 when 71% were open procedures and 29% were laparoscopic. In 2013, 10% of partial nephrectomies were performed open and 90% were performed robotically. The annual number of robot-assisted renal procedures progressively increased from 2007 (n = 2) to 2013 (n = 82). The percentage of open renal procedures steadily decreased from 2002 (n = 109, 73%) to 2013 (n = 26, 16.7%). The mean tumor size for partial nephrectomy increased from 1.7 cm in 2008 to 3.8 cm in 2013 and the median R.E.N.A.L. nephrometry score similarly increased from 5.3 to 7.6 during the same time period.

CONCLUSIONS: The introduction of the daVinci™ System has had a dramatic impact on minimally invasive renal procedures at our institution, particularly for partial nephrectomy. This trend is likely to continue as more surgeons gain expertise and comfort with these procedures.

SOURCE OF FUNDING: None

MP03-03 ROBOTIC LOWER POLE HEMINEPHRECTOMY FOR NON-FUNCTIONING SEGMENT CAUSING RECURRENT PYELONEPHRITIS

INTRODUCTION AND OBJECTIVES: Atrophic segments of a duplicated renal system should be excised if they are associated with symptoms or recurrent pyelonephritis. With the widespread use of robotic partial nephrectomy, robotic heminephrectomy for benign indications can be performed using the same techniques. We report a case of a robotic lower pole heminephrectomy for a hydronephrotic non-functioning segment associated with recurrent pyelonephritis.

METHODS: Our patient is a 69 year-old woman with history of recurrent pyelonephritis. CT scan demonstrated massive hydronephrosis involving the lower two-thirds of left kidney. Renal scan demonstrated 34% left-sided differential function. She underwent cystoscopy with stent placement in the lower pole moiety followed by robotic left lower pole heminephrectomy. The patient was placed in modified flank position and port positioning is described. After colon mobilization, the renal hilum was dissected and the kidney was mobilized within Gerota’s Fascia. The site of fusion of the two moieties was incised and the lower pole moiety was resected with hilar clamping. Care was taken not to injure the upper pole ureter.

RESULTS: The patient tolerated the procedure well and was discharged home on post-operative day 2. Her closed suction drain was removed on post-operative day 1. Operative time was 134 minutes with an estimated blood loss of 25 mL. Her post-operative creatinine level was 0.88 mg/dL.

CONCLUSIONS: Atrophic segments of duplicated renal systems requiring excision can be approached with robotic techniques and often without renal hilar clamping.

SOURCE OF FUNDING: None

MP03-04 EFFECT OF SURGEON EXPERIENCE ON PEROPTATIVE AND RENAL FUNCTIONAL OUTCOMES OF ROBOT ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY

INTRODUCTION AND OBJECTIVES: The importance of surgeon experience in robot assisted urologic surgery has been well described in the literature. In this study we sought to assess the effects of surgeon experience on perioperative and renal
MP03 ROBOTIC SURGERY UPPER TRACT

MP03-05 INCIDENCE AND RISKS OF RHABDOMYOLYSIS FOLLOWING ROBOTIC RENAL SURGERY

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INTRODUCTION AND OBJECTIVES: In this study we sought to determine the incidence and risk factors associated with development of postoperative rhabdomyolysis following robotic renal surgery.

METHODS: We retrospectively reviewed 262 robotic renal surgeries performed by a single surgeon at a tertiary care academic hospital over a 5 year period including 195 partial nephrectomies, 38 pyeloplasties, and 29 nephroureterectomies. All cases were performed by a single surgeon at a tertiary care academic hospital over a 5 year period. Patients were divided into 3 eras based upon nephrometry score: low (4–6), medium (7–9), high (10–12). Parameters compared included: patient age, BMI, WIT, EBL, LOS, tumor size, margin status, warm ischemia time, tumor size, margin status, closest distance to tumor margin, complication rate, preoperative eGFR and postoperative change in eGFR at one month, and operative eGFR and postoperative change in eGFR at one month, and overall complication rate. Statistical analysis was performed using ANOVA and student’s T-test with a p value of <0.05 indicating statistical significance.

RESULTS: Significant upward trends were seen in NS (p<0.001), tumor size (p=0.043), and ASA (p=0.002) over the three eras. Age (p=0.259), BMI (p=0.889), LOS (p=0.767), positive margin rate (p=0.154), preoperative eGFR (p=0.07), ΔGFR (p=0.975), and complication rate (p=0.409) were not found to be significantly different across eras. When comparing era 1 to era 3, there was no significant difference between OR time (p=0.194), WIT (p=0.18), or EBL (0.599).

CONCLUSIONS: Significant trends across eras indicate that as surgeon experience increases, tumor complexity also increases without concomitant worsening of perioperative and renal functional outcomes.

SOURCE OF FUNDING: None

MP03-06 CAN R.E.N.A.L. NEPHROMETRY SCORING PREDICT PERIOPERATIVE OUTCOMES OF ROBOT-ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY?

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INTRODUCTION AND OBJECTIVES: To evaluate the usefulness of a nephrometry scoring (NS) system to predict the perioperative outcomes of robot assisted partial nephrectomy (RAPN) and to aid in patient counseling.

METHODS: We retrospectively reviewed 190 consecutive RAPNs performed by a single surgeon at a tertiary care academic hospital over a 5 year period. Patients were divided into three groups based upon nephrometry score: low (4–6), medium (7–9), high (10–12). Parameters compared included: patient age, BMI, ASA, OR time, EBL, hospital stay, warm ischemia time, tumor size, margin status, closest distance to tumor margin, complication rate, preoperative eGFR and postoperative change in eGFR at one month, and overall complication rate. Statistical analysis was performed using ANOVA with a p value of <0.05 as statistically significant.

RESULTS: Across NS groups, BMI, warm ischemia time, margin distance, tumor size and complication rate differed significantly (p<0.05). Among the low, medium, and high NS groups warm ischemia times were respectively 18.7, 25.0, and 28.7 minutes (p<.001). There was no significant difference in change in eGFR at 1 month (p=0.942). Complication rate increased significantly between groups (0.10 vs 0.16 vs 0.36, p=0.05). Length of stay trended up from the low to high group this was not found to be statistically significant (p=0.223).

CONCLUSIONS: This study suggests that nephrometry scoring for RAPN can predict certain perioperative variables that relate to patient risk and morbidity. These findings may be useful in preoperative patient counseling about surgical treatment options and complications.

SOURCE OF FUNDING: None

MP03-07 DURABILITY OF ROBOTIC PYELOPLASTY: LONG-TERM OUTCOMES OF >10 YEAR EXPERIENCE AT A SINGLE INSTITUTION

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INTRODUCTION AND OBJECTIVES: In the last decade there has been a considerable increase in the utilization of minimally invasive surgical correction of UPJO. We present our long-term outcomes of robotic pyeloplasty (RP) at a single institution.

METHODS: We retrospectively reviewed all cases of RP at our institution between November 2002 and October 2013. Procedure success was defined as resolution of symptoms, improvement in hydronephrosis or no evidence of obstruction on post-operative functional imaging. Failure of RP was defined as image-confirmed persistent UPJO and the need for a subsequent corrective procedure.

RESULTS: A total of 168 patients underwent RP during the study period. The mean patient age was 36.2 years (range 11 months to 78 years). UPJO was primary in 79% while 21% had
previously failed endopyelotomy or pyeloplasty. A crossing vessel was encountered in 44.4% of all patients. All patients were stented during RP with mean stent duration of 42.5 days. Two complications were encountered: 1 patient sustained an injury to a main renal vessel intraoperatively while 1 patient was readmitted postoperatively for pyelonephritis. Follow-up was available for 120 patients revealing RP was successful in 96.7% of patients. 2 patients underwent repeat RP, and an additional 2 patients went on to endopyelotomy after RP.

**CONCLUSIONS:** Robotic pyeloplasty is a safe, feasible, and effective minimally invasive technique for treating UPJO. In our long-term institutional experience, RP is a durable procedure that offers a high success rate.

**SOURCE OF FUNDING:** None

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**MP03-08 EFFECT OF BODY MASS INDEX ON PERIOPERATIVE OUTCOMES OF ROBOT ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY**

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**INTRODUCTION AND OBJECTIVES:** Obesity rates continue to climb in the United States, resulting in new and evolving issues for the surgical care of urologic patients. In this study we sought to assess the effects of patient body mass index (BMI) on perioperative outcomes of robotic assisted laparoscopic partial nephrectomy (RPN).

**METHODS:** We retrospectively reviewed 195 consecutive RAPNs performed by a single surgeon at a tertiary care academic hospital over a 5 year period. Patients were divided into four groups based upon BMI: normal (18–24.9), overweight (25–29.9), obese (30–34.9), morbidly obese (>35). Parameters compared included: patient age, nephrometry score, OR time (ORT), warm ischemia time (WIT), EBL, length of hospital stay, closest distance to tumor margin, tumor size, positive margin rate, preoperative eGFR, postoperative change in eGFR at one month (dGFR), ASA score, and complication rate. Statistical analysis was performed using ANOVA with a p value of <0.05 indicating statistical significance.

**RESULTS:** Our statistical analysis revealed only ASA score to be significantly different (p = 0.036) between the quartiles with a trend toward higher scores in more obese patients. Variances in nephrometry score (p = .828), ORT (p = .232), WIT (p = .773), EBL (p = .944), and dGFR (p = .493) were found to be statistically insignificant.

**CONCLUSIONS:** Across BMI quartiles, there were no significant differences in any of the perioperative outcomes compared aside from ASA. This suggests that RAPN is an equally effective and safe technique regardless of BMI status.

**SOURCE OF FUNDING:** None

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**MP03-09 CONTEMPORARY NATIONAL SURGICAL OUTCOMES IN THE TREATMENT OF URETEROPELVIC JUNCTION OBSTRUCTION**

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**INTRODUCTION AND OBJECTIVES:** Minimally invasive pyeloplasty (MIP) has shown comparable functional outcomes to open pyeloplasty (OP) in the treatment of ureteropelvic junction obstruction (UPJO). We aimed to evaluate contemporary national trends and outcomes of open versus MIP in the treatment of UPJO using the National Surgical Quality Improvement Program (NSQIP) database.

**METHODS:** Patients treated by OP or MIP between 2006 and 2011 were identified by ICD-9-CM codes corresponding to pyeloplasty as their primary operative procedure. Perioperative variables were analyzed using chi-squared and Student’s t-test. Multiple logistic regressions were used to identify morbidities and readmission risk factors.

**RESULTS:** 355 patients were identified. 20.2% of cases were OP and 79.8% were MIP. There was a significant increase in MIP from 33% in 2006 to 83% in 2011 (p < .001). 11.7% of patients in the MIP group underwent outpatient surgery (p = 0.002). Patients treated at a teaching hospital were over three times more likely to undergo MIP (OR = 3.17, p = .001). There was significantly longer hospitalization in OP versus MIP (3.9 versus 2.2 days, p = 0.001). OP was associated with significantly increased risk of re-operation or post-operative morbidity compared to MIP (11.1% versus 4.2%, p = 0.02). Multivariate analysis confirmed a higher rate of overall morbidity in the OP cohort (p = 0.03). Male patients had significantly higher postoperative morbidity or re-operation rates (OR = 4.38, p = .002). There was no significant difference in operative time between groups (p = 0.2).

**CONCLUSIONS:** Within ACS NSQIP hospitals, MIP is associated with decreased re-operation and post-operative morbidity compared to OP. There has been a major change in the operative approach in the last decade.

**SOURCE OF FUNDING:** None
was the single predictor of development of post-operative complication (OR 1.1 CI (1.04–1.18); p = .002) in our series.

CONCLUSIONS: The rate of major post-operative complications after RPN is comparable to LRN regardless of tumor complexity. RPN offers similar oncological results with the addition of renal function preservation when compared to LRN. In the setting of extirpative surgery for renal masses, RPN should be strongly considered where feasible.

SOURCE OF FUNDING: Summer Research Fellowship at Case Western Reserve University School of Medicine

MP03-11 ROBOTIC PARTIAL NEPHRECTOMY IS COST NEUTRAL DURING A PERIOD OF INCREASING UTILIZATION

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INTRODUCTION AND OBJECTIVES: To evaluate trends in utilization and costs of robotic-assistance in partial nephrectomy.

METHODS: We identified all adult (> 17 years) patients undergoing partial nephrectomy for localized primary renal malignancy using the 2009 to 2011 Nationwide Inpatient Sample database. Robotic-assistance coding (17.4x) began in the final quarter of 2008. Total hospital cost exclusive of physician fees was used as the primary outcome. A multiple linear regression model was used to adjust for patient and hospital characteristics.

RESULTS: There were 22,922 (63%) open, 2,678 (7%) laparoscopic, and 11,050 (30%) robot-assisted partial nephrectomies between 2009 and 2011. During the same period, the number of partial nephrectomies performed in the United States increased by 42% with robotic partial nephrectomies (RPN) representing more than 80% of the increase. Robotic partial nephrectomy increased by 175%, and the proportion of all partials performed by robotic-assistance doubled from 20% to 39%. After adjusting for Charlson Comorbidity index, demographics, and hospital region the difference in cost between robotic and open partial nephrectomy decreased from $1,464 (p = .009) in 2009 to $356 (p = .644) in 2011.

CONCLUSIONS: Robotic-assisted partial nephrectomy utilization doubled during the 3-year study period and was responsible for more than 80% of the increase in number of partial nephrectomies performed in the United States. The cost difference between the robotic and open approach decreased with increasing utilization of the robot. On multiple linear regression, robotic partial nephrectomy was cost neutral when compared to open partial nephrectomy.

SOURCE OF FUNDING: None

MP03-13 REDUCING OPERATING ROOM MARGINAL COSTS THROUGH INFORMATION AND REAL-TIME COST FEEDBACK

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INTRODUCTION AND OBJECTIVES: Financial waste of medical supplies is partly driven by overutilization of surgical items that can be replaced with more cost effective alternatives. This study sought to test a protocol providing surgeons with cost feedback relative to their surgeries. We hypothesized that providing feedback about costs would reduce marginal costs within the operating room (OR).

METHODS: The protocol was developed for robotic partial nephrectomy. Costs pertaining to the 20 most recent cases were analyzed to establish a baseline. Through utilization analysis and discussion with surgeons, ten items were identified for replacement or omission. Real time feedback of total OR costs was provided to the surgeon after each case. The effects on marginal costs were analyzed on 18 cases after a five case washout period.

RESULTS: Cost analysis of robotic partial nephrectomy indicates expenditures of $5,212.91 per case. The 10 modifiable items represent $1,188.75 (23%) in total cost. Post-washout period cost analysis found $860.01 (17%) in cost reduction from omission/replacement of modifiable items (p < .05). This process was repeated in Laparoscopic Donor Nephrectomy. Cost analysis indicates a $3599.91 per case baseline. The modifiable items represent $579.37 (16%) total costs with post-washout cost reduction of $420.98 (12%) (p < .05).

CONCLUSIONS: Providing surgeons with information and feedback related to OR costs may lead to a change in surgeons’ behavior and decreased overall costs.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: To evaluate if statin medications (3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase inhibitors) improve either oncologic or renal functional outcomes for patients undergoing robot assisted partial nephrectomy (RPN).

METHODS: Patients undergoing RPN between March 2008 and October 2013 were evaluated from a prospectively maintained database for statin usage. Rate of perioperative acute kidney injury (AKI) as defined according to the RIFLE criteria and progression of Chronic Kidney disease (CKD) were compared between users and non-users. Oncologic outcomes and rate of progression were compared between users and non-users.

RESULTS: 104 (31%) of 339 patients were on statin therapy preoperatively and continued this medication peri and post operatively. Statin patients were older and had higher rates of comorbidities including coronary artery disease, diabetes, and hypertension (p < 0.0001 for all). Rate of acute kidney injury in the statin (16%) and non-statin patients (14%) (p = 0.60) and CKD progression based on Kaplan-Meier estimates (p = 0.57) were similar between both groups. Subgroup analysis of the 271 (80%) patients with hilar clamping also had similar rates of AKI in statin users 10% vs 12% in non users, (p = 0.50). Multivariate analysis of factors affecting CKD progression confirmed these findings. Oncologic progression was not affected by statin therapy (p = 0.90).

CONCLUSIONS: Statin medications do not appear to influence perioperative renal function following RPN, in either clamped or unclamped procedures. Continued use of these medications may be continued perioperatively, but any effect on renal functional or oncologic outcomes was not elucidated in this study.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: Robotic radical nephrectomy is criticized for high-cost and overutilization of robotic resources. We continue to advocate the robotic approach, especially in complex cases which would otherwise require open surgery. We herein describe our 5-year institutional trends in the management of T3a and T3b renal cell carcinoma with emphasis on midterm comparative outcomes.

METHODS: Review of the prospective Wake Forest and Alliance Urology radical nephrectomy databases was performed encompassing T3a and T3b renal cell carcinoma from 2008–2014. Open, laparoscopic, and robotic approaches were compared in terms of utilization trends, tumor characteristics, length of stay, and margin positivity. Finally, overall survival was compared between robotic and open using cox-proportional hazards analysis.

RESULTS: 118 patients encompassing 50 open, 51 robotic, and 17 laparoscopic procedures were identified. Robotic approach increased from 0% to over 70% in while laparoscopy remained relatively constant at 15%. Compared to open, robotic approach was associated with significantly shorter length of stay (2.8 v. 4.5 days) and non-inferior margin positivity and overall survival. T3b disease was more prevalent in the open cohort (40% v. 9.8%), as was the prevalence of masses over 10 cm (54% v. 15.7%).

CONCLUSIONS: Utilization of robotic radical nephrectomy for cases of T3 disease is rapidly replacing open surgery at our institutions. Compared to open surgery, robotic approach is associated with shorter length of stay, similar margin positivity, and non-inferior overall survival. Despite increasing robotic utilization, cases of the utmost complexity are still often managed in an open fashion.

SOURCE OF FUNDING: None

MP03-18 ROBOTIC ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY (RPN) FOR CLINICAL T1B RENAL MASSES: A RETROSPECTIVE COHORT REVIEW

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INTRODUCTION AND OBJECTIVES: Robotic assisted laparoscopic partial nephrectomy (RPN) is becoming the standard of care in the management of small renal masses. We aimed to evaluate the safety, efficacy, and oncologic outcome of RALPN for clinical T1b renal masses.

METHODS: 119 patients who underwent robotic partial nephrectomy by a single surgeon at our institution from 2011 to 2014 were retrospectively reviewed. Perioperative parameters and demographic data for clinical T1a and T1b (21 patients) masses were obtained from chart review and compared using Student’s t-test and Fisher’s exact test.

RESULTS: For clinical T1b patients tumor size (5.3 cm vs. 2.3 cm, p < 0.0001) R.E.N.A.L nephrometry score (6.8 vs. 5.4, p = 0.009), and previous abdominal surgery (29% vs. 86%, p < 0.0001) were all significantly different. Perioperative parameters that were statistically significant were operative time (242 min vs. 203 min, p = 0.010) and length of hospital stay (4.1 vs. 3.5 d, p = 0.002). There was one positive margin in T1b group compared to none T1a group. Inability to complete robotic partial in the T1b cohort was 25% vs. 7% in the T1a cohort (p = 0.030) including difference in conversion to open partial 19% vs. 6.1% (p = 0.050). There was greater percentage of Clavien I-III complications in the T1b cohort (24% vs. 9%, p = 0.055).

CONCLUSIONS: RPN for patients with cT1b renal masses is safe and efficacious. Operative time and hospital stay were longer for patients with cT1b masses as well as need to convert to open partial nephrectomy. When counseling patients with cT1b renal masses, RPN should be considered a feasible option.

SOURCE OF FUNDING: None

MP03-19 SURGICAL TREATMENT OF 4–10CM RENAL CELL CARCINOMA (RCC): IS THERE A CONSENSUS AMONG ENDOUROLOGISTS AND UROLOGIC ONCOLOGISTS?

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INTRODUCTION AND OBJECTIVES: The decision between partial nephrectomy (PN) and radical nephrectomy (RN) may be influenced by training, practice type, or location. Our objective was to evaluate current opinions about the best management of 4–10 cm RCC.

METHODS: A 16 question survey was emailed to approximately 2500 Endourological Society and Society of Urological Oncology members with questions about training, practice setting, and participation in clinical trials in addition to questions about 4 patient scenarios. Logistic regression was used to evaluate associations of demographic variables with specific answers.

RESULTS: 399 physicians completed the survey with 37% and 34% completing Urologic oncology and endourology fellowships respectively. When asked about the best oncologic treatment for 4–10 cm RCC: 56% answered that PN and RN were equal, 38% that the best treatment is currently unknown, and 6% that PN was worse than RN; geographic location was the only predictor of response (p = 0.01). In a healthy, 70 year-old man with 7 cm central tumor and GFR 65, 57% of respondents offered PN (41% open, 16% robotic/lap) while 43% would offer RN (7% open, 36% robotic/lap). Academic setting and completion of oncology fellowship were associated with offering PN (p = 0.03, 0.02). Surgical volume and large group private practice setting were associated with offering robotic/lap surgery (p = 0.006, 0.02). In all case scenarios, self-reported training adequacy was a significant determinant of surgical recommendation.

CONCLUSIONS: Expert opinion about the best treatment for 4–10 cm RCC varies significantly, with 70% of respondents willing to consider enrolling patients in a randomized clinical trial comparing partial nephrectomy and radical nephrectomy.

SOURCE OF FUNDING: None

MP03-20 ROBOTIC PARTIAL NEPHRECTOMY FOR BENIGN INDICATION

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INTRODUCTION AND OBJECTIVES: To describe and analyze the results of robotic partial nephrectomy (RPN) for benign indications in 670 operations.

METHODS: We searched our RPN data base for patients who underwent RPN for benign indications. We analyzed patient demographics, preoperative, perioperative, postoperative and pathologic findings.

RESULTS: We identified 24 Patients who matched the defined inclusion criteria. Median age was 46 (9–88) years and female patients were more prevalent, 21 patients (87.5%). The Estimated blood loss (EBL), Urine output (UO), Warm ischemia time (WIT) and Operation (OR) time were 150 cc (20–600), 310 cc (100–1000), 19 min (8–28) and 180 min (60–382) respectively. The majority of patients were preoperatively noted to have angiomyolipoma (AML), 13 (54.2%). For AML patients median lesion size was 2.1 cm (0.5–18) and 1 patient with AML had prior hemorrhage and 2 patients failed prior embolization. Caliceal diverticuli were identified in 6 (25%) patients. Patients with caliceal diverticuli had associated renal calculus with pain and recurrent infection. All patients had also previously failed endoscopic intervention. Five patients (20.8%) were identified with a duplicated system of which all had a history of pain and recurrent infection. Four of these patients also underwent ureteral excision for the involved moiety. For the entire series, 3 patients (12.5%) had complications with 1 Clavien grade 1 complication (Urinary retention) and 2 Clavien grade 2 complications (Blood Transfusion, DVT). Hospital stay was 2 (1–7) days.

CONCLUSIONS: RPN is a safe and effective option for benign renal pathology such as AML, diverticuli after failure of endoscopic intervention, and congenitally duplicated systems.

SOURCE OF FUNDING: None

MP03-21 BODY MASS INDEX (BMI) HAS NO EFFECT ON PERIOPERATIVE PARAMETERS IN ROBOT ASSISTED PARTIAL NEPHRECTOMY PATIENTS

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INTRODUCTION AND OBJECTIVES: Robot-assisted partial nephrectomy (RPN) is a promising, minimally-invasive treatment method for T1 renal masses. Although robotic assistance eases the procedure patient characteristics may affect preoperative parameters. The aim of this study is to evaluate the effect of body mass index (BMI) on perioperative parameters in robotic partial nephrectomy patients.

METHODS: Between April 2008 and May 2014 98 patients underwent RPN operation at our institution by a single surgeon with extensive prior robotic experience. Perioperative parameters of the patients with BMI <30 (group I) were compared with the patients with BMI >30 (group-II). There were 61 patients in group I and 37 patients in group II. Transperitoneal approach was used in all patients.

RESULTS: Mean operative and warm ischemia time was 135 and 19 minutes in group I and 146 and 20 minutes in group II, respectively. Mean estimated blood loss was 192 ml in group I and 260 ml in group II. One patient in group I (%2) and 2 patients in group II (%5) had blood transfusions. Mean hospitalization time was 3.9 days in group I and 4.1 days in group II. No patients had positive surgical margins in both groups. There were 3 complications in group I (3 Clavien grade IIIB) and 4 complications in group II (1 Clavien grade I, 1 grade II, 1 grade IIIA and 1 grade IVA). None of the differences between the groups were statistically significant.

CONCLUSIONS: Surgical expertise can overcome patient related difficulties and provide optimal perioperative results in RPN patients.

SOURCE OF FUNDING: None

MP03-22 ROBOTIC PARTIAL NEPHRECTOMY IN PATIENTS WITH CHRONIC KIDNEY DISEASE

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INTRODUCTION AND OBJECTIVES: We assessed the functional outcomes of robotic partial nephrectomy (RPN) in patients with chronic kidney disease (CKD).

METHODS: A total of 221 patients underwent RPN between September 2006 and April 2013. Patients characteristics and perioperative outcomes were compared between patients with pre-existing CKD (estimated glomerular filtration rate [eGFR] <60 ml/min/1.73 m2) and patients with eGFR >60 ml/min/1.73 m2

RESULTS: There were 22 patients in CKD group (20 patients in CKD stage 3 and 2 patients in CKD stage 4) and 199 patients in non-CKD group. Mean follow-up was 2.8 years. CKD patients were older (median 67 vs 50 years, P<0.001), with higher American Society of Anesthesiology (ASA) score (2 vs 1, P<0.001). Renal mass size was similar in both groups (2.7 vs 2.8 cm, P=0.393) and there were no differences in warm ischemic time between two groups (23 vs 23 minutes, P=0.715). Early decrease in eGFR was greater in CKD group from post-operative day (POD) 2 until POD 7 (Figure. 1), and then there was no difference between both groups until latest follow up. The latest deterioration of eGFR was similar in both groups (~6.42% vs ~7.65%, P=0.773). Overall CKD upstaging rates after RPN were similar in both groups (22.7 vs 28.1 %, P=0.802). However all patients in CKD stage 4 had CKD upstaging to stage 5.

CONCLUSIONS: Despite early deterioration of eGFR, RPN could be performed in CKD patients safely. Patients with pre-operative CKD stage 4 should be reviewed in more studies.

SOURCE OF FUNDING: None

MP03-23 ONCOLOGIC OUTCOMES AFTER OPEN AND MINIMAL INVASIVE PARTIAL NEPHRECTOMY WITHOUT HILAR CLAMPING

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INTRODUCTION AND OBJECTIVES: To evaluate oncologic outcomes on a 790 patient’s cohort undergoing Open, Laparoscopic or Robotic assisted ZIPN with minimum 2 years of follow-up.

METHODS: Data of 790 patients who underwent zero ischemia Open, Laparoscopic or Robotic assisted PN from 2001 to 2013 were collected in a prospectively maintained database. Within this cohort, detailed data concerning the subgroup of patients affected by malignant tumors, 583 cases (73.8%), were investigated. Survival curves were estimated with Kaplan Meier method and compared with Log Rank test.

RESULTS: Renal recurrence was observed in 31 patients (5.8%) with a median time to renal recurrence of 16 months (range 2–80). PSMs were observed in in 23 patients (3.8%). Five years renal recurrence free survival (RRFS) was 89%. After stratifying for: Fuhrman grade, 5 yrs RRFS was 93% for G1–G2 vs 74% for G3–G4 (p = 0.0001) - Histological subtype 5 yrs RRFS was 100% for chromophobe renal tumors, 100% for papillary type 1, 86% for papillary type 2 and 87% for ccRCC (p = 0.008); - Tumor size 5 yrs RRFS for pT1a and pT1b was 89% and 90% respectively (p = 0.2); Positive and negative surgical margins 5 yrs RRFS was 89% in both groups [p = 0.75]). Disease free surviva (DFS) for G1–2 and G3–4 patients was 87% and 60%, respectively. Adjusted for histological subtype DFS was 97% for chromophobe tumors, 89% for papillary type 1, 53% for papillary type 2 and 79% for ccRCC. pT and PSMs didn’t show any impact on renal recurrence.

CONCLUSIONS: Avoiding hilar clamping doesn’t undermine oncologic outcomes in terms of 5 years renal recurrence.

SOURCE OF FUNDING: None

MP03-24 ROBOTIC PARTIAL NEPHRECTOMY: THE LEARNING CURVE

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INTRODUCTION AND OBJECTIVES: Robotic partial nephrectomy (RPN) is an emerging technique in the management of small renal masses. It has been described as technically demanding; however, data on the nature of the learning curve in RPN is limited. We prospectively recorded several operative parameters with the objective of quantifying the learning curve for the procedure using retrospective analysis.

METHODS: The operative data and clinical outcomes of a single surgeon’s first 100 RPNs, carried out at our institution between September 2010 and October 2013, were collated. Cases were categorized, based upon their Preoperative Aspects and Dimensions Used for an Anatomical (PADUA) score, into three groups: 6–7, 8–9 and > 10. Using an incremental analysis, the mean, the curve of best fit and R2 values for several parameters were calculated for each group.

RESULTS: Amongst 100 patients (F:28, M:72), the mean age was 56.4 ± 11.9 (SD) years. There were 61, 32 and 7 patients in PADUA score groups 6–7, 8–9 and >10 respectively. Surgical proficiency, as measured by operative time, warm ischemia time and clinical outcomes, did not increase, with no model producing an adequate R2 value. There was an increased incidence of more complex cases later in the cohort (p = 0.03).

CONCLUSIONS: Our data suggests that it is difficult to demonstrate a learning curve for RPN, with more complex cases being undertaken later in the surgical cohort.

SOURCE OF FUNDING: None

MP03-25 ROBOTIC OPERATION PREDICAMENT: MISSING NEEDLES CASES REPORT

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INTRODUCTION AND OBJECTIVES: Missing needles during endoscopic operations is a tricky problem to solve once happened. It could be resulted from unfamiliar to instrument use or improper placement of needle. Here we are going to propose three cases occurred during robotic operation and share our experience in dealing these situations.

METHODS: The patient received left partial nephrectomy with left adrenalectomy for possible metastatic lesion. After applying Bull- Dog clip to renal artery, we started partial nephrectomy and closed the tumor bed with 3-0 V-Lock. The tumor bed was closed and the operator temporarily placed the needle on left lateral abdominal wall. However, after hemostasis achieved and placing tumor inside specimen bag, the needle was missing.

RESULTS: We applied magnetic device this time but in vain. There was no needle found in splenic flexure or above the liver dome. Portable X ray was taken for locating the needle and we found needle situated at level about 10th intercostal space. Chest surgeon was consulted for thorascopic evaluation. The needle was found in left pleural cavity. Possible causes of needle migration into pleural cavity 1. The puncture site for placing the needle 2. Negative pressure inside pleural cavity and ventilation 3. Excessive manipulation after placing the needle.

CONCLUSIONS: Missing needle could be both challenging and frustrating for every surgeon while performing robotic or laparoscopic operation. We shared some clinical situation that could resulted in these troublesome and proposed some feasible method trying to solve it. However, the most important factor is the experience of both surgeon and assistant.

SOURCE OF FUNDING: None

MP03-26 INITIAL EXPERIENCES ON ROBOT-ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY FOR ENDOPHYTIC RENAL TUMOR

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INTRODUCTION AND OBJECTIVES: To evaluate the efficacy and safety of robot-assisted laparoscopic partial nephrectomy (RALPN) for endophytic renal tumor.

METHODS: A total of 45 patients underwent RALPN from March 2010 to April 2014. Overall 15 (5.2%) elective RALPNs were for endophytic tumors which were not visible on kidney surface. Medical records of these patients were retrieved from our prospectively maintained robotic surgery database and used for this analysis. Demographics, surgical and perioperative outcomes were analyzed and compared to those of patients with exophytic mass.

RESULTS: Fifteen patients have the mean age of 55 years and mean BMI of 26.4kg/m2. All operations were accomplished
INTRODUCTION AND OBJECTIVES: There have been few reports dealing with renal function after robot-assisted laparoscopic partial nephrectomy (RALPN). The focus of our study is to assess renal function change and to identify the variables correlated to renal function in patients undergoing RALPN.

METHODS: We retrospectively reviewed the electronic medical charts of 149 patients who underwent RALPN for renal mass from June 2009 to April 2014. Perioperative outcomes, including patient age, MDRD eGFR (estimated glomerular filtration rate), total operative time, console time, warm ischemic time (WIT), estimated blood loss (EBL), and tumor size were recorded. We evaluated perioperative renal function change and analyzed the correlation of perioperative outcomes and postoperative renal function.

RESULTS: Within postoperative 24 hour, there has been significant decrease in eGFR from baseline. (85.0 vs 74.4, p<0.001). Although eGFR at last follow up time showed a significant increase from postoperative 24 hr (78.7 vs 74.4, p<0.001), its value didn’t return to baseline eGFR level. (78.7 vs 85.0, p<0.001). However, baseline and postoperative CKD stage in all patients presented eGFR ≥30 indicating no severe decreased renal function. The degree of change in eGFR from baseline at each follow up time (24 hr and last visit) was significantly associated with WIT (p=0.006), EBL (p=0.001), and tumor size (p<0.05).

CONCLUSIONS: Even if renal function following RALPN showed a reduced tendency, there were no cases of severe decrease in eGFR. RALPN may be better renal function preserving therapeutic option, if performed with tolerable WIT and EBL in the appropriate sized renal mass.

SOURCE OF FUNDING: None
group (17±6 versus 23±5 minutes, p<0.01). Asymptomatic RAP was observed in 3 patients (9.6%) in the early unclamping group and in 9 patients (27%) in the conventional group, showing a marginally significant difference (p=0.06).

CONCLUSIONS: The present study demonstrates that the early unclamping technique may reduce the risk of RAP as well as reducing ischemic time. Confirmation of no arterial bleeding before renorrhaphy is likely to be an important step in preventing RAP during RAPN.

SOURCE OF FUNDING: None

MP03-30 MULTI-INSTITUTIONAL REVIEW OF OUTCOMES OF ROBOTIC ASSISTED EXTRAVESICAL URERETAL RE-IMPLANTATION

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INTRODUCTION AND OBJECTIVES: The published literature reports a success rate of >90% in the largest studies of robotic assisted laparoscopic ureteral re-implantation (RALUR) for treatment of vesicoureteral reflux (VUR). Our experience has contradicted these reports. The goal of this study was to report a multi-institutional review of success and complications after pediatric RALUR.

METHODS: A retrospective review of patients who underwent RALUR by 1 of 5 surgeons at Children’s Medical Center, Dallas, TX or Children’s Hospital of Pittsburgh from 2/2010 to 9/2013. Failure of the procedure was defined as persistence of VUR and/or need for reoperation. Multivariate logistic regression to identify possible risk factors for failure was performed.

RESULTS: 61 patients with a mean age of 6.7 years (0.6–18.0) underwent a procedure, 32 (52%) bilateral. 61% had undergone previous subureteric injection for VUR and/or previous subureteric injection for VUR and/or previous subureteric injection for VUR and/or previous subureteric injection for VUR. At a mean follow-up of 11.7 months, the procedure was successful in 44/61 (72%). There were 14 cases of persistent VUR (23%), 6 complications (10%), and 9 re-operations (11%). No factor was identified on multivariate logistic regression that increased patient risk for failure (p=0.737).

CONCLUSIONS: We found the success of RALUR for the surgical treatment of VUR to be much less than reported in the literature. Over 10% of patients of required a re-operation for either persistent VUR or a surgical complication. While it is tempting to only report favorable outcomes, we share our experiences with this procedure as we feel the advantages of this technique need to be weighed against realistic expectations for outcomes.

SOURCE OF FUNDING: None

MP03-31 SURGERY-RELATED OUTCOMES AND POST-OPERATIVE SPLIT RENAL FUNCTION BY SCINTIGRAPHY EVALUATION IN ROBOTIC ASSISTED PARTIAL NEPHRECTOMY IN COMPLEX RENAL TUMORS: AN INITIAL CASE SERIES

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INTRODUCTION AND OBJECTIVES: To assess surgery-related outcomes and split renal function evaluated by renal scintigraphy in robotic assisted partial nephrectomy (RPN) through the comparison between low and moderately or highly complex renal tumors.

METHODS: The initial 39 consecutive RPNs performed for solid renal tumors in our hospital and followed over 6 months were categorized for their complexity (low, intermediate, and high risk for partial nephrectomy) by R.E.N.A.L. nephrometry and PADUA scores and the comparison between low, intermediate and highly complex tumors according to these scoring systems were performed regarding preoperative factors, surgery-related factors and postoperative renal function factors (split renal function at 3 months and serum creatinine and eGFR at 1 week, 1, 3, 6 and 12 months postoperatively).

RESULTS: There was no significant difference between low and intermediate or high complexity tumors for all the categories tested in preoperative data. Especially in split renal function, the changes in MAG3 effective renal plasma flow (ERPF) from preoperative data were −7.60±20.2 mL/min in low complexity in R.E.N.A.L. nephrometry and −14.1±22.7 mL/min in intermediate or high complexity in R.E.N.A.L. nephrometry (p=0.477), −8.21±21.3 mL/min for low complexity in PADUA and −13.4±22.4 in intermediate or high complexity in PADUA (p=0.607). There was either no significant difference in the decrease of renal function, operation time, estimated blood loss or WIT between low and intermediate or high complexity as measured by both scores (p>0.05).

CONCLUSIONS: Our data showed that RPN can be performed without compromising the outcome in surgery-related factors and postoperative split renal function even in intermediate or high complexity tumors.

SOURCE OF FUNDING: None

MP04 ENDOUROLOGY: NEW TECHNOLOGY 1

MP04-01 LONGTERM RETREATMENT RATE IN HIFU TREATED PATIENTS WITH LOCALIZED PROSTATE CANCER: A MULTICENTER ANALYSIS

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INTRODUCTION AND OBJECTIVES: High intensity focused ultrasound (HIFU) performed with Ablatherm® introduced in 1993 as primary treatment of localized prostate cancer is meanwhile clinical routine. Objective of this study is to report the development of HIFU retreatment and salvage treatment rates in a large multicenter study.
METHODS: 2,634 patients of three European HIFU centres suffering from prostate cancer (PCa) staged T3, No, Mo, PSAi <20 ng/ml were treated with 3 generations of HIFU Ablatherm® devices (EDAP-TMS, Lyon, France). Online HIFU database “@-Registry” provided the anonymous statistical informations about patients stratified into 3 subgroups according to treatment period, different Ablatherm® devices and changes in strategy: Prototype (experimental phase) 1993–1999 (n=354), Maxis (Investigational phase) 2000–2004 (n=1,279) and Integrated Imaging (clinical routine) since 2005 (n=1,001). Data were evaluated according to D’Amico’s 03 risk group classification. Kaplan-Meier analyses were performed to determine survival according to onset of 2nd HIFU or any other PCa therapy. Uni-variable and multivariable Cox analyses were performed to adjust for possible confounding variables (clinical stage, Gleason score, PSA, prostate volume).

RESULTS: Median follow up in 3 subgroups was 9.6/6.6/1.3 years (max 19.7). Delay time between 1st and 2nd HIFU in case of retreatment was 7.1/12/10.8 months. Indication for 2nd HIFU were positive biopsies. HIFU retreatment rate decreased from initially 66% over 32% in the Maxis to 10% since ‘2005 using the Integrated imaging device and performing HIFU and TURP.

CONCLUSIONS: Technical development, clinical experience (adjuvant TUR before HIFU since 2000) resulted in higher local efficacy and lower HIFU retreatment rate.

SOURCE OF FUNDING: Cancer Center Harlaching, Munich, Germany Lingen Foundation, Cologne, Germany

INTRODUCTION AND OBJECTIVES: Selective renal arterial clamping during robot-assisted partial nephrectomy (RAPN) has been shown to decrease ischemic insult and blood loss. Indocyanine Green (ICG) fluorescent dye provides surgeons with a visual indication of perfused areas of renal parenchyma and delineates neoplastic from non-neoplastic tissue to aid in tumor dissection. We report our initial experience using ICG by identifying predictive variables and detailing rates of successful selective clamping during RAPN.

METHODS: We identified patients undergoing RAPN and collected demographics, clinicopathological outcomes, and RENAL Nephrometry scores. Based on intraoperative tumor and vasculature findings, selective clamping was attempted. We recorded the number of attempts and successes of selective clamping. Uni-variate analyses were performed to determine an association between the clinicopathologic variables and successful selective clamping, based on visualization of ICG perfusion.

RESULTS: 63 patients have received ICG during RAPN and 46 (73%) of these patients underwent the selective arterial clamping technique. The mean tumor diameter was 3.16 cm (range 1.1–9.2) and the median Nephrometry score for these patients was 6 (range 4–9). From the patients in which clamping was attempted, 26 (57%) had it performed successfully. Demographic, perioperative, and individual components of the Nephrometry score demonstrated no statistical association with successful selective clamping on univariate analysis.

CONCLUSIONS: Selective arterial clamping with ICG is a feasible and reproducible technique. Tumor complexity and perioperative variables are not associated with successful selective clamping, which may be related to complexity of renal vascular anatomy. Further studies are warranted to identify anatomic characteristics associated with successful arterial clamping.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: We are reporting preliminary findings from the first investigational use of focused ultrasound to transcutaneously reposition kidney stones in humans.

METHODS: The study includes three treatment groups: de novo stones, post-lithotripsy fragments, and the preoperative set-ting. A pain questionnaire is completed immediately prior to and following the study. A maximum of 40 push attempts are administered with movement classified as none, within calyx, or out of calyx.

RESULTS: Six subjects have undergone ultrasonic propulsion to date. None reported pain associated with the treatment. For the de-novo group (n=3), an average of 30 pushes were delivered with 25% resulting in movement within the calyx and no stones pushed out of the calyx. For the post lithotripsy group (n=3), an average of 39 pushes were delivered with 50% resulting in movement within the calyx and 10% resulting in movement out of the calyx. One post-lithotripsy subject passed two stones immediately following treatment. Two post-lithotripsy subjects reported passage of multiple fragments 1 to 2 days post treatment. In three subjects, ultrasonic propulsion helped identify a collection of stones previously characterized as a single stone on KUB and ultrasound. There have been no treatment related adverse events reported with telephone follow-up of 3 weeks.

CONCLUSIONS: This is the first report on the successful repositioning of kidney stones in humans using ultrasound. Stones were moved in all subjects without causing adverse events including pain. Treatment was therapeutic in two subjects and provided diagnostic information in three.

SOURCE OF FUNDING: Clinical trial funded by NSBRI through NASA NCC 9–58. Preliminary work supported by NIH DK43881 and DK092197.

MP04-02 ULTRASONIC PROPULSION OF KIDNEY STONES: PRELIMINARY RESULTS FROM FIRST IN HUMAN FEASIBILITY STUDY

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⁴Baylor University Department of Urology (United States)

INTRODUCTION AND OBJECTIVES: We are reporting preliminary findings from the first investigational use of focused ultrasound to transcutaneously reposition kidney stones in humans.

METHODS: The study includes three treatment groups: de novo stones, post-lithotripsy fragments, and the preoperative setting. A pain questionnaire is completed immediately prior to and following the study. A maximum of 40 push attempts are administered with movement classified as none, within calyx, or out of calyx.

RESULTS: Six subjects have undergone ultrasonic propulsion to date. None reported pain associated with the treatment. For the de-novo group (n=3), an average of 30 pushes were delivered with 25% resulting in movement within the calyx and no stones pushed out of the calyx. For the post lithotripsy group (n=3), an average of 39 pushes were delivered with 50% resulting in movement within the calyx and 10% resulting in movement out of the calyx. One post-lithotripsy subject passed two stones immediately following treatment. Two post-lithotripsy subjects reported passage of multiple fragments 1 to 2 days post treatment. In three subjects, ultrasonic propulsion helped identify a collection of stones previously characterized as a single stone on KUB and ultrasound. There have been no treatment related adverse events reported with telephone follow-up of 3 weeks.

CONCLUSIONS: This is the first report on the successful repositioning of kidney stones in humans using ultrasound. Stones were moved in all subjects without causing adverse events including pain. Treatment was therapeutic in two subjects and provided diagnostic information in three.

SOURCE OF FUNDING: Clinical trial funded by NSBRI through NASA NCC 9–58. Preliminary work supported by NIH DK43881 and DK092197.

MP04-03 UTILIZATION AND SUCCESS RATE OF SELECTIVE ARTERIAL CLAMPING USING IMMUNOFLUORESCENCE IMAGING DURING ROBOTIC PARTIAL NEPHRECTOMY

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INTRODUCTION AND OBJECTIVES: Renal transplantation, the definitive and curative management for patients with end-stage renal disease, is effective, safe, widespread, and being performed in more institutions. Therefore, as more transplants are done, more associated problems and complications are found. Our institution is pioneering renal transplantation in the USA and worldwide therefore, we have acquired vast experience in the management of its complications.

METHODS: Few comprehensive reviews are available. Therefore, we review our experience in the IR management of most complications including (a) vascular and (b) non-vascular. Vascular PTA of renal artery stenosis, stenting of renal arteries, arterial and venous thrombolysis, placement of filters in the IVC and iliac veins, embolization of AVFs secondary to kidney biopsy. Non-Vascular: Percutaneous nephrostomy, internal and external urinary drainage, dilatation of pelvic and ureteral strictures, stunting of uterers, drainage of lymphocele and other fluid collections, needle aspiration and core biopsies, and others.

RESULTS: Most, if not all procedures are successful in managing all the minor and major complications listed in the above section.

CONCLUSIONS: The IR are one of the most important members of the “team” managing renal transplant complications. The IR procedures are simple, quick, safe, effective, and cost-effective. Surgery with its attendant morbidity must be avoided, if possible. The IR’s must be available 24 hours a day 7 days a week. Every effort must be made to salvage a transplanted kidney as the shortage of organs for transplantation is critical in our country.

SOURCE OF FUNDING: None

MP04-05 LONG-TERM FOLLOW-UP OUTCOMES OF A NOVEL PROCEDURE FOR PERSISTENT AND RECURRENT HEMOSPERMIA: A SINGLE CENTER EXPERIENCE IN SOUTH CHINA

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INTRODUCTION AND OBJECTIVES: Introduction: In general, hemospermia represents a common and trivial condition in adult males. Just most patients with hemospermia require only minimal investigations and simple management as it is slight and self-limited. Nevertheless, in a few cases, it may be recur or persist and produce a lot of anxiety to the patient and his partner. The dilemma now is how far to investigate them. This study was to assess a novel diagnostic and therapeutic procedure for persistent and recurrent hemospermia. Objectives: To evaluate the long-term efficacy of a novel technique for persistent and recurrent hemospermia by transurethral seminal vesiculoscopy.

METHODS: 109 patients with persistent and recurrent hemospermia (course of 6 months to 17 years) in our clinic were successfully diagnosed and treated by seminal vesiculoscopy using a 4.5/6.5F rigid ureteroscope since July 2008. They were not cured by medical treatment or any other physical therapy. The definite urogenital malignancy of persistent haemospermia were excluded.

RESULTS: All the patients were confirmed by transurethral seminal vesiculoscopy (41 seminal vesiculitis and 32 seminal stone secondary to them, 19 ejaculatory ducts obstruction, 7 Mullerian cyst, 6 cyst of seminal vesicle and 4 benign prostatic hyperplasia). The mean follow-up period was 18 months. Haemospermia in 98 cases disappeared and 11 patients respectively recurred in 3 to 48 months after receiving transurethral seminal vesiculoscopy. Of those 11 cases with postoperatively recurrent hemospermia, 4 patients were cured by re-transurethral seminal vesiculoscopy.

CONCLUSIONS: Our long-term follow-up results suggest that transurethral seminal vesiculoscopy be an effective diagnostic and therapeutic procedure for it.

SOURCE OF FUNDING: This work was supported by Guangdong Provincial Science and Technology Program (2011B060300003), Fundamental Research Funds for the Central Universities (12ykpy40).

**MP04-06 PHYSICAL 3-D KIDNEY TUMOR MODELS CONSTRUCTED FROM 3-D PRINTERS IMPROVE TRAINEE PERFORMANCE**

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INTRODUCTION AND OBJECTIVES: Physical three-dimensional (3D) anatomic models based on cross-sectional imaging can be constructed using 3D printers and have been used in medicine for complex craniofacial reconstruction. We used 3D models of kidney tumors to evaluate trainee understanding of renal pathology and its relationship to normal renal anatomy.

METHODS: Twenty-eight first-year medical student volunteers and expert urologic oncologists completed RENAL nephrometry scores for 6 patients with enhancing renal lesions based on both CT scans and corresponding physical 3D models. The 3D models were constructed on 3D printers using standard cross-sectional imaging. Nephrometry scores calculated from trainee’s interpretation of CT scans and 3D models of the kidney tumors were compared using a paired t-test. The student nephrometry scores were also compared to the expert scores.

RESULTS: Based on 336 nephrometry score calculations, the student nephrometry scores for the CT scan versus the 3D model were statistically different in 3/6 kidney tumors (p < 0.01, p < 0.01, p = 0.012) and trended toward significance in 1 of the models. For 5/6 of the kidney tumors the means of the students’ scores for the 3D model were closer to the expert opinion than the students’ scores for the CT scan. All trainees reported the 3D models helped them complete the nephrometry score and improved their comprehension of the relationships between abnormal and normal renal anatomy.

CONCLUSIONS: Physical 3-D models increased trainees understanding of renal pathology compared with standard cross-sectional imaging.

SOURCE OF FUNDING: None

**MP04-07 THE BIOPROTECT BALLOON FOR RECTAL PROTECTION IN EXTERNAL BEAM RADIATION THERAPY FOR LOCALIZED PROSTATE CANCER: IMPLANTATION-RELATED MORBIDITY AND VOIDING ASSESSMENT**

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INTRODUCTION AND OBJECTIVES: Rectal irritation or mucosal bleedings are potentially serious side effects of external beam radiation therapy (EBRT) for prostate cancer. An innovative method for rectal dose reduction was successfully introduced by spacer materials injected between prostate and rectum. The Bio Protect balloon is a new perineally implanted biodegradable device.

METHODS: 83 consecutive patients with localized prostate cancer scheduled for adaptive, image-guided IMRT have undergone TRUS-guided perineal implantation of 4 gold markers and the Bioprotect Balloon with perioperative antibiotic prophylaxis in general anesthesia. Peri and postoperative morbidity, as well as pre- and postoperative (6 weeks & 3 months) Postvoid Residual Urine (PVR) and Qmax were analyzed. 3-Tesla MRI was performed in all patients after the Implantation procedure.

RESULTS: The Balloon could be implanted successfully in 74 patients (89 %). Of the 9 patients (11 %) where the implantation was not feasible, 3 were related to technical issues, 4 patients have undergone undergone TUR-P and another two patients had 3 sets of prostatebiopsies. Seven out of these 9 patients belonged to the first 40 cases. Perioperatively we observed 3 perineal hematomas (4.1 %) and one edema of the penis & scrotum (1.3 %), all resolving within 3 weeks without hospitalization. Two patients presented with urinary retention (2.7 %), which resolved after 2 months. A slightly significant change in Qmax was noted without clinical implications.

CONCLUSIONS: The transperineal Bioprotect Balloon Implantation is safe procedure. Perioperative Morbidity is only of minor degree and no patient required postoperative hospitalization. A slight decrease in Qmax was noted, without a clinical consequence.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Thermal water vapor technology is a novel energy platform that delivers pure thermal energy (steam) convectively into tissues. The thermodynamics of convective heating are ideally suited to prostate anatomy. Earlier reports have validated the principles of convective heating in benign prostatic hyperplasia (BPH). The objective of this study was to evaluate the in vivo feasibility of convective water vapor energy as a focal therapy for prostate cancer.

METHODS: Ten patients have undergone concomitant transperineal, ultrasound-guided vapor treatment followed by immediate radical prostatectomy under the same anesthetic. Vapor was administered at various doses (15–40 cal/sec for 10–30 sec) in the peripheral (PZ) and/or transition zone (TZ). Whole mount sectioning and vital staining identified the treated areas. Safety was assessed by real-time ultrasound monitoring, thermocouples between the prostate and rectum and anoscopy. Intraoperative observations were recorded.

RESULTS: Thermal ablation was clearly identified in all pathologic specimens. The peripheral (PZ) or transition zone (TZ) could be selectively targeted. Needle placement, vapor injections and treated areas could be clearly visualized by real-time ultrasound monitoring. Ablation was limited to the zone targeted. Increasing vapor doses only increased the percentage (50–100%) of treated tissue in the targeted zone. Extraprostatic tissue injury did not occur.

CONCLUSIONS: Thermal water vapor technology can be safely used to target any anatomic zone within the prostate. Thermodynamically, it appears to be ideally suited as a focal
therapies for localized prostate cancer. These favorable findings support continued investigation.

SOURCE OF FUNDING: None

MP04-10 EVALUATION OF IN VIVO HEMORRHAGIC KIDNEY INJURY CAUSED BY BURST WAVE LITHOTRIPSY

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INTRODUCTION AND OBJECTIVES: Burst wave lithotripsy (BWL) is a new noninvasive treatment approach for kidney stones that uses bursts of ultrasound energy to fracture kidney stones. This effort assessed the potential for BWL to cause renal injury.

METHODS: BWL treatments at 170 kHz were applied in vivo to kidneys from six pigs (55–60 kg) for durations up to 25 minutes. Treatment exposures comprised 10 cycle bursts of ultrasound at a burst repetition rate of either 40 Hz or 200 Hz, with peak focal pressures from 4.9–6.5 MPa. Real-time B-mode imaging was performed of the treatment site. Treated kidneys were perfusion-fixed and evaluated for injury by either gross examination or by an image-based method for quantitation of hemorrhagic lesion volume.

RESULTS: In exposures using a burst rate of 200 Hz, echogenic regions in B-mode images persisted throughout the treatment and correlated with sites of hemorrhagic injury identified on gross examination. In 9 subsequent BWL exposures with a burst rate of 40 Hz, the pressure level was reduced if echogenicity was observed. In these exposures, the threshold for the onset of echogenicity was between 4.9–5.5 MPa. In two of the kidneys for which injury quantitation was performed, the lesion volume was estimated to be <0.1% of functional renal volume. During the same experiments, equivalent exposures were used to break natural stones in the bladder into passable fragments.

CONCLUSIONS: If echogenicity is avoided, BWL exposures at 170 kHz induce negligible kidney injury at pressures that break stones.

SOURCE OF FUNDING: Work supported by NIH 2T32 DK007779-11A1, R01EB007643, P01DK043881, R01DK092197, and NSBRI through NASA NCC 9-58.

MP04-11 IN VITRO EVALUATION OF THE LITHASSIST: OPTIMIZING LASER LITHOTRIPSY DURING PERCUTANEOUS STONE SURGERY

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INTRODUCTION AND OBJECTIVES: The LithAssist (Cook Medical, Bloomington IN) is a new disposable handle, which integrates laser fiber use with on-demand suction, attempting to enhance user control and fragment clearance. Our objective was to evaluate LithAssist’s (LA) usability and efficacy using in vitro calyceal and bladder stone models.

METHODS: Bego stones (1 cm) were used in calyceal models, whereas bladder models used large (2.5–3 cm) rehydrated uric acid stones. LA was inserted through the working channel of a 24Fr nephroscope and connected to suction. The device was tested using 1000μm laser fiber at two settings (L1: 0.8J/8 Hz, L2: 0.2J/20 Hz), and the pneumatic StoneBreaker (Cook Medical, SB). The handle was removed and a bare laser fiber (L3: 0.8J/8 Hz) and Cyberwand (CW) were tested. Three trials (60 s/trial) were repeated for each.

RESULTS: Calyceal Stone: CW had the greatest residual stone dry weight reduction (CW 8.9%, L1 2.48%, L2 3.57%, SB 0.41%, L3 0.91% p < 0.001). SB produced the greatest number of fragments/stones (SB 12.13, CW 6.01, L1 3.17, L2 0.92, L3 0.94 p = 0.031). Similar findings were observed for the larger soft bladder stones, though dusting was significantly more effective than fragmentation settings with and without the handle (L2 2.1% vs L1 0.4%, L3 0.01% p = 0.021).

CONCLUSIONS: During rigid nephroscopy the LithAssist provides straightforward control of the laser fiber and on-demand suction, while eliminating the need for assistance with suction. Dusting settings appear more appropriate with the LA, however the efficacy of laser lithotripsy for larger stones remains limited – with or without the use of this device.

SOURCE OF FUNDING: None

MP04-12 TABLET BASED IMAGE GUIDED ROBOTIC SURGERY - FIRST IN MAN

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INTRODUCTION AND OBJECTIVES: Preoperative MR and CT images contain large amounts of anatomical data, but this information is under-utilised during actual interventional procedures. The aim of this study is to report the feasibility of using a tablet/iPad based 3D imaging device for the first 2 cases of robotic assisted radical prostatectomy (RARP).

METHODS: The Translucient Medical system is comprised of a touch screen tablet computer, a tracking system housed in a portable cart, a magnetic field generator and position sensors. Proprietary software uses the tracking data from the sensors to present 3D patient images in alignment with the patient’s anatomy. As the tablet computer display is moved, the system software updates image data to show the patient’s internal anatomy in motion on the display. After extensive laboratory and cadaveric testing it was used in two RARP patients with informed consent. The tumours were colour coded for accurate visualisation.

RESULTS: The average operative time was 120 minutes. Both patients had negative margins. The first had two Gleason 6 cancers, one suspected T3, the second patient had a Gleason 7 anterior tumour at the bladder neck. Both achieved continence, at 3 months and 2 weeks respectively and are undergoing penile rehabilitation.

CONCLUSIONS: This new tablet-like device is small, portable and easy to use. The 3D images align to the position of the patient on the operating table as well as during the movement of the prostate and its neighbouring structures during RARP. The device
INTRODUCTION AND OBJECTIVES: In URS, Flushing Urine Cytology is generally performed as a tool to rule out urothelial malignancy. However, for its low sensitivity, Flushing Urine Cytology is limited in its role to detect low-grade urothelial lesions. This study proposed an new technique in which the micro-Raman Spectroscopy (MRS) is introduced to assist the traditional Flushing Urine Cytology, to improve the diagnostic rate. 

METHODS: Urine samples, from the renal pelvis via URS, containing the urothelial cell carcinoma (38) and normal cells (33) were smeared/stained, and then performed micro-Raman Spectroscopy (MRS) focusing on following spectral peaks: 1000 cm-1 (phenylalanine band), 725 cm-1 (adenine, CH2 deformation), and 538 cm-1 (adenine, S-S). Through analysis, a criteria to differentiate the malignant cells and of the normal cells, was thereby established.

RESULTS: It shows that, the MRS spectral peak area, or, in other ward, the spectral intensity, wound decrease in accordance with the grade of malignancy potential of the urothelial cells. When the results of the MRS-based approach and pathologic diagnosis were compared by the partial least squares (PLS), the sensitivity was 97% and the specificity reached to 100%. On the other hand, when the 725/1000 cm-1 peak area were used for the construction of the ROC curve, the sensitivity was 81.8%, while the specificity was 90.3%.

CONCLUSIONS: MRS measurement for Flushing Urine Cytology analysis demonstrate a good accuracy to facilitate the clinical diagnosis. It provides objective evidences in assisting the pathologist and urologist toward an improved diagnosis, especially when bewildered in a gray zone.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: Percutaneous IRE of kidney tumors has been performed in a range of organs using high intensity focused ultrasound (HIFU). Calibration of a 12 mm HIFU probe for renal tissue was done. The objective was to calibrate the probe for both treatment and safety in ablation of renal tissue.

METHODS: A HIFU probe was introduced on a fixed arm and ablation was subsequently carried out at two planned locations within each kidney at varying energy levels. The kidneys were retrieved and pathologic analysis of the lesions was carried out for necrotic volume (NV) after four days of survival. The planned volume (PV) was compared to the determined pathologic NV. The animal research committee at our institution approved the study.

RESULTS: A number of optimizations were carried out as the experiment progressed. When the energy density was between 400 and 460 calories/cm3 near optimal ablation zone dimensions and complete cell death were achieved. Pathologic analysis revealed the average ratio of necrotic zone volume to planned zone volume was 1.0 (Std. dev. 0.18) in the seven lesions with energy density between 400 and 460 calories/cm3. No device related complications were identified during the study and all animals survived the surgeries. No acute renal failure or electrolyte disturbances were identified in analysis of the blood work.

CONCLUSIONS: Successful calibration of a novel 12 mm laparoscopic HIFU probe was performed for the ablation of porcine renal tissue. The safety profile of the SonaTherm probe was found to be excellent as no device related complications occurred.

SOURCE OF FUNDING: SonaCare Medical

INTRODUCTION AND OBJECTIVES: Irreversible electroporation (IRE) is a nonthermal tissue ablation technique where high voltage electric pulses of microsecond duration are applied to create irreversible nanoscale defects in the cell membrane, leading to apoptosis. We evaluated our initial IRE experience to assess feasibility, safety, effectiveness and radiographic outcomes of IRE renal tumor ablation.

METHODS: A retrospective analysis of all IRE cases between April 2013 and March 2014 was performed. The NanoKnife 15 cm monopolar probe was used. All procedures were performed under general anesthesia and with cardiac synchronization. All patients underwent CT guided ablation and a post-procedure contrast-enhanced CT. 16 patients had a minimum of 6 week follow-up with a contrast-enhanced CT.

RESULTS: A total of 20 tumors (19 pts) underwent IRE. Median tumor size was 2.2 cm (1.2–3.6 cm). Procedure time ranged from 1 to 3.9 hours. The median number of probes placed was 4. Median length of stay was 1 day. There were no complications. CT scan immediately post procedure typically showed decreased perfusion with an enhancing rim at the ablation site. CT scan at 6 weeks and 6 months was completed in 16 and 8 patients respectively. 16 patients (17 tumors) demonstrated no enhancement. At 6 weeks, two patients failed IRE. These patients’ CT scan demonstrated a persistent rim of enhancement. Both underwent successful salvage RFA. At 1 year, one patient had a recurrence that was treated with successful partial nephrectomy.

CONCLUSIONS: Percutaneous IRE of kidney tumors has shown to be feasible and safe. Additional follow-up is needed to confirm the oncologic efficacy of IRE.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Ablative therapy has been performed in a range of organs using high intensity focused ultrasound (HIFU). Calibration of a 12 mm HIFU probe for treatment of renal kidney tissue was done. The objective was to calibrate the probe for both treatment and safety in ablation of renal tissue.

METHODS: A HIFU probe was introduced on a fixed arm and ablation was subsequently carried out at two planned locations within each kidney at varying energy levels. The kidneys were retrieved and pathologic analysis of the lesions was carried out for necrotic volume (NV) after four days of survival. The planned volume (PV) was compared to the determined pathologic NV. The animal research committee at our institution approved the study.

RESULTS: A number of optimizations were carried out as the experiment progressed. When the energy density was between 400 and 460 calories/cm3 near optimal ablation zone dimensions and complete cell death were achieved. Pathologic analysis revealed the average ratio of necrotic zone volume to planned zone volume was 1.0 (Std. dev. 0.18) in the seven lesions with energy density between 400 and 460 calories/cm3. No device related complications were identified during the study and all animals survived the surgeries. No acute renal failure or electrolyte disturbances were identified in analysis of the blood work.

CONCLUSIONS: Successful calibration of a novel 12 mm laparoscopic HIFU probe was performed for the ablation of porcine renal tissue. The safety profile of the SonaTherm probe was found to be excellent as no device related complications occurred.

SOURCE OF FUNDING: SonaCare Medical

INTRODUCTION AND OBJECTIVES: To compare radiofrequency ablation (RFA) outcomes based on tumor subtype.

METHODS: All RFA treated tumors from 2 centers were identified but only clear cell and papillary RCC subtypes were included in the analysis. Numbers of other RCC subtypes were small (<10) and not included. RFA failure was defined as a >10 HU enhancement on contrast-enhanced CT in a previous ablation zone. Disease-free survival (DFS) and overall survival (OS) were defined as those patients who had no evidence of disease or who were alive at last follow-up respectively. The Kaplan-Meir method, using the log-rank test, was used to compare outcomes between RCC subtypes.

RESULTS: 229 patients were included. The mean age of the cohort was 64.5 years with a median follow-up of 48 (IQR 12–65) months. The mean tumor size was 2.5 cm. There was no difference between papillary and clear cell RCC groups based on age, tumor size or months of follow-up. A total of 181 (75.7%) tumors were clear cell type and 48 (20.1%) papillary type. There were 15 failures in the clear cell subtype and none in the papillary subtype, giving an estimated 5-year DFS of for 89.7% and 100% for clear cell RCC and papillary RCC respectively (p = 0.041). There was no difference in OS between groups (p = 0.764).

CONCLUSIONS: This is the first report suggesting a significant difference in RFA success based in RCC subtype, with papillary RCC having more favorable outcomes compared to clear cell RCC.

SOURCE OF FUNDING: None
MP04-19 THE USE OF A ROBOTIC REMOTELY OPERATED SUCTION/IRRIGATION (ROSI) SYSTEM MAY LEAD TO LESS POST-OPERATIVE BLOOD LOSS AFTER ROBOTIC PYELOPLASTY

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INTRODUCTION AND OBJECTIVES: Subjective surgeon experience with a Remotely-Operated Suction/Irrigation system (ROSI) has been associated with improved surgical field visibility through autonomy and flexibility of suction/irrigation tasks. We report our first objective experience of 11 patients who all underwent robotic pyeloplasty during which the ROSI was utilized for suction/irrigation tasks.

METHODS: 22 consecutive patients underwent robotic pyeloplasty – the first 11 surgeries utilized a human-assistant to perform suction/irrigation tasks with a traditional rigid suction/irrigation device (control group) and the next 11 surgeries utilized a surgeon or assistant-controlled, flexible suction/irrigation device (ROSI group). Age, BMI, surgery time, estimated blood loss, as well as immediate post-operative and discharge hematocrit values were compared between the two groups.

RESULTS: The ROSI and control groups were similar in terms of age (35.3 vs. 44.2 years, p = 0.183), BMI (25.7 vs. 24.6, p = 0.69), surgery time (140.9 vs. 149.2 minutes, p = 0.39), and estimated blood loss (45.5 vs. 45.9 cc, p = 0.971). Compared to the ROSI group, the control group had a greater but non-significant immediate post-operative drop in hematocrit (2.40 vs. 4.43 %, p = 0.034) and a statistically significant drop in hematocrit at the time of discharge (3.05 vs. 5.95 %, p = 0.034).

CONCLUSIONS: The use of a flexible, surgeon-controlled suction/irrigation system may lead to less post-operative blood loss after robotic pyeloplasty, although this is likely not of clinical significance. However, the ROSI system does have the ability to enhance the surgeon’s surgical field visibility, possibly enabling him/her to better detect and cauterize small bleeding vessels.

SOURCE OF FUNDING: None

MP04-20 TRANSVAGINAL VESICOVAGINAL FISTULA REPAIR WITH TRANSURETHRAL RESECTION OF FISTULA

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INTRODUCTION AND OBJECTIVES: Principle of vesicovaginal fistula (VVF) repair is completely excision of fistula and scar tissue, then tensionless anastomosis by well vascularized clean tissue. We reported that the efficacy and safety of the transvaginal repair with transurethral excise of VVF and scar tissue.

METHODS: Seven patients underwent transvaginal repair with transurethral resection of VVF. The mean age was 44.5 years (14–67) and mean follow-up period was 25 months (4–39). Their surgical history included that three patients had radical hysterectomy due to cervical cancer, one patient had a laparoscopic hysterectomy due to uterine myoma, and one patients had a hypogastric artery ligation due to vaginal bleeding after cervical biopsy. (Table I) This technique was consisted of two step. First, transurethral resection of fistula and around scar tissue. If there was a bleeding, minimally used a electrocautery. After then, transvaginal repaired of bladder mucosa, bladder muscle and vaginal mucosa with tensionless. If there was needed a interposition flap, the Martius flap was useful.

RESULTS: Mean operation time was 186.3 minutes, and mean Foley catheter indwelling days was 14 days. All VVFs were located in the bladder base area, and there were little bleeding. In six patients, successfully completed an operation through transcervical approach, but one patient developed an abdominal perforation during transurethral resection of fistula, and conversion to abdominal approach. All patients were dry after catheter removal. In one patient, we used a Martius flap interposition for VVF repair

CONCLUSIONS: This technique was very effective and safe, and reduced burden of surgeons and patients by transvaginal approach.

SOURCE OF FUNDING: None

MP04-21 PILOT STUDY OF INTRARENAL DOCETAXEL FOR UPPER TRACT CARCINOMA-IN-SITU (UT-CIS) IN PATIENTS WITH PRIOR BCG-REFRACTORY CARCINOMA

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INTRODUCTION AND OBJECTIVES: The gold standard treatment for upper tract urothelial carcinoma (UT-UC) is nephroureterectomy; however, this is not possible in all patients. Prior studies on urothelial carcinoma of the bladder have shown good efficacy with low toxicity for intravesical docetaxel. This is the first report of a subset of patients managed with intrarenal instillation of docetaxel for UT-CIS via a ureteral catheter.

METHODS: Four patients with UT-CIS with a history of BCG-refractory lower tract urothelial carcinoma completed induction course with 6 weekly instillations of 80 mg of docetaxel. Three of four patients have completed two maintenance courses with 75 mg or 80 mg of docetaxel as three monthly treatments. All four had imperative indications for avoiding nephrectomy (bilateral disease in two, solitary kidney in one, poor contralateral function in one). All patients would have been dialysis dependent following nephroureterectomy. Each patient underwent cystoscopy, ureteroscopy with biopsy, and upper tract cytologies pre- and post-induction and following each maintenance course.

RESULTS: Median follow-up was 24.6 months. All patients had negative post-induction cytology and/or ureteroscopy for a 100% complete initial response rate. There were no major complication; three of four patients experienced minor adverse events, including UTI and transient hematuria. One patient with prior muscle invasive bladder cancer and high-grade UT-UC in his contralateral kidney status-post cystectomy and contralateral nephroureterectomy developed evidence of metastatic disease but had negative cytology and biopsies in his treated kidney.

CONCLUSIONS: Upper tract docetaxel is a viable and effective treatment for UT-CIS among patients with strong indication for nephron sparing treatment and a history of BCG-refractory disease.

SOURCE OF FUNDING: None

MP04-22 ABSORBABLE CLIPS HAVE A LOW MISFIRE RATE AND ARE SAFE FOR HEMOSTASIS AND LYMPHOSTASIS DURING ROBOTIC RADICAL PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: Clip ligation of blood and lymph vessels during robotic prostatectomy is preferred for ease, efficiency, and lack of thermal energy. Multiple reports document serious complications from the use of permanent clips such as erosion into the bladder and bowel, bladder neck contracture, and interference with adjuvant pelvic radiation. The Lapro-Clip (Covidien, Mansfield MA) is an approved absorbable clip with similar application to common metallic and nylon clips but absorbs completely in 180 days. In this analysis we objectively describe the use of Lapro-Clips in a consecutive series of robotic prostatectomy.

METHODS: We reviewed the record of sixty consecutive patients undergoing robotic radical prostatectomy in which Lapro-Clips were used for all hemostasis and lymphostasis. Parameters describing clip utilization and misfires were recorded. Analysis of all misfires was performed to elucidate possible contributing factors.

RESULTS: Lapro-Clips were used successfully in all cases without additional hemostatic or lymphostatic maneuvers. Median total clip use was 18 per case with 5 clips per prostate pedicle, 1 per artery of the seminal vesicle, and 3 per lymph node packet. Six misfires occurred over the use of 1120 clips for a misfire rate of 0.54% with 3 likely resulting from human error and 3 from faulty clips.

CONCLUSIONS: The use of Lapro-Clip absorbable clips is safe for control of the vascular pedicles and lymphostasis during robotic prostatectomy with pelvic lymphadenectomy. The clips have an acceptably low misfire rate and may avoid problems related to use of permanent materials.

SOURCE OF FUNDING: None

MP04-24 QUANTIFICATION OF RENAL CELL OPTICAL BIOMARKERS USING SECOND HARMONIC GENERATION IMAGING

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INTRODUCTION AND OBJECTIVES: Initial investigations examining Second Harmonic Generation (SHG) based optical biomarkers revealed subjective differences in intrinsic collagen signals between malignant and benign renal tissue. Improvements in digital analytic technology and software are permitting quantification of SHG-based optical biomarkers. Since SHG signatures have been linked to prognosis in ovarian and breast cancer, we sought to characterize renal cell carcinoma (RCC) using SHG.

METHODS: A tissue microarray (TMA) was constructed from renal tissue specimens, including RCCs grades 1–4 and benign tissue. A 5μm section was cut from the TMA and SHG images were captured with an excitation wavelength of 890 nm and an emission filter centered at 445 nm with a 20 nm bandwidth. SHG images were analyzed using Curvelet transform-based software, which automatically extracts collagen fibers in an image and quantifies the alignment of fibers with respect to each other. Alignment coefficients were compared with t-tests.

RESULTS: Renal tissue, both benign and malignant, generated excellent SHG signals despite the small size of the samples used in the microarray. Curvelet transform-based image analysis software is able to quantify a variety of RCC collagen fiber characteristics such as alignment, width, length, and angle. Collagen fibers appear more linearly aligned in high grade RCC compared to low grade RCC or benign (p=0.004 and 0.0004). In other malignancies, aligned collagen fibers have been shown to act as a "scaffold" along which cancer cells migrate.

CONCLUSIONS: SHG imaging provides a flexible platform with which to analyze renal tumors and may provide additional information to characterize both whole specimens and biopsy cores.

SOURCE OF FUNDING: CA114462, CA136590, CA009206

MP04-25 THE USE OF SOCIAL MEDIA IN ENDouroLOGY: AN ANALYSIS OF THE 2013 WORLD CONGRESS OF ENDouroLOGY MEETING

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INTRODUCTION AND OBJECTIVES: To examine social media use in endourology by reporting on its utilization during the 2013 World Congress of Endourology (WCE) meeting.

METHODS: Two social media platforms were analyzed: Twitter (San Francisco, CA), and LinkedIn (Mountain View, CA). A commercial vendor (Tweetreach, San Francisco, CA)
was used to quantitatively analyze all tweets with hashtags ‘#WCE2013’ and ‘#WCE13’ during the meeting. Tweets were content classified using an established classification system. Each tweet was determined for sentiment (Semantria, Amherst, MA) and given a numeric score (range -2 to +2). The penetration of both social media platforms within WCE faculty was assessed by a manual search.

RESULTS: A total of 335 tweets from 68 Twitter users were created during the study period. Conference-related tweets had a reach of 38,141 Twitter accounts and 188,629 impressions (total number of times tweets were delivered, including repeats). Physicians generated the majority of content (63.0%), of which 55.8% were not attending the meeting. More tweets were informative (56.7%) vs. uninformative (43.3%), and 17.9% had links to an external web citation. Mean sentiment score was 0.13 (range -0.90 to 1.80); 13.1%, 57.0% and 29.9% of tweets were negative, neutral and positive in sentiment, respectively. Of 302 faculty, 49.7% and 17.2% had LinkedIn and Twitter accounts, respectively; only 19.2% of faculty on Twitter tweeted during the meeting.

CONCLUSIONS: Despite a relatively low number of Twitter users, tweeting during the WCE meeting dramatically increased its online exposure with dissemination of content that was mostly informative including engagement with physicians not attending the meeting.

SOURCE OF FUNDING: None

MP04-26 IN VITRO EVALUATION OF LITHASSIST: A NOVEL COMBINED HOLMIUM LASER AND SUCTION DEVICE
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INTRODUCTION AND OBJECTIVES: The aim of this in vitro study was to compare a novel intracorporeal lithotripter, LithAssist (LA), (Cook Medical, Bloomington, IN), with the Swiss LithoClast Ultra (SLU), (Boston Scientific, Boston, MA) for the fragmentation and removal of artificial stones.

METHODS: Standardized U-30 stones were fragmented using two lithotripters. We recorded the stone weight prior to placing them into a 60-mL syringe for fragmentation. We inserted a 30Fr percutaneous access sheath into the syringe and positioned the stone within its lumen. Next, we inserted the lithotripter into a right-angled nephroscope. We recorded the times required for first and complete stone disintegration, and complete stone removal. Additionally, we recorded the stone mass following each fragmentation minute.

RESULTS: We subjected 5 soft and 10 hard stones to SLU and LA, respectively. Soft stones were completely disintegrated and removed with both the SLU and LA. For soft stones, disintegration to 2-mm (2.83 ±0.41 vs. 4.13 ±0.70 min, p = 0.049), complete disintegration (3.18 ±0.20 vs. 6.40 ±1.95 min, p = 0.038), and complete removal (3.30 ±0.22 vs. 8.82 ±1.0 min, p = 0.001) were faster for the SLU compared to the LA. For hard stones, fragmentation was not accomplished with the SLU. With the LA, mean time for first disintegration, disintegration to 2-mm, complete disintegration, and complete removal were 3.60 ±1.36 min, 7.25 ±3.33 min, 7.54 ±2.94 min and 8.64 ±2.78 min, respectively.

CONCLUSIONS: We demonstrated that both the SLU and the LA can fragment and remove softer stones. The SLU demonstrated faster times for disintegration to 2-mm, complete disintegration, and complete removal when compared to the LA. The LA was superior at fragmenting and completely removing harder stones.

SOURCE OF FUNDING: None

MP04-27 A NOVEL DIFFUSE OPTICAL SPECTROSCOPY LAPAROSCOPIC PROBE TO EVALUATE ADIPOSE TISSUE CONTENT AND METABOLISM
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INTRODUCTION AND OBJECTIVES: Metabolic interaction between perirenal fat (FF) and different subtypes of RCC has previously been described. Diffuse optical spectroscopy (DOS) can measure the concentrations and states of hemoglobin, water, and lipid types within different tissues. We performed an in vivo porcine study to determine the feasibility of a novel DOS laparoscopic probe (DOSLP) to evaluate the metabolic properties of various adipose tissues (AT).

METHODS: We developed a DOSLP to fit a standard 12 mm laparoscopic trocar. The DOSLP provides near-infrared (650 to 1000 nm) absorption and scattering spectra in each tissue site in a 2–3 second measurement. Metabolic properties of various AT were obtained from subcutaneous, visceral, and PF. The DOSLP was placed on the surface of each respective tissue during data acquisition. Hemoglobin (oxygenated, deoxygenated), water and lipid concentrations were derived from the absorption spectrum.

RESULTS: We evaluated the DOSLP on two Yorkshire pigs. Characteristic features of lipids (increased absorption at 910 nm) were evident in all AT absorption spectra. AT hemoglobin concentrations and hemoglobin saturation varied across the adipose sites, consistent with known differential levels of perfusion and metabolic activity. Kidney tissues were found to have significantly lower lipids and significantly higher hemoglobin concentrations than the AT sampled.

CONCLUSIONS: We demonstrated that the novel DOSLP is a promising tool for evaluating the perfusion and lipid content of AT during laparoscopic surgery. Accurate evaluation of AT metabolism using novel non-invasive technology may allow to better understanding relationship between AT and kidney cancer. Further animal studies are in progress prior to clinical application.

SOURCE OF FUNDING: None

MP04-28 NOVEL AUTOMATED STONE DETECTION SYSTEM TO MEASURE RENAL CALCULI WITH ULTRASOUND
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INTRODUCTION AND OBJECTIVES: Measurement of stone size with ultrasound is variable and user-dependent. We sought to improve sizing accuracy and precision by using automated stone sizing.
METHODS: Forty five Calcium oxalate monohydrate stones were imaged at depths of 6, 10, and 14 cm. Stones were measured manually in B-mode by a blinded user with the on-screen calipers. Ultrasound data was also post-processed through three different automation programs: ray line imaging (RL), flash angle imaging (FA) and harmonic imaging (HI). Voltage, gain, and focus were automatically adjusted with each mode. Stone width was measured using an edge detection algorithm based on gray scale intensity. A linear mixed-effect model was used to account for within-stone correlations and compare manual versus automated stone measurements.

RESULTS: At 6 cm depth the difference in true versus automated stone width for Ray Line (0.5±1.7 mm), Flash Angle (0.7±1.4 mm), and Harmonic Imaging (1.2±1.3 mm) was statistically equivalent to manual measurements (1.0±0.7 mm). At 10 cm depth, automated stone measurement using Ray Lines (0.4±1.5 mm) was more accurate (p<0.001) than manual sizing (1.5±1 mm). At 14 cm depth automated stone measurement using Ray Lines (0.8±1.1 mm) and Flash Angle (1.1±1.6 mm) were more accurate (p<0.001) than manual stone measurement (2.0±1.2 mm).

CONCLUSIONS: Our results show automated stone detection is a feasible technology that could minimize user variability associated with ultrasound, particularly at greater skin to stone distances.

SOURCE OF FUNDING: NIH DK43881 and DK092197, and NSBRI through NASA NCC 9–58.

MP05 ENDOUROLOGY: SWL

MP05-01 ADDITIONAL PAIN CONTROL DURING EXTRACORPOREAL SHOCKWAVE LITHOTRIPSY (ESWL) USING ETORICOXIB, RANDOMIZED-CONTROL TRIAL

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INTRODUCTION AND OBJECTIVES: To compare the efficacy of oral etoricoxib to placebo for pain control during extracorporeal shockwave lithotripsy (ESWL).

METHODS: A series of 60 patients with renal or ureteral calculi who chose the treatment with ESWL between February to July 2013 were randomized into two groups. The control group received placebo and study group received etoricoxib orally. All patients received intravenous tramadol 50 mg before ESWL. A visual analog scale (VAS) was used for subjective evaluation of pain every 15 minutes after ESWL was started. Various parameters were recorded and analysed statistically.

RESULTS: The VAS at 15, 30, 45, 60, 75 minutes were not significantly different between two groups. Mean and maximal VAS during ESWL were 5.53, 6.97 in control group and 5.48, 6.90 in study group, without significant difference between two groups.

CONCLUSIONS: The additional use of oral etoricoxib does not provide effective analgesia during ESWL.

SOURCE OF FUNDING: None

MP05-02 MONOTHERAPY WITH A SINGLE SESSION OF ESWL FOR KIDNEY STONES IN THE COMMUNITY SETTING

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INTRODUCTION AND OBJECTIVES: Extracorporeal shock wave lithotripsy (ESWL) has progressively acquired popularity as being the gold standard treatment for upper urinary tract urolithiasis since 1980.

METHODS: A retrospective clinical study was performed on 2,316 patients between 2010 and 2012. Main outcome measured of our study was the clearing of stones after single session of ESWL. ESWL was done on all patients under conscious sedation by 24 board-certified urologists. The Litho Tron lithotripter (Healthtronics, Atlanta, GA) was used for the treatment. Median age of the patients was 38.7 years (range: 18–95). The percent distribution of patients according to stone size was following: ≤ 5 mm-15%, 5.1–10 mm-61%, 10.1–15 mm-15%, 15.1–20.0 mm-7%, > 20 mm-2%.

RESULTS: No significant perioperative complications were noted. All patients tolerated the procedure well and were discharged within 2 hours after the procedure. The results demonstrated a complete destruction of the stone in 1,488 (64.3%) cases, partial stone destruction in 496 (21.3%) and treatment failure in 331 (14.3%) patients, respectively. We found a direct correlation between large stone size and failure rate. A JJ stent was inserted before the procedure in 178 patients and after procedure in 119 patients.

CONCLUSIONS: No complications following ESWL treatment were noted. We conclude that ESWL remains efficacious and safe treatment modality for renal calculi in adults. Selection of patients is a crucial factor in treatment outcomes. Success rates are lower as stone size increases.

SOURCE OF FUNDING: None

MP05-03 ULTRA LOW DOSE CT-KUB TO DETECT KIDNEY STONES WITH 50% LESS RADIATION: IS THE PLAIN RADIOGRAPH OBSOLETE?

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INTRODUCTION AND OBJECTIVES: At our institution, Kidney-Ureter-Bladder (KUB) radiographs are performed immediately prior to shockwave lithotripsy (SWL). Conventional low dose CT-KUBs (effective dose of 2.2–3.0 mSv) are only performed
if stones are not visible on KUB. Recent advances in CT detector design and image reconstruction algorithms have made sub-millisievert ultra-low dose CT (ULDCT) acquisition feasible, but the diagnostic performance of these exams has not yet been reported. We sought to compare the radiation dose and diagnostic performance of ULDCT to KUB in patients prior to SWL.

METHODS: Patients enrolled in this study received both a KUB radiograph and an ULDCT prior to SWL. Radiation exposure parameters were recorded and both examinations were read in random order by blinded radiologists to determine the correlation between the two modalities.

RESULTS: To date, 51 patients (M:F, 34:17) with a mean age of 56.2 ± 13.8 y were enrolled. The effective radiation dose was significantly lower with ULDCT (0.28 ± 0.10 mSv) compared to KUB (0.50 ± 0.10 mSv, p = 0.014). The number of stones seen on KUB was 1.59 ± 1.27 vs 1.92 ± 0.51 for ULDCT (p = 0.35). Measurement of stone size was equivalent between ULDCT (6.47 ± 3.34 mm) and KUB (6.98 ± 3.41 mm, p = 0.455). In 3 cases, ULDCT localized ureteral stones that were not visible on KUB.

CONCLUSIONS: Sub-millisievert ULDCT delivers 43% less radiation than a plain KUB radiograph and was equivalent in detecting the number and size of stones. In some cases, it helped localize stones prior to SWL better than KUB. In future, ULDCT may replace KUB as it delivers less radiation with more information. This study is ongoing.

SOURCE OF FUNDING: None

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**MP05-04 A NOVEL WET COUPLING DESIGN FOR CONTEMPORARY ELECTROMAGNETIC LITHOTRIPTERS: ELIMINATION OF COUPLING DEFECTS AND IMPROVEMENT OF COMMINUTION EFFICIENCY**

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**INTRODUCTION AND OBJECTIVES:** Air bubbles trapped in shockwave lithotripsy coupling gel may contribute to the decreased stone comminution efficacy of contemporary lithotripters compared to the original HM3. We have developed a novel wet coupling technique and evaluated its impact on stone comminution in an electromagnetic lithotripter.

**METHODS:** The shockwave source of a Modularis electromagnetic lithotripter was fitted with a custom-designed, open-ended bellow allowing direct water-skin contact while adhering to the patient with a suction seal. The standard coupling was also tested with ultrasound gel applied in a spiral and bolus method. In-vitro comminution was performed in a torso model using hard Begostone phantoms treated at E2.5 for 1000 shocks at 1 Hz pulse repetition frequency. Percent comminution (fragments < 2 mm) was measured, and analyzed using ANOVA and Bonferroni corrected t-tests.

**RESULTS:** For each coupling method, 11 ~ 14 trials were performed. Unlike the spiral method, the bolus method produced minimal air defects while wet coupling ensured a perfect acoustic interface. Commminution (mean ± SD) was 30 ± 11% for the spiral method, 59 ± 18% for the bolus method, and 66 ± 15% for the wet coupling. The spiral method was significantly less effective than the bolus and wet coupling (p < 0.001). No statistical difference was observed between the bolus and wet coupling methods (p = 0.26).

**CONCLUSIONS:** The performance of contemporary lithotripters depends critically on the quality of shockwave source-patient coupling interface. A novel wet coupling design is developed to overcome the vulnerability and inconsistency of gel coupling, ensuring an effective shockwave transmission through the coupling interface with improved lithotripsy efficacy.

**SOURCE OF FUNDING:** National Institutes of Health

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**MP05-05 URETERAL WALL THICKNESS AT THE IMPACTED URETERAL STONE SITE: A CRITICAL PREDICTOR FOR SUCCESS RATES AFTER SWL**

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**INTRODUCTION AND OBJECTIVES:** To determine whether some certain stone and patient related factors could independently predict stone-free rates after extracorporeal shock wave lithotripsy (SWL) in patients with single impacted proximal ureteral calculi.

**METHODS:** A total of 111 patients (86 male, 25 females) with such stones (age range 26 to 79 years) treated between 2012 and 2014. Variables analyzed included diameter of proximal ureter and renal pelvis, degree of hydronephrosis, stone size and HU unit, ureteral wall thickness at the impacted stone site. Stone-free status on follow up imaging at 3 months was considered a successful outcome.

**RESULTS:** After SWL 87 patients (78.4%) were stone-free, 24 (21.6%) required a repeat procedure and had residual fragments. Among the parameters evaluated the significance was not statistically significant for all but only for HU value of the stone (p: 0.004) and particularly the wall thickness of the involved ureter at the impacted stone site (p: 0.002). As a reliable independent predictor, ureteric wall thickness revealed a high-correlation in cases with lower success rates requiring higher additional procedures after SWL.

**CONCLUSIONS:** Ureteral wall thickness at the impacted proximal ureteral calculi site demonstrates a highly significant predictive value for the success rates of SWL particularly with cases requiring additional procedures.

**SOURCE OF FUNDING:** Extracorporeal shock wave lithotripsy, Ureteral wall thickness, Ureteral calculi.

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**MP05-06 IS ANTIBIOTIC PROPHYLAXIS NECESSARY PRIOR TO SWL TREATMENT IN PATIENTS WITH A NEPHROSTOMY TUBE AS RECOMMENDED**

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**INTRODUCTION AND OBJECTIVES:** It has been postulated that fragmentation of an infected stone may result in release of bacteria thus recent guidelines recommend routine antibiotic prophylaxis before shockwave lithotripsy (SWL) treatment in patients with a nephrostomy tube. This study aimed to evaluate
whether SWL treatment changes the bacterial microenvironment and to assess the necessity of routine antibiotic prophylaxis in patients with a nephrostomy tube.

METHODS: Patients with an obstructing kidney stone who needed a nephrostomy tube for urgent decompression of the collecting system and who consecutively underwent SWL between March 1992 and May 2014 were prospectively included. Urine cultures were obtained during the placement of the nephrostomy tube and antibiotic treatment was initiated if indicated. Urine cultures were repeated before and after SWL sessions and results were compared.

RESULTS: Overall, 16 patients with mean age of 45.25 ± 28.17 (range 17–61) were included. Antibiotic treatment was needed in 2 (12.5%) patients because of the Escherichia coli growth in urine sample taken during placement of nephrostomy tube. Median treatment session number was 3 (range: 2–4). Of the patients, 2 (12.5%) had Klebsiella and Escherichia after 1st and 3rd sessions, respectively. One of patients with Escherichia coli growth during placement of nephrostomy tube had same microorganism developed prior to 3rd session. None of patients with positive urine cultures had clinical signs of urosepsis.

CONCLUSIONS: Most patients with a nephrostomy tube have sterile urine thus don’t need prophylactic antibiotics before SWL. However, microorganisms may occur during SWL, therefore obtaining urine cultures may be of benefit before and after each session.

SOURCE OF FUNDING: None

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MP05-08 THE USING OF STENT ACCORDING TO STONE BURDEN IN PELVIS RENALIS CALCULI TREATED WITH SWL: USE IT OR LOSE IT?

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INTRODUCTION AND OBJECTIVES: In this study our purpose is to determine the efficiency of ureteral stent usage for SWL treatment in pelvis renalis stones.

METHODS: Between 1992 and 2008, 1361 patients with pelvis renalis stones were included to the study. Patients were subdivided into 3 groups according to stone burden as stones equal or smaller than 1 cm2 (group 1), 1.1 to 2 cm2 (group 2) and bigger than 2 cm2 (group 3). Also we formed 2 subgroups according to ureteral stent usage before SWL treatment as stented and non-stented. Statistical analysis was performed by chi-square, Fisher’s exact and Mann-Whitney U tests. The efficiency of treatment among the groups was determined by the effectiveness quotient (EQ) that was calculated with a special formula.

RESULTS: There were 514 patients in group 1, 530 patients in group 2 and 317 patients in group 3 according to stone burden. We used ureteral stents as an auxiliary procedure in 6% for group 1, in 8% for group 2 and in 33% for group 3. There were no statistically significance between stented and non-stented subgroups according to steinstrasse rates in the groups.

Stone-free rates of non-stented subgroups were statistically higher than stented subgroups in group 2 and group 3. The EQ was calculated as 64.4%, 63.7% respectively in non-stented, stented and totally for group 1. This ratio calculated as 52%, 30% and 49% for group 2 and 43%, 33% and 40% for group 3.

CONCLUSIONS: Our results suggest that stone free rates are in nonstented patients higher than stented patients regardless of stone size. Although ureteral stent usage may be necessary before SWL in selected patients, there were no difference in subgroups according to steinstrasse rates.

SOURCE OF FUNDING: None

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MP05-09 EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY IS A RISK FACTOR FOR CHRONIC KIDNEY DISEASE: A POPULATION-BASED STUDY

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INTRODUCTION AND OBJECTIVES: The incidence of chronic kidney disease under dialysis status is the highest in the world and the annual expense of dialysis therapy was 8.3 billion USD in health insurance system in Taiwan, it is necessary to identify possible risk factors related to chronic kidney disease so as to decrease the incidence of chronic kidney disease in Taiwan.

METHODS: The data were retrieved from the National Health Insurance Research Database (NHIRD 2008) of Taiwan. A total of 52930 patients with renal stones were identified from NHIRD while 8387 patients received at least one episode of extracorporeal shock wave lithotripsy and 44543 patients were randomly selected as the comparison cohort. The multivariate Cox proportional hazards regression model was used to explore the risk of chronic kidney disease in patients received extracorporeal shock wave lithotripsy after adjusting for demographic characteristics and comorbidities.

RESULTS: After adjusting for potential covariates, extracorporeal shock wave lithotripsy caused a 1.25-fold increased risk of developing chronic kidney disease (adjusted OR: 1.25, 95% CI: 1.12–1.40). When considering dose-response and adjusting for potential covariates, extracorporeal shock wave lithotripsy remained independent risk factors and exhibited a dose-response relationship of the development of chronic kidney disease. The risk of developing chronic kidney disease after 1, 2 and 3 times extracorporeal shock wave lithotripsy was 0.94-fold (95% CI: 0.84–1.27), 1.32-fold (95% CI: 1.05–1.65) and 1.62-fold (95% CI: 1.34–1.97) respectively.

CONCLUSIONS: Extracorporeal shock wave lithotripsy might be a risk factor for the chronic kidney disease.

SOURCE OF FUNDING: None

MP05-10 CHANGING PATIENT POSITION CAN ELIMINATE ARRHYTHMIAS DEVELOPING DURING SHOCK WAVE LITHOTRIPSY (SWL)

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INTRODUCTION AND OBJECTIVES: SWL has a low complication rate. While serious side effects are rare arrhythmias such as ventricular tachycardia may occur and require cessation of treatment. The aetiology of these arrhythmias is poorly understood, but is most likely related to the relative position of the stone and the heart. This study examines the effect of rotating the patient 15 to 20 degrees when an arrhythmia occurs.

METHODS: 760 patients were prospectively evaluated for arrhythmias during SWL. The initial patient position was dependent on the location of the stone and the size of the patient. Stones on either side may be treated with the patient flat supine. More frequently, the patients are rotated about 15 degrees with the opposite side to the stone elevated. With stones on the right the patient would be right posterior oblique (RPO) and for left sided stones left posterior oblique (LPO). If a sustained arrhythmia developed, treatment was held for 2 minutes and then recommenced. If the arrhythmia returned, as occurred in all 15 patients, the patient was rotated to the flat, RPO or LPO position, angling the shock wave away from the heart.

RESULTS: 15 patients developed arrhythmias during SWL. Arrhythmias occurred more frequently in patients with a lower BMI (P<0.01) and in those with right-sided stones (P=0.08). After rotation no further arrhythmias were seen in 8 patients, 4 patients had an occasional arrhythmia and 3 patients required gating.

CONCLUSIONS: Changing the position by rotating the patient by 15 to 20 degrees may eliminate arrhythmias that develop during SWL.

SOURCE OF FUNDING: No funding

MP05-11 THE EFFECTS OF DIFFERENT TREATMENT PROTOCOLS ON PREVENTION OF RENAL FIBROSIS IN PATIENTS WITH RENAL STONES RECEIVING SHOCK-WAVE LITHOTRIPSY

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INTRODUCTION AND OBJECTIVES: We would like to assess the effects of ramping protocol and pause-protection protocols on renal fibrosis in human subjects during SWL.

METHODS: 320 patients with renal stone were recruited and randomized to follow one of the protocols, (1) 80% power from the beginning till the end; (2) the first 100 shocks at 40% power, followed by SWs at 80% power till the end; (3) the first 100 shocks at 40% power, followed by a 3-minute pause and then further SWs at 80% power till the end; (4) the first 100 shocks at 80% power, followed by a 3-minute pause and then further SWs at 80% power till the end. All patients received 1 SWL section. Spot urine samples were collected immediately before and till 12-week after SWL. Urinary renal fibrosis markers, procollagen III aminoterminal propeptide (PIIINP) was measured and expressed as ratios to creatinine for comparison.

RESULTS: The baseline information of the 4 groups were comparable. There was a trend of higher baseline PIIINP level in patients received 2 previous sessions of SWL than those with 0/1 session. The PIIINP levels, both overall and individual groups, increased continually till 12-week post-treatment. The levels were significantly higher in Group-2, 3, and 4 at 6-week post-SWL when compared to baseline (p<0.05). and the levels of all groups at 12-week were significantly higher than baseline (p<0.01). However, there was no difference between the groups observed.

CONCLUSIONS: Based on the change in urinary renal fibrosis markers, neither protocols could help to decrease renal fibrosis after SWL.

SOURCE OF FUNDING: Hong Kong RGC General Research Fund (No.472111)

MP05-12 THE EFFECTS OF DIFFERENT TREATMENT PROTOCOLS ON PREVENTION OF ACUTE RENAL INJURY IN PATIENTS WITH RENAL STONES RECEIVING SHOCK-WAVE LITHOTRIPSY

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INTRODUCTION AND OBJECTIVES: We would like to assess the effects of ramping protocol and pause-protection protocols on acute renal injury in human subjects during SWL.
MP05-13  NON-CONTRAST COMPUTED TOMOGRAPHY – BASED PREDICTION MODEL FOR EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY OUTCOME OF RENAL STONES

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INTRODUCTION AND OBJECTIVES: Extracorporeal shock wave lithotripsy (ESWL) is a popular treatment for nephrolithiasis. We took advantage of non-contrast abdominal computed tomography (NCCT) to search the possible prognostic factors including abdominal fat distribution influencing the stone free rate.

METHODS: From August 2008 to August 2010, 145 patients who had renal calculus and undergone ESWL were retrospectively reviewed. All of them received NCCT assessment before ESWL and followed up after one month for stone clearance. These patients were divided into two groups, one is stone free group and the other is residual stone group. Affecting parameters include stone size, location, stone surface area, Hounsfield unit density (HU density), skin to stone distance (SSD) and abdominal fat area were analyzed between these two groups.

RESULTS: Of 145 patients, 70 were stone free and 75 had residual stone after ESWL treatment and 1 month follow up. From univariate analysis, stone size, HU density, SSD and surface area were significant predicting factors for ESWL success. Multivariate analysis showed that stone size, HU density, SSD and stone surface area were significant predicting factors for ESWL success. On multivariate analysis, the important factors influence ESWL outcome were HU density and stone surface area (odds ratio 1.002 versus 77.18, respectively, p<0.05). Abdominal fat accumulation and distribution had no significant difference between these two groups.

CONCLUSIONS: This study revealed stone size, HU density, SSD and stone surface area are associated with stone free rate after ESWL treatment. Therefore, we can use these factors to assess the feasibility of ESWL before deciding the treatment strategy. Abdominal fat distribution has no significant impact on ESWL outcome for renal stones.

SOURCE OF FUNDING: None

MP05-14  SHOCKWAVE LITHOTRIPSY WITH RE-NO PROTECTIVE PAUSE IS ASSOCIATED WITH RE-NOVASCULAR VASOCONSTRICTION IN HUMANS

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INTRODUCTION AND OBJECTIVES: Low-energy shocks followed by a 3-minute pause mitigates renal injury in an animal model during shockwave lithotripsy (SWL). This is associated with increases in resistive index (RI). The purpose of our study was to investigate whether this association is observed in humans.

METHODS: Prospectively recruited patients underwent SWL of renal stones with a Dornier Compact S lithotripter. A renal protective protocol was utilized that consisted of treatment at 1 Hz and slow power ramping for the initial 250 shocks followed by a 2 minute pause. RIs were measured using ultrasound prior to treatment, after 250 shocks, after 750 shocks, after 1500 shocks, and at the end of the procedure. A linear mixed-effects model was used to compare RIs at the different timepoints and to account for additional covariates including age, gender, laterality, and body mass index (BMI).

RESULTS: Fifteen patients were enrolled. Average stone size treated was 10.4 ± 7.7 mm. RI pretreatment, after 250 shocks, 750 shocks, 1500 shocks, and post-treatment were 0.68 ± 0.06, 0.71 ± 0.07, 0.73 ± 0.06, 0.75 ± 0.07 and 0.75 ± 0.06, respectively. RI was found to be significantly higher post-treatment compared to pre-treatment (p<0.001) with a significant rise starting after 250 shocks (p=0.04). Age, gender, BMI, and treatment side, was not significantly associated with RI.

CONCLUSIONS: SWL using a renal protective protocol is associated with a rise in RI in humans occurring after 250 shocks into treatment. Monitoring for a rise in RI during SWL is possible and may provide real-time feedback as to when the kidney is protected.

SOURCE OF FUNDING: NIH DK43881 and DK092197, and NSBRI through NASA NCC 9–58.

MP05-15  RADIODYNAMICITY OF URETERAL STONE ON KUB CAN BE A PROGNOSTICATOR OF SHOCK WAVE LI THOTRIPSY OUTCOMES

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INTRODUCTION AND OBJECTIVES: There were few studies on prediction of extracorporeal shock wave lithotripsy (ESWL) outcomes by KUB. The aim of this study was to determine whether radiologic findings on NCCT and KUB could predict the outcome of ESWL for ureteral stone.

METHODS: A total of 223 patients treated by ESWL for radiopaque ureteral stones measuring 5 to 20 mm were included in this retrospective study. The parameters including radio-density relative to twelfth rib on KUB and average Hounsfield unit (HU) were collected. Patients were categorized into two groups: group 1 (radio-density less than or equal to twelfth rib: n = 163) and group 2 (more than twelfth rib: n = 60).

RESULTS: Mean stone size in the group 1 was smaller than that in the group 2 (7.5 vs. 9.9; p = 0.002). There was a significant difference in the average HU between the two groups (789.8 vs. 1030.7; p < 0.001). Overall success rates after one months of ESWL in the group 1 and 2 were 82.1% and 60.0%, respectively (p = 0.007). Mean time to stone-free and average number of ESWL sessions required for success in the two groups were 21.7 vs. 39.2 days and 1.8 vs. 2.3, respectively (p < 0.05). On multivariate logistic analysis, stone size, the time to ESWL and the radio-density of ureteral stone on KUB were the independent predictors of successful ESWL.

CONCLUSIONS: Our data suggest that ureteral stones with radio-density more than twelfth rib are at a 1.8-times higher risk of ESWL failure at 1-month after the procedure.

SOURCE OF FUNDING: None

MP05-16 PREDICTIVE FACTORS OF SUCCESSFUL OUTCOME OF EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY FOR THE PATIENTS WITH URETERIC CALCULI

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INTRODUCTION AND OBJECTIVES: To determine the predictive factors of successful treatment with extracorporeal shock wave lithotripsy (ESWL) in the patients with ureteric calculi.

METHODS: We evaluated 446 (mean age 48.6, range 12 to 88) patients, who underwent ESWL for ureteric calculi of 0.5 to 2 cm (mean stone size 8.68 ± 5.91 mm) in diameter and who had computed tomography (CT) on pre-treatment, between 2003 and 2010 in a single urological institute. The fragments of 0.3 cm or less were regarded as successful treatment in follow up imaging study. In addition to the basic characteristics of the patients (age, gender, and urine pH), the parameters from CT findings including hydronephrosis, skin to stone distance (SSD) and Hounsfield unit (HU), size, location and laterality of the stone were analyzed considering the total numbers of ESWL session required to the successful treatment of ureteric calculi.

RESULTS: In all, 374 (83.9%) patients were treated successfully in 2.25 ± 1.65 times of ESWL sessions while 72 (16.1%) patients were failed and needed additional treatments after ESWL. In multivariate analysis, age (p = 0.022), the degree of hydronephrosis (p = 0.009) and HU (p < 0.001) were independent predictive factors of the successful treatment of ureteric calculi. The SSD and stone size were significant only in univariate analysis.

CONCLUSIONS: When determining the treatment modality of the patients with ureteric calculi, it might be considered that the old age and CT finding including presence of hydronephrosis and high HU are related with the poor outcome of ESWL.

SOURCE OF FUNDING: None

MP05-17 PREDISPOSING FACTORS ASSOCIATED WITH SUBCAPSULAR HEMATOMA AFTER EXTRACORPOREAL SHOCKWAVE LITHOTRIPSY

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INTRODUCTION AND OBJECTIVES: Although shockwave lithotripsy (SWL) is a standard intervention in treating urolithiasis because of its ease of use, high efficacy, and noninvasive nature. Subcapsular hematoma is one of the most frequent and maybe life-threatening complication of SWL. We attempt to determine the incidence and identify the subgroup of patients who are high risk for symptomatic subcapsular hematoma after SWL.

METHODS: Between 2008 and 2013, a total of 6467 SWL were performed for urolithiasis. All SWL procedures were performed using a Dornier Compact Delta II lithotripter without general anesthesia. The patients with subcapsular hematoma after SWL were identified by symptom and sign. Additionally, we enrolled 264 patients as control group for risk factor survey. We retrospectively reviewed for medical history and analyzed for patient age, sex, BMI, location of stone, total number and peak intensity of SWL, position during procedure, and past history including hypertension, diabetes mellitus, hyperlipidemia and the use of antplatelet drugs.

RESULTS: After 6467 treatment episodes on a total of 4146 patients during this period, symptomatic subcapsular or perirenal hematoma developed in 11 patients for a total incident rate of 0.17%. Most of them received conservative therapy except one patient received transcutaneous arterial embolization intervention. The predisposing risk factor identified hypertension (p = 0.04) and Hyperlipidemia (p = 0.01, respectively). But higher BMI and diabetes mellitus were not associated with perirenal hematoma after SWL.

CONCLUSIONS: Post-SWL perirenal hematoma is a rare (incidence rate, 0.17%) but may be life-threatening. In multivariate analysis, hyperlipidemia is an important predisposing factors to perirenal hematoma after SWL.

SOURCE OF FUNDING: None

MP05-18 URINARY STONE CHARACTERISTICS OF PATIENTS TREATED WITH EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY (ESWL) IN CIPTO MANGUNKUSUMO HOSPITAL, JAKARTA, 2008–2013: A GENDER ANALYSIS

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INTRODUCTION AND OBJECTIVES: Urinary stone is the most common urology case in Indonesia. The incidence of urinary stone has increased every year in both male and female. Aim of this study is to describe the characteristics of urinary stone found in male and female patient who underwent Extracorporeal Shock Wave Lithotripsy (ESWL) therapy at Cipto Mangunkusumo Hospital, Jakarta.

METHODS: This research data were obtained from medical record from Cipto Mangunkusumo Hospital Jakarta during 2008–2013 periods. We obtained 3,611 out of 4,427 data due to
incomplete data record. We sorted data records by gender and analyzed with statistic tools (SPSS v.20).

RESULTS: From 3,611 records obtained, 86.7% came for the first ESWL treatment and the rest came for continued treatment. The incidence of urinary stones was two times higher in male rather than female (68.1%: 31.9%) and occurred in productive age (60.3% in male and 61.2% in female). Unilateral kidney stone became the most common location for both gender (52.7% in male, 64.6% in female), with most frequent site located in calyx inferior (22.2% in male & 21.96% in female). The mean size of the stone from all subject is 11.52 mm. This study showed 79.3% of all stone has radioopaque opacity (78.4% in male & 81.25% in female).

CONCLUSIONS: Urinary stone founds two times higher in male rather than female, which mostly occurs on their productive ages. More of the stone located in calyx inferior of the kidney and had radioopaque opacity.

SOURCE OF FUNDING: Universitas Indonesia Research Grant 2013–2014

MP05-19 THE CORRELATION BETWEEN BODY-MASS-INDEX, URIC ACID SERUM, RANDOM GLUCOSE SERUM, AND BLOOD PRESSURE TOWARD STONE OPACITY IN URINARY TRACT STONE PATIENTS

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INTRODUCTION AND OBJECTIVES: Urolithiasis refers to formation of stone in the kidney, ureter, or bladder. Several studies showed metabolic abnormalities were common in urolithiasis patients (70–80%). The aim of this study was to describe the correlation between body-mass-index, uric acid serum, random glucose serum, and blood pressure toward stone opacity in urinary tract stone patients.

METHODS: This study was done by reviewing registry data of urinary tract stone patients that had undergone ESWL on January 2008–December 2013 in Department of Urology Cipto Mangunkusumo Hospital. Risk estimation was expressed in OR and 95% CI.

RESULTS: There were 2889 patients who undergone ESWL on January 2008–December 2013. We analyzed 242 subjects that have completed data. Mean age was 47.95 (± 12.32 SD). Male-to-female ratio was 2.27:1. Body-Mass-Index (BMI) mean was 24.24 kg/m2 (15.56–36.51 kg/m2). High risk BMI were found in 66.5% patients. The proportion of radiolucent stones were 22.31% patients. Only 9.1% patients had normal blood pressure. Patients with normal uric acid serum were 95.9%. Statistically there were significant correlation in normal random glucose serum with radiolucent stone formation rather than radiopaque stone formation OR 0.219 (95%CI 0.064–0.747). The probability of patient with normal random glucose serum and radiolucent stone formation was 17.97%. BMI, uric acid serum, and blood pressure had no significant correlation with stone opacity.

CONCLUSIONS: There is significant correlation between normal random glucose serum with radiolucent stone formation. Eleven out of twenty patients who have normal random glucose serum levels with urolithiasis problems will experience radiolucent stones.

SOURCE OF FUNDING: Universitas Indonesia Research Grant 2013–2014

MP05-20 IMPACT OF RENAL ANATOMY AND STONE CHARACTERISTICS ON SHOCK WAVE LITHOTRIPSY OUTCOMES FOR LOWER POLE CALCULI: RESULTS FROM A PROSPECTIVE TRIAL

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INTRODUCTION AND OBJECTIVES: The efficiency of shock wave lithotripsy (SWL) for lower pole stone is controversial. We aim to evaluate which variables impact fragmentation and clearance of lower pole calculi after SWL.

METHODS: We prospectively evaluated patients undergoing SWL for solitary lower pole kidney stones ranging from 5–20 mm. One radiologist, blinded to SWL outcomes, measured stone size, density, stone-skin distance, infundibular length, width and height, and infundibulopelvic angle based on baseline noncontrast computed tomography (NCCT). Fragmentation, stone-free rates and success (residual fragments < 4 mm in asymptomatic patients) were evaluated by low dose NCCT 8 weeks post-operatively. A logistic regression including BMI, abdominal waist circumference, and all parameters measured from first NCCT was performed. Then, a ROC analysis was performed.

RESULTS: 60 patients were enrolled. Overall fragmentation, success and stone-free rates were 77%, 57%, and 38%, respectively. BMI, abdominal waist circumference, stone size and stone density were higher, but not significantly different, in the groups that failed to fragment or clear the fragments. Success rates were similar for patients with infundibular length > 3.0 cm (45% vs. 58%, p = 0.51), width < 5.0 mm (48% vs. 61%, p = 0.42), height > 15 mm (59% vs. 50%, p = 0.73), or infundibulopelvic angle < 70o (57% vs. 58%, p = 1.0) compared to patients with favorable anatomy. On logistic regression only stone size was an independent predictive factor for success (p = 0.028) and stone-free (p = 0.030) rates. ROC analysis showed 11 mm was the ideal cutoff to predict success.

CONCLUSIONS: SWL outcome for lower pole calculi is significantly influenced by stone size but not lower pole collecting system anatomy.

SOURCE OF FUNDING: None

MP05-21 HOW DO THE RESIDUAL FRAGMENTS AFTER SWL AFFECT THE HEALTH-RELATED QUALITY OF LIFE? A CRITICAL ANALYSIS IN A SIZE BASED MANNER

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INTRODUCTION AND OBJECTIVES: To evaluate the possible effects of residual fragments after shockwave lithotripsy on the health-related quality of life of the patients on a size related basis.

METHODS: 86 patients with residual fragments after shockwave lithotripsy were divided into three groups; Group 1 (n:30 with fragments ≤ 2 mm), Group 2 (n:21 2 mm–≤ 4 mm) and Group 3 (n:35 >4 mm) in a size based manner. During a 3-months follow-up spontaneous passage rates, emergency department
visits, mean analgesic required, additional procedures and the quality of life were all evaluated. Quality of life was evaluated using the Short Form-36 survey.

RESULTS: Of the 30 patients with fragments ≤2 mm all cases passed the fragments spontaneously. Of the 21 cases with fragments 2 mm–≤4 mm, 76% were stone free. Lastly of the 35 cases with fragments >4 mm; 52% passed them spontaneously in 3 months. While no patient with fragments ≤2 mm required emergency department visit, 19% of the cases with fragments 2 mm–≤4 mm and 51.4% with fragments >4 mm did require this visit. Mean analgesic need (mg) values were higher again in cases with larger fragments. Evaluation of the quality of life score data in a subgroup comparison base showed that cases with larger fragments had prominently lower scores during both 1 and 3 month evaluation.

CONCLUSIONS: Residual fragments after shockwave lithotripsy could pose an impact on the quality of life of the cases in a size related basis. While fragments ≤2 mm had nearly no impact on this aspect larger fragments could significantly affect the quality of life.

SOURCE OF FUNDING: Renal Stones, ESWL, residual fragments, health-related quality of life

MP05-22 DO THE RESIDUAL FRAGMENTS AFTER SWL AFFECT THE QUALITY OF LIFE?

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INTRODUCTION AND OBJECTIVES: To evaluate the possible effects of residual fragments on the Health related quality of life in patients undergoing ESWL for renal stones.

METHODS: 71 patients with residual fragments were divided into two further groups; Group 1 (n:42, ≤4 mm) and Group 2 (n:29, >4 mm). During 3-months follow-up, spontaneous passage rates; number of emergency department visits, amount of the analgesic required, additional procedures and the changes in the quality of life were evaluated. Quality of life was evaluated using the Short Form-36 survey. Statistical analyses included independent sample t tests.

RESULTS: Of the 42 cases with fragments ≤4 mm while 92.8% passed the fragments spontaneously; in 4.8% fragments resided until 3-months. Again, following 2 sessions of ESWL; of the 29 cases with fragments >4 mm, 55% were stone free; 14% still had residual fragments. Mean numbers of emergency department visits were 0.07 and 0.5 in both groups respectively. Mean analgesic need (mg) was 138.75 in Group 1 and 375 in Group 2. While significantly lower scores were noted only for one parameter during 1 month evaluation in cases with larger fragments; they were present in all 8 parameters during 3-month evaluation.

CONCLUSIONS: Larger residual fragments could significantly affect the quality of life. Emergency department visits and colic attacks are the causes of discomfort. Effective stone disintegration by an experienced urologist should be aimed to limit the negative effects of residual fragments on the quality of life.

SOURCE OF FUNDING: None

MP05-23 STONE SIZE AND QUALITY OF LIFE: A CRITICAL EVALUATION AFTER EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY

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INTRODUCTION AND OBJECTIVES: To evaluate the quality of life (QOL) of the patients after extracorporeal shockwave lithotripsy (ESWL) on a treated stone size related basis.

METHODS: 90 patients undergoing ESWL for solitary kidney stones were divided into three groups; Group 1 (n:30, <10 mm), Group 2 (n:28, 10 mm–20 mm) and Group 3 (n:32, 20–25 mm). During 3-months follow-up, outcome of the procedure, number of cases with emergency department (ED) visits, analgesic required, re-treatment rates, additional procedures and the changes in the QOL were evaluated. The QOL was evaluated by using the SF-36®.

RESULTS: Of the 30 cases in Group 1, while 73.3% was stone free (SF) after SWL; these values were 67.9% and 53.1% in Group 2 and 3 cases respectively after 3 months. Additionally both the number of ED visits and mean analgesic need; re-treatment rates and additional procedures were significantly higher in Group 3. Evaluation of QOL scores in three groups showed that while all cases had lower scores during 1 month evaluation; despite the evident improvement in the first two groups, cases with larger fragments still had lower scores during 3-month evaluation.

CONCLUSIONS: Stone size could help us to predict the possible impact of ESWL on the QOL and depending on the size of the stone treated, a well planned indication and effective management possibly by an experienced urologist could limit the changes in the QOL of the patients.

SOURCE OF FUNDING: None

MP05-24 10 YEARS FOLLOW-UP AFTER ELECTROMAGNETIC ESWL OF RENAL STONES: OUR EXPERIENCE

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INTRODUCTION AND OBJECTIVES: Long term side effects of ESWL are still debated and uncertain. Our goal is to assess the incidence of long term side effects ten years after an ESWL treatment performed with an electromagnetic Dornier Lithotripter X XP.

METHODS: Patients who had an ESWL treatment of renal stones ten years ago were invited to undergo a complete medical check-up involving renal function, renal morphology, blood pressure levels and blood glucose assessment. We compared past data with the new ones, considering also confounding factors (cholesterol and triglycerides values, BMI, cigarette smoke).

RESULTS: One hundred patients with a current age of 61 years (DS: 10,2) were considered. ESWL treatments have been performed from 2002 up to 2004. At the time of the treatment, mean BMI value was 26 (DS:3,9); 53% of the patients were smokers, 35% suffered of hypercholesterolemia, 33% had hypertension, 6% had diabetes, mean creatinine value was 0,96 mg/dl (DS: 0,22) and mean VFG was 92,8 (DS: 17,8). At the follow-up, BMI was 27,3 (DS: 4,2), smokers were 11%, 61% had
hypercholesterolemia, 39% had hypertension (p = 0.37) with all those patients undergoing medical therapy, 17% were diabetics (p = 0.0). Mean creatinine value at follow up was 0.92 mg/dl (DS: 0.19) and mean VFG was 88.1 (DS: 21.7).

CONCLUSIONS: At 10 years follow up, overall renal function

MP05-25 INCIDENCE OF AND FACTORS ASSOCIATED WITH IMMEDIATE COMPLICATIONS AFTER EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY

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INTRODUCTION AND OBJECTIVES: Purpose: Urinary calculi are prevalent and extracorporeal shock wave lithotripsy (ESWL) is a widely utilized treatment modality for renal and some ureteric calculi. Although ESWL is generally considered safe reported complications after ESWL are not rare. Most previous studies are single hospital based. Our study aimed to investigate the incidence of and associated factors with immediate complications after ESWL.

METHODS: Materials and Methods: This is a cross sectional population-based study using the claim data of one million subjects randomly selected from all beneficiaries of Taiwan National Health Insurance in year 2010. All data of ESWL between April first, 2010 and December 31th, 2011 were recorded from ambulatory claim files. Then the data were linked to identify the records of emergency department visits, with relevant diagnoses including renal colic, hydrenephrosis, urinary tract infection, hematuria or perinephric hematoma, within three days after ESWL. The incidence will be analyzed according to stone location (kidney or ureter stone), patient characteristics (age, sex, comorbidity) and physician characteristics (age, sex, accreditation level of hospital).

RESULTS: Results: The incidence of immediate complications after ESWL according to different associated factor. Independent risk factors associated with immediate complications after ESWL.

CONCLUSIONS: Some factors may increase complications of ESWL.

SOURCE OF FUNDING: None

MP05-26 SINGLE CENTER, SINGLE OPERATOR COMPARATIVE STUDY OF EFFICACY AND OUTCOMES OF ELECTROHYDRAULIC AND ELECTROMAGNETIC EXTRACORPOREAL SHOCK WAVE LITHOTRIPTORS

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INTRODUCTION AND OBJECTIVES: To compare the efficacy and outcomes of 2 types of shock wave machines, electrohydraulic lithotriptor (E3000) and electromagnetic lithotriptor (EM1000), in the treatment of upper urinary tract stones.

METHODS: We retrospectively reviewed the efficacy and outcomes of shock wave lithotripsy (SWL) in 270 patients meeting study inclusion criteria with upper urinary tract stones from January 2011 to June 2013 with Medispec’s E3000 electrohydraulic shock wave lithotriptor (180 cases) and Medispec’s EM1000 electromagnetic shock wave lithotriptor (90 cases). A single operator performed all SWL treatments under the supervision of urologists in a single center. We analyzed the demographic features, treatment parameters, such as stone site and size, and complications for both lithotriptors. Patients were evaluated 4 weeks after lithotripsy by plane abdominal X-ray. Comparisons of treatment outcomes, such as disintegration rate, stone-free rate, retreatment rate and auxiliary procedure rate, were done for both groups.

RESULTS: In our study, the pre-SWL patients characteristics, treatment parameters and stone-related parameter were similar in both groups. There were higher stone-free rate and disintegration rate in the electrohydraulic group. The retreatment rate in the electromagnetic group was higher. The complication rate including pain, skin or subcapsular hematoma were not significantly different between groups.

CONCLUSIONS: The electrohydraulic lithotriptor (Medispec’s E3000) resulted in higher disintegration rate and stone-free rate with similar complication rate compared with electromagnetic lithotriptor (EM1000) group. The advantage of electromagnetic lithotriptor group was that the SWL were performed without anesthesia or analgesic.

SOURCE OF FUNDING: None

MP05-27 NEW IS SILVER AND OLD IS GOLD – NOT TRUE FOR SIEMENS THIRD GENERATION ELECTROMAGNETIC LITHOTRIPTERS

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INTRODUCTION AND OBJECTIVES: Extracorporeal shock wave lithotripsy (ESWL) is important for treatment of urinary lithiasis. Siemens Modularis (SM) and Siemens Lithoskop (SL) are both third generation electromagnetic lithotripters. SL is a newer model with wider focal zone and online targeting capability, and a potential for higher stone free rates after one session. This study aims to compare stone free rates after first session of ESWL between SM and SL.

METHODS: Between August 2012 and September 2013, we retrospectively reviewed 100 ESWL cases performed with SM and SL each. All stones were less than 2 cm and were first session ESWL. The stones were localised and treated as per guidelines. They were followed up within 30 days with the same radiological imaging used before and after the procedure. The operators were all doctors trained in operating the lithotripters.

RESULTS: Mean stone size for SL in the kidney and ureter were 9.8 mm (SD 3.7) and 9.9 mm (SD 4.2) respectively with 54% located in the kidney and 46% in the ureter. The mean stone size for SM was 10.4 mm (SD 3.8) in the kidney and 10.1 mm (SD 3.5) in the ureter with 58% located in the kidney, and 42% in the ureter. Overall stone free rate for both kidney and ureter combined was 45% for SM and 20% for SM and this was significant with a p-value of 0.001.

CONCLUSIONS: We conclude that the initial clinical experience with SL shows higher stone free rate after one session of ESWL compared to an older electromagnetic lithotripter, SM.

SOURCE OF FUNDING: None
MP05-28 PAIN IS A SIGNIFICANT FACTOR FOR PREDICTING THE SUCCESS RATE OF ONE-SESSION SHOCK WAVE LITHOTRIPSY FOR TREATING URETER STONES

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INTRODUCTION AND OBJECTIVES: This study was conducted to evaluate prognostic pretreatment factors that influence ureter stone clearance and to estimate the probability of stone-free status in SWL patients with a ureter stone.

METHODS: We retrospectively reviewed the medical records of 1,418 patients who underwent their first SWL between 2005 and 2013. Among these, 551 patients with a ureter stone 4–20 mm were eligible for our analyses. A detailed description of the ureter stone was obtained, including history of pain onset and stone characteristics. SWL treatment was defined as successful when patients were rendered stone-free or had asymptomatic, clinically insignificant residual fragments (< 4 mm) as measured on X-ray.

RESULTS: Before SWL was performed, 263 patients had no pain (painless group) and 288 had pain before SWL (painful group). The maximal stone length in the painless group (9.61 ± 4.10 mm) was longer than that in the painful group (8.80 ± 5.34 mm; P = 0.044). Mean stone densities (MSDs) were 744.95 ± 281.94 HU in the painless group and 666.13 ± 248.26 HU in the painful group (P < 0.001). One-session success and stone-free rates were higher in the painless group (74.7% and 71.9%, respectively) than in the painful group (60.5% and 57.8%, respectively) (P < 0.001 for both factors). A multivariate logistic regression model revealed that painful stone (odds ratio [OR]: 1.593, 95% confidence interval [CI]: 1.077–2.362, P = 0.020), shorter stone length (OR: 0.917, 95% CI: 0.872–0.960, P < 0.001) and lower MSD (OR: 0.997, 95% CI: 0.997–0.998, P < 0.001) were statistically significant indicators of one-session success.

CONCLUSIONS: Pain in patients with ureter stones was a significant predicting factor for one-session success of SWL.

SOURCE OF FUNDING: Nil

INTRODUCTION AND OBJECTIVES: New generation lithotriptors have been introduced into Taiwan for years. These lithotriptors offer an immersion free treatment and decrease in shock wave induced pain. Among different analgesic methods used to overcome the pain experienced during Extracorporeal Shock Wave Lithotripsy (ESWL) patient control analgesia (PCA) was reported to have effective pain relief. We test the feasibility of PCA in ESWL in Taiwan.

METHODS: A total of 71 consecutive patients with renal or ureter stone were enrolled into two group to have fentanyl infused by PCA or by anesthesiologist. The dose of fentanyl, stone size, location, maximum energy level achieved, number of shock wave given, duration of procedure and pain scores were recorded as the parameters to evaluate the difference between the two groups.

RESULTS: The fentanyl needed in PCA group and non-PCA group were 19.0+/–20.0 μg versus 71.7+/–29.5 μg (p=0.00). The side effects of fentanyl including nausea giddiness were lower in PCA group.

CONCLUSIONS: PCA decreases narcotic requirement and hence its adverse effect. These advantages favor an outpatient procedure and can be used to qualify the amount of analgesic requirement during lithotripsy. In conclusion of safety and comfort, PCA may be an alternative choice of pain control for ESWL.

SOURCE OF FUNDING: Nil

MP05-29 PATIENT CONTROL ANESTHESIA IN EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY FOR URULITHIASIS

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INTRODUCTION AND OBJECTIVES: This study was conducted to evaluate the feasibility of patient controlled analgesia (PCA) in Extracorporeal Shock Wave Lithotripsy (ESWL) patient control analgesia (PCA) was reported to have effective pain relief. We test the feasibility of PCA in ESWL in Taiwan.

RESULTS: Before SWL was performed, 263 patients had no pain (painless group) and 288 had pain before SWL (painful group). The maximal stone length in the painless group (9.61 ± 4.10 mm) was longer than that in the painful group (8.80 ± 5.34 mm; P = 0.044). Mean stone densities (MSDs) were 744.95 ± 281.94 HU in the painless group and 666.13 ± 248.26 HU in the painful group (P < 0.001). One-session success and stone-free rates were higher in the painless group (74.7% and 71.9%, respectively) than in the painful group (60.5% and 57.8%, respectively) (P < 0.001 for both factors). A multivariate logistic regression model revealed that painful stone (odds ratio [OR]: 1.593, 95% confidence interval [CI]: 1.077–2.362, P = 0.020), shorter stone length (OR: 0.917, 95% CI: 0.872–0.960, P < 0.001) and lower MSD (OR: 0.997, 95% CI: 0.997–0.998, P < 0.001) were statistically significant indicators of one-session success.

CONCLUSIONS: Pain in patients with ureter stones was a significant predicting factor for one-session success of SWL.

SOURCE OF FUNDING: None

MP05-30 IMPACT OF SHOCK WAVE LITHOTRIPSY ON RENAL FUNCTION

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INTRODUCTION AND OBJECTIVES: Data on the long-term impact of shock wave lithotripsy (SWL) on renal function is lacking. Our objective was to evaluate change (if any) in renal function among patients who underwent SWL treatments, and to assess any cumulative effect of repeated treatments on renal function.

METHODS: We retrospectively analyzed 324 patients who had SWL and two or more 24h urine collections from 2002–2013. The patients were divided into 3 groups based on number of SWL treatments: 1, 2–5, and > 5. We compared the baseline eGFR (calculated using the MDRD formula) to values obtained after at least 1 SWL. Linear regression analysis was used to compare the change in renal function before and after SWL in each of the 3 groups, and logistic regression analysis was used to assess if there was any change in CKD (Chronic Kidney Disease) class following SWL.

RESULTS: 90.1% of patients had normal to mild CKD at both baseline and after SWL (90.1% vs. 85.8%, respectively). In multivariate analysis, age was the only predictor of final eGFR (p=0.01); there was no difference in change in eGFR among patients treated with a single SWL vs. those with multiple treatments (p=0.26). The number of SWL treatments did not impact change in CKD class (p=0.571).

CONCLUSIONS: While some patients demonstrated a small deterioration in renal function over time, the number of SWL treatments did not correlate with this change. Larger scale and prospective or epidemiologic studies that better account for other confounders should be performed to confirm this finding.

SOURCE OF FUNDING: Nil

MP05-31 INTERIM RESULTS OF A RANDOMIZED TRIAL COMPARING NARROW VERSUS WIDE FOCAL ZONES FOR SHOCK WAVE LITHOTRIPSY OF RENAL CALCULI

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INTRODUCTION AND OBJECTIVES: The Modulith SLX-F2 (Storz Medical) is the first lithotripter allowing for a dual focus of either a narrow (6 × 28 mm) or wide (9 × 50 mm) focal zones. The objective of this study is to compare single-treatment success rates of narrow and wide focal zones for the shock wave lithotripsy (SWL) of renal stones.

METHODS: 118 patients with a previously untreated radio-opaque solitary kidney, were randomized to receive narrow (N) or wide (W) focus lithotripsy. Patients were followed with KUB x-rays and renal ultrasound. Urinary markers indicating the degree of renal cellular damage (microalbumin and Beta-2 macroglobulin) were measured pre- and post-SWL, 24 hours post-SWL and 7 days post-treatment. Primary outcome was single-treatment success rate, defined as stone-free or adequate fragmentation (sand and asymptomatic fragments <=4 mm) at 3 months post-treatment.

RESULTS: 61 (51.7%) patients were randomized to narrow focus versus 57 (48.3%) patients to wide focus. The groups were similar in baseline characteristics (age, gender, BMI, stone size and density and skin to stone distance). The overall success rates were not significantly different at 2 weeks post treatment (N:72.1% vs W:61.4%; P = 0.216) nor at 3 months (N:68.3% vs W:58.9%; P = 0.292). The microalbumin-to-creatinine ratio was significantly different between the two groups (p = 0.019) that difference was gone within 24 hours after the treatment.

CONCLUSIONS: Interim results indicated that single-treatment success rate and complications are comparable when using the narrow or wide focus of the Modulith SLX-F2. We are continuing to recruit patients to a pre-planned sample size of 300.

SOURCE OF FUNDING: No funding

MP06 ENDOUROLOGY: URETEROSCOPY 1

MP06-01 DEFINING THE RATE OF ENCOUNTERING THE DIFFICULT URETER IN PATIENTS UNDERGOING FLEXIBLE URETEROSCOPY

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INTRODUCTION AND OBJECTIVES: Successful performance of retrograde intrarenal surgery (RIRS) with flexible ureteroscopy depends on achieving primary access through the ureter. It has been stated that primary access up the ureter is not possible in 8–10% of attempted cases of RIRS. This figure is not uniformly defined, however. We define the rate of failed primary ureteral access in a consecutive series of patients undergoing flexible ureteroscopy with a fiberoptic flexible ureteroscope (Flex X2).

METHODS: We retrospectively reviewed all ureteroscopies performed at our institution during 2013. Data was collected including indication for ureteroscopy, the presence of a pre-existing stent and the presence of active ureteral pathology. Ureteral access sheaths were not used routinely for dilation.

RESULTS: A total of 601 flexible ureteroscopies were performed during 2013 at our institution. Of these, 243 (40%) were excluded due to the presence of a previously placed stent. Therefore 358 patients made up the study group. Indications for ureteroscopy were nephrolithiasis (48%), treatment of upper tract urothelial carcinoma (28%), and diagnostic (24%). There were 27 cases (7.5%) in which primary ureteral access was not achieved. 19 of these had associated active ureteral pathology including chronic ureteral stones while 8 were unable to be primarily accessed in the absence of ureteral pathology.

CONCLUSIONS: The rate of encountering a ureter which is difficult to access in the absence of active ureteral pathology is 8/358 (2.2%) when small fiberoptic flexible ureteroscopes are utilized. This may serve as a benchmark to continue to promote the further development of smaller diameter digital flexible ureteroscopes.

SOURCE OF FUNDING: None

MP06-02 CRITICAL ANALYSIS OF MECHANICAL URETERAL STENT COMPLICATIONS: A SINGLE INSTITUTION EXPERIENCE

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INTRODUCTION AND OBJECTIVES:Despite their widespread use, stents are associated with varying degrees of irritative urinary symptoms and pain. We sought to evaluate our experience with mechanical stent complications including encrustation, stent migration, stenosis/occlusion, accordion/kinking, or fracture.

METHODS: A retrospective review was performed of patients that underwent ureteral stent placement by a single surgeon between September 2003 and December 2013. A total of 1147 ureteral stents were evaluated based on complete records and adequate follow-up. All stent related data were entered on the date of the placement and updated in a prospectively maintained database.

RESULTS: Ureteral stents (n = 1147) were placed in patients 18–93 years old (mean 56.7), and consisted of 630 men (54.9%) and 517 women (45.1%). Stents were placed on the left (43.8%) or right (56.2%). Stents from 3 different manufacturers were evaluated. Stent diameters included <5F (n = 61), 5F (n = 701), 6F(364), and ≥7F (n = 21), and lengths <20 cm (n = 32), 20 cm (n = 8), 22 cm (n = 36), 24 cm (n = 807), 26 cm (n = 213), 28 cm (n = 17), and multilength (n = 34). The mean indwelling stent duration was 17.2 days (median 9 days). Mechanical stent complications were noted in 20 (1.7%) patients and included: encrustation in 6 patients (0.52%), stent migration in 8 patients (0.70%), stenosis/occlusion in 5 patients (0.44%), and accordion/kinking in 1 patient (0.09%), Most of the complications were immediately treated successfully except in 1 patient that required 5 additional endoscopic procedures to manage his condition.
CONCLUSIONS: Stent design, material, and manufacturing are important components to mechanical stent-related complications. In addition, surgeon experience, appropriate stent selection, and proper stent placement technique are invaluable adjuncts to minimizing complications.

SOURCE OF FUNDING: None

MP06-03 PATIENTS UNDERGOING URETEROSCOPIC LITHOTRIPSY MAY BE EXCELLENT SINGLE SESSION SWL CANDIDATES BASED UPON TRIPLE D SCORE

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INTRODUCTION AND OBJECTIVES: The Triple D (DDD) score utilizes CT findings to predict the probability of shockwave lithotripsy (SWL) success. A recent cost-effectiveness analysis reported that SWL outperforms URS when the SWL stone-free (SF) rate is greater than 65%. We hypothesize that many patients undergoing URS with a favorable DDD score may have been excellent SWL candidates.

METHODS: The last 100 patients undergoing URS at our institution were reviewed. 75 had available preoperative CT imaging. Patients with distal ureteral stones, acute presentation, or multiple stones larger than 4 mm on the side of treatment were excluded. DDD score was calculated from stone density, volume and skin-to-stone distance.

RESULTS: 61 patients were included. 29/61 (47.5%) of patients had a DDD score greater than or equal to 2. Among these, 22/61 (36.0%) patients had a DDD score of 2 and 7/61 (11.4%) had a DDD score of 3, which correlate with SWL SF rates of 75% and 95%, respectively. The overall URS SF rate for our cohort was 92%. 66% of patients that failed initial treatment had multiple stones and the remaining 33% had stone volume greater than 500 mm³.

CONCLUSIONS: Cost-effective stone treatment requires careful patient selection. The DDD score identifies patients with a high probability for successful SWL. We conclude that many patients undergoing URS as first line therapy would be excellent single-session SWL candidates. These findings reinforce the importance of proper patient selection, which allow for SWL to be a noninvasive and cost-effective treatment modality for the management of urinary stones.

SOURCE OF FUNDING: None

MP06-04 ACCURACY OF URETEROSCOPIC BIOPSY COMPARED TO RADICAL NEPHROURETERECTOMY PATHOLOGY

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INTRODUCTION AND OBJECTIVES: Ureteroscopic biopsy is the most accurate technique to date for grading upper tract urothelial carcinoma (UTUC) and thereby guiding treatment decision making. The aim of this study was to evaluate the concordance between ureteroscopic biopsy grade and final pathologic grade at the time of radical nephroureterectomy (RNU).

METHODS: A retrospective review was performed of all patients who underwent RNU for UTUC at our institution over a 10-year period. Those with a cytopathologic biopsy of UTUC from ureteroscopic evaluation followed by surgical resection were included. Ureteroscopic specimens were then compared to the final surgical specimen to determine grade concordance. Both the 1973 and 2004 WHO grading classification systems were utilized during this study period. Grade was classified as low (low, grade 1, grade 1–2, low grade 2) or high (high, grade 2–3, grade 3, high grade 2). Sub-group analysis was performed for those who did not have a tumor grade on ureteroscopic biopsy (atypical, suspicious, positive).

RESULTS: Of 149 patients who underwent RNU, 104 patients had complete ureteroscopic biopsy and RNU final pathology results. Among 79 patients who had low or high grade at both biopsy and RNU, grade concordance was 76%: while downgrade was 4% and upgrade was 20%. Nineteen patients did not have a tumor grade on ureteroscopic biopsy, of which the majority (13/19, 68%) had high grade RNU pathology.

CONCLUSIONS: Ureteroscopic biopsy grade accurately predicts the final RNU grade. However, patients found to have atypical, suspicious, or positive cytopathology warrant careful attention.

SOURCE OF FUNDING: None

MP06-05 PERCUFLEX HELICAL URETERAL STENT PROVIDES EXCELLENT PATIENT COMFORT AND UPPER TRACT DRAINAGE

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INTRODUCTION AND OBJECTIVES: Ureteral stent discomfort is a problem. A novel helically cut Percuflex stent (Boston Scientific) was developed to follow the shape of the ureter to improve patient comfort. We sought to determine its comfort in a prospective single-arm study of patients undergoing ureteroscopy for stone disease.

METHODS: A 6F Percuflex Helical ureteral stent (Boston Scientific Corporation) was placed in patients following successful ureteroscopy. Patients filled out a visual analog score (VAS) and analgesic record at regular intervals.

RESULTS: Fifteen (10M:5F) patients were enrolled. Stent remained in 7.3±1.2 d and mean stone size was 11.5±1.9 mm. Ureteral access sheath was used in 20% of cases, 0% balloon dilation, 0% pre-stented, basket in 33%, and 100% of cases used holmium:YAG laser. There were no intraoperative complications. Two developed UTI post-op. Three required unscheduled visits for pain or infection and all resolved. Flank and lower abdominal pain, urgency and frequency were never statistically significantly different from baseline levels. Urethral pain was the only parameter significantly worse on post-operative day 1 (p=0.017) and day 2 (p=0.037) compared to baseline levels in the stented patients, but this resolved by day 7. 66% of patients did not require medications in the recovery room or 4 weeks following surgery. 82% of patients were satisfied and of 5 patients who had stents previously, 4 (80%) reported the Helical stent to be more comfortable.

CONCLUSIONS: The Percuflex Helical stent is a very well-tolerated stent in patients following uncomplicated ureteroscopy.
The Helical stent may be more comfortable than regular double-J stents. Further studies will be necessary.

**SOURCE OF FUNDING:** Boston Scientific Provided In-Kind Products. No other financial support was received.

**MP06-06 INCREASED RADIATION EXPOSURE DURING URETEROSCOPY IN THE OBESE PATIENT**

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**INTRODUCTION AND OBJECTIVES:** Patients with urolithiasis are at increased risk of significant radiation exposure. We determined the effect of obesity on radiation exposure during simulated ureteroscopy (URS).

**METHODS:** A validated anthropomorphic adult male phantom with a Body Mass Index (BMI) of approximately 24 kg/m2, was positioned to simulate URS. Padding with radiographic characteristics of human fat was placed around the phantom to create an obese model with BMI of 30 kg/m2. Metal oxide semiconductor field effect transistor dosimeters were placed at 20 organ locations in both models to measure organ dosages. A portable C-arm was used to provide continuous fluoroscopy to simulate URS. Organ dose rates were calculated by dividing organ dose by fluoroscopy time. Effective dose rate (EDR, mSv/sec) was calculated as the sum of organ dose rates multiplied by a tissue weighting factor (ICRP).

**RESULTS:** The mean effective dose rates were higher for the obese model compared with the non-obese model. The mean EDR during left URS was significantly increased in the obese model at 0.0092 ± 0.0004 mSv/sec compared to 0.0041 ± 0.0003 mSv/sec in the non-obese model (p=0.006). The mean EDR during right sided URS was 0.0087 ± 0.0044 and 0.0036 ± 0.0003 mSv/sec in the obese and non-obese model, respectively (p=0.180).

**CONCLUSIONS:** Fluoroscopy during URS contributes to overall radiation dose. Obese patients are at even higher risk due to increased exposure during fluoroscopy. Efforts should be made to minimize the amount of fluoroscopy used during URS, especially in obese patients.

**SOURCE OF FUNDING:** None

**MP06-07 ENDOSCOPIC MANAGEMENT OF UPPER TRACT UROTHELIAL TUMOUR: IS IT SAFE?**

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**INTRODUCTION AND OBJECTIVES:** Gold standard treatment for upper tract urothelial cancer (UTUC) currently remains nephroureterectomy (NU). However, endourological management may allow good long-term outcomes, when a nephron sparing approach is needed. We aimed to evaluate our experience of endourological management of UTUC.

**METHODS:** We reviewed our tertiary centre experience of UTUC from October 2009 to February 2013, assessing initial grading, recurrence rates, progression to NU and overall mortality.

**RESULTS:** 41 patients (24 male, 17 female), mean age 69 years, underwent endoscopic control of UTUC. Four had elective endoscopic management of their UTUC, despite no risk-factors precluding them from NU. The remaining 37 had endoscopic management due to risk of becoming dialysis dependent if NU was undertaken. Follow-up data was available for 26/41 patients: G1: (n=4), 2 recurrence-free (mean follow-up 30 months), one having tumour recurrence at 3 months and one patient proceeding to NU (no cancer on final pathology). G2: (n=11), one patient recurrence-free at 48 months, 6 having recurrence (mean time 12 months), 4 proceeding to NU (3 with G2pTa disease, 1 with G3pT2 on final pathology). G3: (n=9), one patient recurrence-free at 24 months, 5 proceeding to NU (G3pTa in two patients, G3pT3 in two and G2pT1 in one), two had no documented follow-up and one patient died. CIS: (n=2), both proceeding to NU (G3pT2 and G3pT4 respectively on final pathology).

**CONCLUSIONS:** Endoscopic control of UTUC is feasible. G3 disease and CIS, however, have greater potential of harbouring worse true pathological staging (5/9 and 2/2 proceeding to NU respectively); these cases may not be suitable for endoscopic control.

**SOURCE OF FUNDING:** None

**MP06-08 THE EFFECT OF REPAIR COSTS ON THE PROFITABILITY OF A URETEROSCOPY PROGRAM**

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**INTRODUCTION AND OBJECTIVES:** Ureteroscopy (URS) is a common surgical approach for the management of stone disease, but there is great capital expense associated with the purchase and repair of endoscopic equipment. In some cases, these costs can outpace revenues and lead to an unprofitable and unsustainable enterprise. We sought to characterize the profitability of our URS program when accounting for endoscope maintenance and repair costs.

**METHODS:** We identified 190 consecutive URS cases performed by a single surgeon during fiscal year 2013 (FY2013). Charges, collection rates, and fixed and variable costs including annual equipment repair costs were obtained. The net margin and break-even point of URS were derived on a per-case basis.

**RESULTS:** For 190 cases performed in FY2013, total endoscope repair costs totaled $115,000, resulting in an average repair cost of $605 per case. The vast majority of cases (94.2%) were conducted in the outpatient setting, which generated a net margin of $659 per case, while inpatient cases yielded a net loss of $455. URS was ultimately associated with a net positive margin approaching $600 per case. On break-even analysis, URS remained profitable until repair costs reached $1,200 per case. Based on these findings, a URS program can sustain profitability even with large equipment repair costs. Nonetheless, our findings serve to emphasize the importance of controlling costs, particularly in the current setting of decreasing reimbursement. A multifaceted approach, based on improving endoscope durability and exploring digital and disposable platforms, will be critical in maintaining the sustainability of URS.

**SOURCE OF FUNDING:** None
MP06-09 ACCURACY OF RETROGRADE PYELOGRAPHY IN THE EVALUATION OF THE RENAL COLLECTING SYSTEM

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INTRODUCTION AND OBJECTIVES: Fluoroscopic retrograde pyelography (RPG) is believed to be highly sensitive for diagnosing upper tract malignancy. The objective of this study was to determine the accuracy of RPG using iodinated-contrast in the evaluation of the upper urinary tract by comparison to retrograde ureteroscopy (URS).

METHODS: We prospectively performed RPG in patients undergoing elective URS for management or surveillance of carcinoma or urolithiasis at our institution between February 2014 and May 2014. RPG was performed with a 5F open-ended catheter to instill a 50% mixture of saline and iodinated-contrast or sterile-water and contrast into the ureter under fluoroscopic monitoring until the entire collecting system was thought to be opacified without creating extravasation. URS evaluation was subsequently performed to confirm the actual collecting system anatomy. The degree of hydronephrosis, number and location of all major and minor calyces were recorded then compared with saved RPG images.

RESULTS: 54 patients (34 Female and 20 male) with an average age of 57-years (22–82 years) were included in the study. Mild, moderate and severe hydronephrosis was present in 13, 16 and 6 patients respectively. RPG significantly identified fewer calyces than URS regardless of whether they were located in the upper (UP), interpolar (IP) or lower pole (LP). This difference remained significant after patients with moderate to severe hydronephrosis were excluded. There was no difference whether the contrast was mixed with saline or with sterile-water.

CONCLUSIONS: A significant number of calyces are missed by RPG compared to URS regardless of the location and degree of hydronephrosis present.

SOURCE OF FUNDING: None

MP06-10 DIAGNOSIS AND MANAGEMENT OF URETERAL FIBROEPITHELIAL POLYPS IN CHILDREN: A NEW TREATMENT ALGORITHM

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INTRODUCTION AND OBJECTIVES: Fibroepithelial polyps (FP) are a rare cause of ureteropelvic junction obstruction (UPJO) in children. The purpose of this study is to review our experience with diagnosis and management of ureteral FP using endoscopic and open surgical techniques in a pediatric cohort.

METHODS: We retrospectively reviewed the records of patients aged 0–18 years who underwent surgical treatment for UPJO at a single academic medical center between January 2008 and November 2013. Presenting symptoms, diagnostic imaging, intraoperative findings, and follow up studies of 3 cases of ureteral FP were reviewed.

RESULTS: Four male patients were treated for UPJO caused by FP. Mean patients’ age was 12 years, and all presented with ipsilateral intermittent flank pain. Preoperative imaging showed hydronephrosis. All patients underwent dismembered pyeloplasty. Ureteroscopy was performed in those patients with filling defects for polyp mapping and evaluation of the polyp appearance. Based on ureteroscopic findings, endoscopic polypectomy was performed in patients with single, pedunculated polyps. Open dismembered pyeloplasty was performed for multilobulated polyps too large for endoscopic treatment. All patients remained symptom free at last follow-up. In all patients, eGFR was stable following surgery.

CONCLUSIONS: Diagnosis of ureteral FP is usually made at the time of pyeloplasty but can be achieved endoscopically even in the pediatric population. Ureteroscopy is a useful adjunct to open surgical treatment for both diagnostic and therapeutic purposes, especially when multiple ureteral polyps are suspected.

SOURCE OF FUNDING: None

MP06-12 INTRODUCTION OF THE K.U.B GRADING SYSTEM FOR ENTOMBED STENTS

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INTRODUCTION AND OBJECTIVES: This study introduces a five point preoperative K.U.B grading system to help identify entombed stents that may require multimodality therapy and multiple trips to the operating room (OR) for successful stent removal.

METHODS: A novel K.U.B. 5-point grading system based upon stone size and complexity divided into kidney, ureter, and bladder stone involvement was developed and tested on the 23 most recent entombed stents treated in an academic program. The primary endpoint was successful removal of the entombed stent. Fisher’s exact test and standard unpaired T-tests were used to determine statistical significance, with p<0.05 considered significant.

RESULTS: Average stent duration was 17 months. 62% received multimodality therapy with 85% removed in one setting. Mean KUB score was lower for stents removed with one modality (4.83 vs. 7.00; p=0.016) and one OR visit (5.09 vs. 7.67; p=0.05) compared to multiple settings. Scores that were associated with multiple modalities included U score (p=0.02) and U+B score (p=0.01). Scores associated with multiple trips to the OR included average K score (p=0.03), average U score (p=0.03), cumulative score (p=0.05), and K+U score (p=0.014).

CONCLUSIONS: The simple K.U.B system for entombed stents predicts ultimate stent-free status and those requiring multiple modalities and operative settings.

SOURCE OF FUNDING: None

MP06-13 FLEXIBLE URETERORENOSCOPY IS SAFE AND EFFICIENT FOR THE TREATMENT OF KIDNEY STONES IN PATIENTS WITH CHRONIC KIDNEY DISEASE

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INTRODUCTION AND OBJECTIVES: To evaluate the outcomes of kidney stone treatment using flexible ureterorenoscopy (f-URS) among patients with chronic kidney disease (CKD).

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: Since there is limited data regarding the results of shockwave lithotripsy (SWL) and flexible ureterorenoscopy (F-URS) in patients with solitary kidneys, we aimed to compare the outcomes of SWL and F-URS in this patient population.

METHODS: The database of our institution has been retrospectively reviewed and medical records of urolithiasis patients with a solitary kidney who underwent F-URS or SWL between January 2009 and December 2012 were examined. Retreatment rates, complications, changes in estimated glomerular filtration rates (eGFR), chronic kidney disease (CKD) stages and stone-free rates were compared between the two groups.

RESULTS: Overall stones of 48 patients (mean age of 48.8 ± 15.4, range: 14–76) with solitary kidneys were treated with SWL (n = 30, 62.5%) or F-URS (n = 18, 37.5%). Patient demographics and stone related parameters were similar. The most common stone location was pelvis in SWL group (36.6%) whereas it was pelvis and a calyx in F-URS group (38.8%). Complication and success rates were similar in both groups although patients in Group 1 needed more sessions to achieve stone clearance (2.2 ± 0.89 vs. 1.06 ± 0.24, p = 0.0001). Preoperative and postoperative eGFR and CKD stage changes were also similar.

CONCLUSIONS: Both SWL and F-URS are effective and safe techniques that can be used to manage kidney stones in patients with a solitary kidney. However, patients treated with SWL need more sessions to achieve stone clearance.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: Some urologists are not trained with the use of flexible ureteroscopy and routinely use semi-rigid ureteroscopy for the treatment of proximal ureteral stones. The goal of our study was to assess the safety and efficacy of semi-rigid ureteroscopy for proximal ureteral stones.

METHODS: Retrospective review of patients who had semi-rigid ureteroscopy for solitary proximal ureteral stone in an academic hospital setting.

RESULTS: Among 333 consecutive patients who had ureteroscopy between 6/2011 and 8/2013 we have identified 75 who had semi-rigid ureteroscopy for solitary proximal ureteral stone. Among these 15 (20%) were female. Average stone size was 8.6 mm (range 4–17). 19 patients (26%) were pre-stented and 2 (2.6%) had nephrostomy tube preoperatively. No intraoperative complications occurred. In 7 patients (9.3%) the rigid ureteroscope was not able to reach the stone and in 12 (16%) the stone was flushed into the kidney. Among these 19 patients, in 14 cases (74%) the preforming urologist was proficient with the use of flexible ureteroscopy and the procedure was completed with a flexible ureteroscope. 5 patients needed ancillary procedures. With a mean follow-up of 8.2 months, no ureteral strictures occurred. Overall SFR was 73% for stones of any size and 93.5% for stones larger than 2 mm.

CONCLUSIONS: Semirigid ureteroscopy is safe and effective for proximal ureteral stones. In a quarter of patients the procedure could not be completed without the use of a flexible ureteroscope, thus urologists should be encouraged to learn the use of flexible ureteroscopy when performing ureteroscopy for proximal ureteral stones.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: In this study, we describe and now will be automatically sent to remind short message service (SMS), for both the patients and the phone number of the urologist.

METHODS: We have integrated a stents register program (SRP) and extract the reminders (serps) to our hospital computer network and electronic medical records plan (EPRP). A after stent implantation, the doctor entered the EPRP operations on details. SRP automatically for the user “best life”. In the serps check record when patients every day to send the rest of the message be the best support for staff and patients. In the serps continue to send messages to the bracket will be deleted. We analysis the success of SMS recall system and the preliminary results of the project.

RESULTS: In the period of 11 months a total of 165 patients in the intubation. The serps have been recalled in 97 patients (group 2) and others beyond project (N: 68, group 1). Average delay specified optimal stent life entent removal rate was 11.7, 13.5, group 1 and 2, respectively (P < 0.001). In addition, we determined, this application provides a positive additive effect, in the patient’s satisfaction.

CONCLUSIONS: Although during the follow-up period is short, our preliminary results show that the SRP and the search results page will appear stents removed ignored, be forgotten ureteral stents produced by the legal and medical solutions of the problem. This system can be used for those who need close follow-up tracking, such as the bladder and prostate cancer patients.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Semirigid and flexible ureterorenoscopy (URS) are safe and efficient treatment options for Urolithiasis of all localizations. Often, a JJ-stent is placed in preparation of definitive treatment. Aim of our study was to evaluate the influence of prestenting on therapy success of URS.

METHODS: We analyzed 565 patients out of our prospective multicenter, multinational database who underwent URS for renal or ureteral stones from 06/2011 to 12/2013. Demographic and stone related data, surgery time, stone clearance and complications were evaluated. Statistical analysis was performed using R 2.15 comparing the prestented and not-prestented group.

RESULTS: Demographic data, stone size and localization were comparable in both groups. 323 patients were prestented and 242 not. Overall, prestenting had significant influence on stone free rate (86.38% prestented vs 73.97% not-prestented, p = 0.0003) and complication rate (6.5% vs 14.46%, p = 0.003) but not on surgery-time (55.34 ± 36.11 vs 60.83 ± 35.28 min, p = 0.071). Subgrouped for ureteral and renal calculi, this was also true for renal stones (82.67% vs 60.19%, p = 0.0001/8.67% vs 19.42%, p = 0.02/
**MP06-20** APPLICATION OF FLEXIBLE URETEROSCOPY WITH HOLMIUM LASER IN UPPER URINARY TRACT CALCULI WITH ABNORMAL ANATOMY

**INTRODUCTION AND OBJECTIVES:** To evaluate the therapeutic effect of flexible ureteroscopy with holmium laser in treating upper urinary tract calculi with abnormal anatomy.

**METHODS:** We retrospectively reviewed the records of 10 patients with abnormal anatomy who underwent flexible ureteroscopy using a holmium laser from June 2011 to May 2013. The calculi diameter was 0.8 cm – 1.8 cm. The operations were performed 2 weeks after double-J placement. The ureteral access sheath was placed first, and the flexible ureteroscopy was inserted. Lithotripsy were finished by 20 ~ 30 walt holmium laser with 200μm fiber within single operation.

**RESULTS:** All calculi were found successfully. No significant complication happened. The operative time and hospital stay were 25 ~ 40 minutes and 2 ~ 4 days. Calculi free rate was achieved 100% 3 month later.

**CONCLUSIONS:** Flexible ureteroscopy with holmium laser is a safe, efficient and minimal invasive procedure way in treating upper urinary tract calculi with abnormal anatomy.

**SOURCE OF FUNDING:** None

**MP06-21** EFFECT OF OPERATING ROOM TIME ON SAFETY AND OUTCOMES IN URETEROSCOPY WITH LASER LITHOTRIPSY

**INTRODUCTION AND OBJECTIVES:** Many urologists feel that prolonged operative time during ureteroscopy (URS) with laser lithotripsy is associated with an increased risk of complications. The objective of this study was to determine the effect of operating room time on safety and efficacy of flexible and rigid URS with laser lithotripsy.

**METHODS:** Retrospective chart review was conducted on all URS cases for renal and ureteral stones performed by three surgeons at one institution from January 2007 to January 2013. Access sheath use was analyzed. Reviewed complications included UTI, urosepsis, readmission, or requirement of second procedure. Post-operative imaging also reviewed for post-operative hydronephrosis. Treatment success rate was determined.

**RESULTS:** 687 patients were identified for a total of 757 procedures. Mean age was 51 years. Average stone size was 8.7 mm, with no difference in size between access vs no access sheath. Overall stone-free rate was 96%. An access sheath was used in 351 patients. The complication rate was 6.26% with the use of an access sheath and 8.37% without the use of an access sheath, which was no difference (p > 0.05). In patients without access sheath, 2.22% patients had post-operative hydronephrosis. In those patients with access sheath, 5.40% patients had post-operative hydronephrosis (p > 0.05). In all patients except one, who ultimately required surgery, the post-operative hydronephrosis resolved without intervention.

**CONCLUSIONS:** In this study, there was no difference in complications, stone free rates, stricture formation, or postoperative sepsis in patients undergoing URS regardless of whether or not an access sheath was used.

**SOURCE OF FUNDING:** None

**MP06-22** NO DIFFERENCE IN OUTCOMES WITH AND WITHOUT A URETERAL ACCESS SHEATH FOR FLEXIBLE URETEROSCOPY WITH LASER LITHOTRIPSY

**INTRODUCTION AND OBJECTIVES:** There has been much discussion regarding the advantages and disadvantages of access sheaths in ureteroscopy (URS) and laser lithotripsy. The purpose of this study was to identify outcomes and complications associated with use of access sheaths during flexible ureteroscopy with laser lithotripsy.

**METHODS:** Retrospective chart review was conducted on all URS cases for renal and ureteral stones performed by three surgeons at one institution from January 2007 to January 2013. Access sheath use was analyzed. Reviewed complications included UTI, urosepsis, readmission, or requirement of second procedure. Post-operative imaging also reviewed for post-operative hydronephrosis. Treatment success rate was determined.

**RESULTS:** 687 patients were identified for a total of 757 procedures. Mean age was 51 years. Average stone size was 8.7 mm, with no difference in size between access vs no access sheath. Overall stone-free rate was 96%. An access sheath was used in 351 patients. The complication rate was 6.26% with the use of an access sheath and 8.37% without the use of an access sheath, which was no difference (p > 0.05). In patients without access sheath, 2.22% patients had post-operative hydronephrosis. In those patients with access sheath, 5.40% patients had post-operative hydronephrosis (p > 0.05). In all patients except one, who ultimately required surgery, the post-operative hydronephrosis resolved without intervention.

**CONCLUSIONS:** In this study, there was no difference in complications, stone free rates, stricture formation, or postoperative sepsis in patients undergoing URS regardless of whether or not an access sheath was used.

**SOURCE OF FUNDING:** None

**MP06-23** URETEROSCOPY WITH LASER LITHOTRIPSY IN OBES AND DIABETIC PATIENTS IS ASSOCIATED WITH AN INCREASED RISK OF COMPLICATIONS

**INTRODUCTION AND OBJECTIVES:** There has been much discussion regarding the advantages and disadvantages of access sheaths in ureteroscopy (URS) and laser lithotripsy. The purpose of this study was to identify outcomes and complications associated with use of access sheaths during flexible ureteroscopy with laser lithotripsy.

**METHODS:** Retrospective chart review was conducted on all URS cases for renal and ureteral stones performed by three surgeons at one institution from January 2007 to January 2013. Access sheath use was analyzed. Reviewed complications included UTI, urosepsis, readmission, or requirement of second procedure. Post-operative imaging also reviewed for post-operative hydronephrosis. Treatment success rate was determined.

**RESULTS:** 687 patients were identified for a total of 757 procedures. Mean age was 51 years. Average stone size was 8.7 mm, with no difference in size between access vs no access sheath. Overall stone-free rate was 96%. An access sheath was used in 351 patients. The complication rate was 6.26% with the use of an access sheath and 8.37% without the use of an access sheath, which was no difference (p > 0.05). In patients without access sheath, 2.22% patients had post-operative hydronephrosis. In those patients with access sheath, 5.40% patients had post-operative hydronephrosis (p > 0.05). In all patients except one, who ultimately required surgery, the post-operative hydronephrosis resolved without intervention.

**CONCLUSIONS:** In this study, there was no difference in complications, stone free rates, stricture formation, or postoperative sepsis in patients undergoing URS regardless of whether or not an access sheath was used.

**SOURCE OF FUNDING:** None
INTRODUCTION AND OBJECTIVES: The objective of this study was to determine if diabetes and obesity increased complications in patients undergoing ureteroscopy (URS) with laser lithotripsy.

METHODS: Retrospective chart review was conducted on all URS cases for renal and ureteral stones performed by three surgeons at one institution from January 2007 to January 2013. The factors assessed included body mass index (BMI), history of diabetes, hypertension, hyperlipidemia, hepatitis C, or coronary artery disease. Reviewed complications included UTI, urosepsis, rehospitalization, or requirement of second procedure.

RESULTS: 799 patients were identified. Mean patient age was 51 years and average BMI was 30.0 kg/m2. Overall stone-free rate was 97%, with no differences in success rates in diabetic and obese patients. Complication rates between normal and overweight patients were 11.5% and 10.2%, respectively. Complications were higher in obese patients at 16%. Patients with diabetes had a higher complication rate of 22%. BMI and history of diabetes were significantly associated with complications on univariate analysis. Other factors such as hypertension, and hyperlipidemia, were not significantly associated with complications. On multivariate analysis, only diabetes was found to be significantly associated with an increased number of complications.

CONCLUSIONS: In this study, patients with obesity and diabetes mellitus had a higher rate of complications following ureteroscopy with laser. On multivariate analysis only diabetes was associated with a higher complication rate. Overall stone free rate was no different in patients with obesity or diabetes mellitus. Urologists should be aware of the increased risk of complications following ureteroscopy with laser lithotripsy in this group of patients.

SOURCE OF FUNDING: None

MP06-24 THE EFFECTS OF LASER FIBER CLEAVAGE TECHNIQUES ON POWER OUTPUT AND TIP MORPHOLOGY

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INTRODUCTION AND OBJECTIVES: Proper cleavage of reusable laser fibers is required for optimal functionality. This study quantifies the effect of different cleaving tools on power output of the holmium laser fiber and demonstrates morphologic changes with microscopy.

METHODS: Baseline power transmission measurements at 3 watts (0.6 J, 5 Hz) were obtained using new, uncleaved 272 μm reusable laser fibers. Four instruments – 11-blade scalpel, scribe pen cleaving tool, diamond cleaving wheel, and suture scissors – were used to cleave the fibers, and power output was measured in a single-blinded fashion. Fiber cleavage was rated as “ideal,” “acceptable,” or “unacceptable” by blinded reviewers based on light dispersion according to manufacturer specifications. Fiber tips were imaged with confocal and scanning electron microscopy. Independent samples Kruskal-Wallis and chi square tests were used for statistical analysis.

RESULTS: New uncleaved fiber tips transmitted 3.04 W and were used as a reference (100%). Fibers cleaved with the scribe pen, scalpel, diamond cleaving wheel, and suture scissors transmitted progressively less power (97.1%, 83.4%, 77.1%, 61.7%; p < 0.001). On pairwise comparison, the scribe pen produced comparable power output to new tips (p = 1.0). Classification of light dispersion patterns from the different cleavage methods followed the same trend as the power output (p < 0.001). Microscopy showed that the scribe pen produced small defects along the fiber cladding but maintained a smooth core, while the other techniques produced defects on both the core and cladding.

CONCLUSIONS: Cleavage techniques significantly affect the initial power transmitted by reusable laser fibers. The scribe pen cleaving tool produced the most consistent and highest average power output.

SOURCE OF FUNDING: None

MP06-25 PRECISION OF URETEROSCOPIC VISUAL ESTIMATION OF STONE FRAGMENT SIZE

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INTRODUCTION AND OBJECTIVES: We sought to establish the accuracy of fellowship trained endurologists in estimating in vivo stone fragment size during flexible ureterorenoscopy by comparing visual estimated size to measured size.

METHODS: An IRB approved prospective study was conducted with all patients undergoing laser lithotripsy for renal and ureteral stones by fellowship-trained endourologist. In all patients ureteral access sheaths were successfully placed and there was no deviation from standard management of surgeons’ clinical practice. The size of 283 fragments were initially visually estimated by the surgeon from estimation based on a 200 micron laser fiber and a 0 tip nitinol basket (all cases 1.9 Fr). The stone fragment was then basket extracted using a standard 0 tip nitinol stone basket and the largest dimension of the stone was measured by the surgeon using a ruler. Accuracy of measurement was performed by creation of correlation coefficients and creation of Altman-Brand plots.

RESULTS: Fellowship trained endourologists overall underestimated stone size by 0.138 mm. The correlation coefficient was r = 0.70 with p value = 0.13. Stones smaller than 4 mm were underestimated by 0.103 mm (R = 0.65, p = 0.14) and stones larger than 4 mm were underestimated by 0.3 mm (R = 0.04, P = 0.08). Altman-Brand plots demonstrated that the endourologists estimated stone size within a range of 2 to 3 mm.

CONCLUSIONS: Endourologists were accurate in this study in predicting the sizes of stone fragments during ureterorenoscopy. This suggests that endourologists are well trained in making intraoperative decisions on which stone fragments to basket extract in order to achieve optimal stone free rates.

SOURCE OF FUNDING: None

MP06-26 SINGLE-CENTER ANALYSIS OF PREDICTABILITY OF CLEARING RENAL STONE FRAGMENTS FOLLOWING FLEXIBLE URETEROSCOPY

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INTRODUCTION AND OBJECTIVES: The spontaneous clearance of residual renal fragments (CRRF) after flexible
ureteroscopy (fURS) has not been fully examined yet, despite the widespread use of the procedure. The aim of the present study is to investigate factors that predict spontaneous clearance of RRF following fURS.

**METHODS:** Among 632 consecutive URS procedures, 89 were identified to have residual renal fragments by intraoperative URS and on kidney-ureter-bladder films at postoperative day 1. Among them, eight procedures performed by only semi-rigid URS were excluded. Remaining 81 fURSs with/without semi-rigid URS were enrolled in this study. On non-contrast computed tomography at postoperative month 3, 33 (40.7%) cases showed CRRF and 48 (59.3%) cases revealed non-CRRF. Correlations between possible factors and the spontaneous CRRF following fURS were analyzed using a multivariate logistic regression model with backward selection.

**RESULTS:** Significant differences were found between the non-CRRF and CRRF groups in the following parameters: stone number, stone location, presence of lower pole calculi, and preoperative stent placement. A multivariate assessment showed stone number (P = 0.004), presence of lower pole calculi (P = 0.021) and presence of hydronephrosis (P = 0.024) were independent predictors.

**CONCLUSIONS:** Stone number, presence of lower pole calculi and presence of hydronephrosis were independent factors to predict spontaneous CRRF following fURS.

**SOURCE OF FUNDING:** None

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**MP06-27 RETROSPECTIVE STUDY OF URETEROSCOPY WITH HOLMIUM LASER FOR NEPHROLITHIASIS AT RUSH UNIVERSITY MEDICAL CENTER**

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**INTRODUCTION AND OBJECTIVES:** The AUA guidelines recommend informing patients requiring stone removal that both SWL and URS are acceptable first line treatments. URS is associated with a better chance of becoming stone free with a single procedure, but has higher complication rates. The aim of our study was to present our experience with URS and to evaluate the stone-free, re-treatment, and complication rates.

**METHODS:** A retrospective study of 426 nephrolithiasis patients treated with flexible or rigid URS at our institution for ≥1 upper tract stones between July 2007–July 2013 was performed. A JJ–stent was placed in 96.36% of patients and kept for a median time 9 days post–procedure. Data analyzed included stone size, location, operating time, complications as listed below, and need for secondary procedures.

**RESULTS:** Mean stone burden was 9.26 mm. 35.21% of patients had more than one stone treated during URS. The average stone number per patient was 1.55. Mean operating time was 65.08 minutes. Complication rate was 0.96% for sepsis, 0.24% ureteral injury, 0.24% ureteral stricture, 0% Steinstrasse, and 3.13% UTI. Overall single–procedure stone–free rate (defined as absence of stone presence on follow up imaging and absence of need for a secondary procedure) was 92.61%, with 7.39% of patients requiring a secondary procedure.

**CONCLUSIONS:** URS is an effective treatment modality for upper urinary tract stones. Based on the evidence, our URS management of upper tract stones resulted in a higher stone–free rate and lower complication rate compared to the reported SWL stone–free and complication rates in the overall population.

**SOURCE OF FUNDING:** Rush University Dean’s Summer Fellowship

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**MP06-28 TRENDS AND TREATMENT OUTCOMES OF FLEXIBLE URETEROSCOPY (FURS) FOR LOWER POLE STONES**

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**INTRODUCTION AND OBJECTIVES:** To evaluate trends in efficacy and safety of FURS for the treatment of lower pole stones over a six-year period.

**METHODS:** 409 patients were treated for pure lower pole stones over a six-year period (2007–2012) at our institution. An analysis over this period for stone size (mm), number of stones/patient, stone-free rates (SFR), and complications was performed. The SFR were stratified according to stone size (< 5 mm, 5–9 mm, and ≥10 mm), the number of stones/patient and given for each year.

**RESULTS:** There were no annual differences in stone size (7.09 ± 3.41 mm) and number of stones/patient (1.66 ± 2.86) during the six-year period. The total SFR (annual range during six-year period) after one URS procedure was 88% (83.2–94%). Total SFR of 97.6% (88.2–100%), 89.1% (82.9–96.3%), 71% (60–78.6%) for urinary calculi < 5 mm (3.43 ± 0.78 mm), 5–9 mm (6.69 ± 1.34 mm), and ≥10 mm (13.09 ± 6.02 mm) could be demonstrated over the six-year period. The total SFR differed significantly between these groups (p < 0.0179). The SFR decreased from 90% (86.2–95.4%) (1 stone) to 84.1% (60–100%) in those with ≥ 3 stones. Perioperative complications occurred in 9.7% (6–13.6%): Clavien I 5.1% (1.2–8.6%), Clavien II 2% (0–4.9%), Clavien IIIa 0.9% (0.3–4%), Clavien IIIb 1.7% (1.2–4.8%) over the six-year period without differences between the annual complication rates.

**CONCLUSIONS:** FURS is a safe and efficacious procedure for the treatment of lower pole calculi with high primary SFR and a low rate of perioperative complications. FURS in larger stones (≥20 mm) is however associated with a high probability for a staged procedure.

**SOURCE OF FUNDING:** None
patients with ≥3 kidney stones (p≤0.0001). Perioperative complications (range in different locations) occurred in 10.6% (7.4–18%): Clavien I 5.1% (2.8–8.2%), Clavien II 2% (1.8–5.2%), Clavien IIIa 0.9% (0–3.4%), Clavien IIIb 2.2% (1.5–3.6%). The CR was higher in the upper pole (18%) compared to the lower pole (7.4%) (p<0.0061).

CONCLUSIONS: URS is safe and efficacious for the treatment of kidney stones with high primary SFR and low perioperative CR. The SFR is affected by stone size, number of stones/patient and stone location. The relation between the CR and stone location is less clear.

SOURCE OF FUNDING: None

MP06-30 COMPARISON OF OUTCOMES OF URETEROSCOPY FOR URETERAL CALCULI: ANALYSIS OF SIX-YEAR OUTCOME OF A HIGH-VOLUME STONE CENTRE
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INTRODUCTION AND OBJECTIVES: To evaluate the stone-free rates (SFR) and complication rates (CR) of ureteroscopy (URS) for the treatment of ureteral calculi over a six-year period.

METHODS: 996 patients who received URS for ureteral calculi (n=283 proximal ureter, n=255 mid ureter, n=434 distal ureter, n=24 multiple location) from 01/2007 to 12/2012 were included in this study. A time trend analysis over the six-year period for SFR and CR was performed. The SFR were stratified according to stone location, number of stones/patient and analysed for each year.

RESULTS: The total SFR (six-year range) after one URS procedure was 95% (90.1–98.4%). The total SFR (six-year range) were 92.6% (84.4–100%), 95.7% (92.3–100%), and 97.5% (93.1–100%) for proximal, mid, and distal ureteral stones over the six-year period and differed significantly between proximal and distal ureteral stones (p<0.0016). The mean stone sizes differed significantly between proximal (6.9±5.25 mm), mid (5.75±3.45 mm), and distal ureteral stones (6.52±4.73 mm) (p<0.001). The total SFR (six-year range) were 96% (91.5–99.4%) in patients with one stone, 87.9% (70–100%) in patients with two stones, and 80.8% (33.3–100%) in patients with ≥3 stones (p=0.0018). Perioperative complications (six-year range) occurred in 9.7% (4.2–15.3%) of the patients: Clavien I 3.6% (0.4–6.3%), Clavien II 2.3% (0.5–4.2%), Clavien IIIa 1.5% (0–5.9%), and Clavien IIIb 2.3% (0–6.9%) without a trend in the annual CR. No Clavien IV or V complication occurred.

CONCLUSIONS: The SFR for ureteral stones were high with low perioperative CR. Success of URS is rather based on stone size and number of treated stones/patient than on stone location.

SOURCE OF FUNDING: None

MP07 LAPAROSCOPIC SURGERY UPPER TRACT 2

MP07-01 RETROPERITONEAL LAPAROSCOPIC NEPHROURETERECTOMY OF DUPLICATED KIDNEY IN ADULT PATIENTS: A REPORT OF TWO CASES AND REVIEW OF LITERATURE
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INTRODUCTION AND OBJECTIVES: To explore the technique and clinical efficacy of retroperitoneal laparoscopic nephroureterectomy of duplicated kidney.

METHODS: From August 2012 to February 2013, 2 patients with duplicated kidney underwent retroperitoneal laparoscopic heminephroureterectomy in our institution. Both are female, aged 26 years old and 32 years old. IVU and CT were performed pre-operation for the diagnosis of duplicated kidney evaluation of the hydronephrosis renal function. Both patients were complete duplicated ureter and kidney, complicated with ectopic ureterocele malformation. Both cases were treated with retroperitoneal laparoscopic heminephrectomy, with lateral position and classic three-channel mode. Duplex kidney and ureter were removed under laparoscopic procedure. An oblique incision was made on the lower abdominal to treat the distal duplicated ureter and ureterocele.
CONCLUSIONS: Retroperitoneal laparoscopic nephroureterectomy of duplicated kidney is a safe and effective technique with minimal invasion, less blood loss, better cosmetic result, shorter hospital stay and should be regarded as the first choice surgery for patients with duplicated kidney.

SOURCE OF FUNDING: None

MP07-02 THE COMPARISON OF RETROPERITONEAL LAPAROSCOPIC PARTIAL AND TOTAL ADRENALECTOMY FOR ADRENAL NON-FUNCTIONAL ADENOMAS
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INTRODUCTION AND OBJECTIVES: To compare the effect of retroperitoneal laparoscopic partial and total adrenalectomy for Adrenal non-functional adenomas.

METHODS: We retrospectively analysed the data of 112 cases of adrenal non-functional adenomas undergoing total adrenalectomy or partial adrenalectomy in our hospital from June 2009 to April 2014. 42 patients underwent total adrenalectomy, and 70 patients underwent partial adrenalectomy. All the patients were followed up for 6 months to 36 months, 26 months on average.

RESULTS: In the group of total adrenalectomy, mean operative time was (50.0±12.0) min; mean blood loss was (35.5±9.5) ml, mean drainage time was (2.5±1.0) d, mean tumour size was (25.0±5.0) mm and postoperative hospital stay was (5.5±2.0) d. In the group of partial adrenalectomy, mean operative time was (60.0±13.0) min, mean blood loss was (29.5±10.0) ml, mean drainage time was (2.5±1.2) d, mean tumour size was (20.5±4.5) mm and postoperative hospital stay was (6.0±2.5) d. There’s no significant difference in mean blood loss, mean drainage time, mean tumour size and postoperative hospital stay between total and partial group (P>0.05). Mean operative time of partial group was significantly longer than total group (P<0.05). The average operative duration and estimated volume of blood loss were significantly less in laparoscopic decortication group ((42±12) min, (20±15) ml) than laparoscopic adrenalectomy group (78±22) min, (35±30) ml), decortication group was obviously inferior to adrenalectomy group (P<0.01).

CONCLUSIONS: Laparoscopic decortication for the treatment of adrenal cysts has the advantages of minimal invasion and efficiency with comparing to laparoscopic adrenalectomy.

SOURCE OF FUNDING: None

MP07-03 COMPARISON OF RETROPERITONEAL LAPAROSCOPIC DECORTICATION AND ADRENALECTOMY FOR THE THERAPY OF ADRENAL CYSTS
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INTRODUCTION AND OBJECTIVES: To compare the effect of retroperitoneal laparoscopic decortication and adrenalectomy in the treatment of adrenal cysts.

METHODS: We retrospectively analysed the data of 29 cases of adrenal cysts in our hospital from October 2008 to April 2014. There were 13 males and 16 females aged 43.4 (23–67) years. 9 cases were symptomatic and the others were identified incidentally. They underwent laparoscopic surgery through retroperitoneal space including, 21 cases of retroperitoneal laparoscopic adrenalectomy and 8 cases of decortication. Variables compared included operation time, blood loss, amount and time of drainage, time of Gastrointestinal functional recovery, postoperative hospital stay, postoperative complication.

RESULTS: All were confirmed as adrenal cysts by postoperative pathological examination. The mean diameter of cyst was 5.8 (1—14) cm and no apparent endocrine abnormalities were found. The symptoms of 7/9 patients were relieved after a mean 48 months follow-up. No recurrence was found in this follow-up. There was no significant difference in gastrointestinal functional recovery, postoperative hospital stay, postoperative complication, amount and time of drainage (P>0.05). The average operative duration and estimated volume of blood loss were significantly less in laparoscopic decortication group ((42±12) min, (20±15) ml) than laparoscopic adrenalectomy group (78±22) min, (35±30) ml), decortication group was obviously inferior to adrenalectomy group (P<0.01).

CONCLUSIONS: Though the retroperitoneal laparoscopic approach is associated with longer operation time and warm ischemic time, retroperitoneal laparoscopic partial nephrectomy for the treatment of little renal tumour has the advantages of minimal invasion and efficiency.

SOURCE OF FUNDING: None

MP07-04 COMPARISON OF OPEN PARTIAL NEPHRECTOMY AND RETROPERITONEAL LAPAROSCOPIC NEPHRECTOMY IN SMALL RENAL CELL CARCINOMA
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INTRODUCTION AND OBJECTIVES: To compare the effect of open partial nephrectomy (OPN) with retroperitoneal laparoscopic partial nephrectomy (RLPN) in the treatment of small renal cell carcinoma.

METHODS: We retrospectively analysed the data of 56 cases of partial nephrectomy in our hospital from October 2009 to April 2014, including 18 cases of retroperitoneal laparoscopic partial nephrectomies and 38 cases of open partial nephrectomies. Variables compared includes operation time, warm ischemia time, blood loss, amount and time of drainage, time of Gastrointestinal functional recovery, postoperative hospital stay, postoperative complication and creatinine levels before and after partial nephrectomy.

RESULTS: There was no significant difference in postoperative complication, amount and time of drainage (P>0.05), RLPN group was obviously superior to OPN group in blood loss, time of Gastrointestinal functional recovery and postoperative hospital stay (P<0.05). But in the operation time, warm ischemia time, RLPN group was obviously inferior to OPN group (P<0.01). There was no significant difference between the two groups in creatinine increased after operation.

CONCLUSIONS: The retroperitoneal laparoscopic approach is associated with longer operation time and warm ischemic time, but it is safer, quicker, and more suitable for small renal cell carcinoma.

SOURCE OF FUNDING: None
MP07-05 THE CLINIC ANALYSIS OF RETROPITONEAL LAPAROSCOPIC RADICAL NEPHRECTOMY (87 CASES REPORTS)
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INTRODUCTION AND OBJECTIVES: To probe the operating skills of retroperitoneal laparoscopic radical nephrectomy (RLRN).
METHODS: From Dec 2010 to Dec 2014, 87 patients with renal tumors were treated by retroperitoneal laparoscopic nephrectomy. 49 cases were located in left kidney, and 38 in the right kidney. The mean diameter of renal tumor was (5.26±1.86) cm. There were 65 Cases of T1NoMo, 21 cases of T2NoMo, 1 cases of T3NoMo. During the process of RLRN, the arcuate ligament was constantly used as an operative mark for seeking and ligating the renal artery and vein. The specimens were cut completely and removed by expanding the first hole operation.
RESULTS: All of the 87 cases were performed by retroperitoneal laparoscopic with the arcuate ligament marking method successfully. 17 cases of homolateral adrenal gland were resected and 9 cases of regional lymph node were cleaned. 3 cases were transit open surgery. there was no serious injury of liver, spleen or bowels. The operating time ranged 64–112 min with an average of 55 min, and the blood loss was 55–650 ml with the mean of 85 ml. The post—operative length of stay was 5–11 day with an average of 6 day. Major complications included 4 cases of vessel injury, 2 case with an injury of diaphragmatic muscle and 1 cases with a lymphous leakage. Post-operative staging included 64 cases of vessel injury, 2 case with an injury of diaphragmatic muscle and 1 cases with a lymphous leakage. Post-operative hospital stay was 6–36 months with an average of 18 months. 2 cases had an incisional hernia, 1 had a local tumor recurrence and 1 died of pulmonary metastasis.
CONCLUSIONS: RLRN could be a safe for the treatment of renal tumors, and the patients could recover fastly with fewer complications.
SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Recent advances in laparoscopic techniques have led to the wide acceptance of laparoscopic resection of adrenal pheochromocytomas. Nevertheless, laparoscopic resection of paragangliomas is still challenging. Objective The current study aimed to evaluate the feasibility and safety of laparoscopic treatment of retroperitoneal paraganglioma.
METHODS: A retrospective analysis of laparoscopic resection for retroperitoneal paraganglioma was performed at Peking Union Medical College Hospital from June 2004 to April 2014; A total of 85 patients (10–75 years), including 5 relapses, were included. The tumor diameters varied from 2 to 8.5 cm. The surgery approaches included the retroperitoneal approach and the transperitoneal approach. Demographic and perioperative data, including the operative time, estimated blood loss, incidence of intraoperative hypertension, bowel recovery day, postoperative hospital stay were recorded.
RESULTS: All patients, except for the one open conversion case, underwent laparoscopic surgery. There were no patient deaths. The mean operative time was 104±29.3 mins. The mean blood loss was 144±66.5 ml. The incidence of surgical blood pressure elevation was 58%. Intestinal function recovery time was 1.9±0.7 days. The postoperative hospital stay was 6.3±3.1 days. The pathological results all demonstrated paragangliomas. All patients were followed-up from 2 to 96 months (mean, 45 months). Recurrence occurred in two cases.
CONCLUSIONS: For experienced laparoscopic surgeons, Retroperitoneoscopic and laparoscopic resection for retroperitoneal paraganglioma are safe and efficacy. Surgical approach should be decided according to location of paragangliomas.
SOURCE OF FUNDING: None

MP07-07 RETRO-LAPAROSCOPIC RESECTION OF RETROPERITONEAL GANGLIONEUROMA: REPORT OF 4 CASES
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INTRODUCTION AND OBJECTIVES: To investigate the feasibility and experience of retro-laparoscopic resection of retroperitoneal ganglioneuroma.
METHODS: Four patients with retroperitoneal ganglioneuroma underwent abdominal ultrasonography and contrast-enhanced computerized tomography (CT) scan before retro-laparoscopic resection. One tumor was located in the left adrenal area, and two were in the right. One was retrocaval ganglioneuroma.
RESULT: The operation was accomplished successfully in all cases without any adjacent organ or vessel injury. The average size of tumor was 5.6 cm, and average operative time was 110 min. The average blood loss was 70 ml, and average post-operative hospital stay was 6 days. The pathologic diagnosis was ganglioneuroma. There has been no tumor recurrence following up for 6–24 months.
CONCLUSIONS: Even when the tumor is large, variable location and adheres to adjacent vascular structures and organs, retro-laparoscopic resection of retroperitoneal ganglioneuroma is a minimally invasive, safe and effective option with preoperative radiologic studies, retroperitoneal approach, and skilled retro-laparoscopic techniques.
SOURCE OF FUNDING: None

MP07-08 HAND-ASSISTED RETROPERITONEOSCOPIC NEPHROURETERECTOMY (HARNU) WITH BLADDER CUFFING AFTER PREPERITONEAL AND RETROPERITONEAL PERIVESICAL BALLOONING
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INTRODUCTION AND OBJECTIVES: We aimed to describe the surgical technique of hand-assisted retroperitoneoscopic nephroureterectomy (HARNU) with bladder cuffing after preperitoneal and retroperitoneal perivesical ballooning.
INTRODUCTION AND OBJECTIVES: To identify risk factors for developing subsequent bladder cancer in patients undergoing radical nephroureterectomy for upper urinary tract urothelial carcinoma. METHODS: This study included 168 patients who were diagnosed as having clinically localized upper urinary tract carcinoma and thereafter underwent nephroureterectomy after exclusion of those with a previous and/or concurrent history of bladder cancer. Univariate and multivariate analyses using both the logistic regression model and the Cox proportional hazards model were carried out to determine the risk factors for in-travesical recurrence after nephroureterectomy. RESULTS: Of the 168 patients, 37 (22.0%) developed recurrent bladder cancer after a median interval of 42.4 months (range: 3–57). Intravesical recurrence-free survival rates for these 168 patients at 1, 3, and 5 years were 85.7%, 73.2%, and 64.1%, respectively. Univariate analyses showed that patients with high stage, high grade tumors, positive margins and those with multifocal tumors were likely to undergo intravesical recurrence; however, there was no significant impact of other factors on subsequent intravesical recurrence, including age, tumor size, tumor location, surgical approach (open or laparoscopic), operation time, mood of the distal ureter management (open or endoscopic), lymph node metastasis. Furthermore, pathologic stage, and tumor multifocality were identified as independent predictors for the development of recurrent bladder cancer by multivariate analyses. CONCLUSIONS: The incidence of intravesical recurrence after nephroureterectomy for upper urinary tract carcinoma is comparatively high. Patients with high stage tumors and multifocal tumors require carefully follow-up.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: We evaluate results of laparoscopic and open appendiceal on-lay flap ureteroplasty for repairing ureteral strictures. METHODS: Between 1998 and 2014 20 patients were operated with substitution of extended defects of ureter with appendix. There were 17 women and 3 men with a median age of 44.2 ± 8.5 years. The postoperative follow up period was from 3 months to 16 years (mean 9.5 years). Two patients (10%) underwent laparoscopic ureteral reconstruction with appendix. The causes of progression of ureteral strictures were: the ureteral trauma as a result of gynecological and urological interventions and radiotherapy. One patient had stricture of the lumbar ureter because of gunshot wound. He underwent substitution of the upper third of the right ureter with appendix. In the other cases we perform substitution of the pelvis part of the ureter with appendix, in three cases from the left side. RESULTS: The mean time of laparoscopic operation was 225.3 ± 19.8 minutes vs 174.7 ± 7.5 minutes in open surgery. Late postoperative complications developed in 2 (12.5%) cases in patient underwent open surgery. The stricture of ureter-appendicocan灶omosis was developed in 3 months in one patient. Resection of stricture and reanastomosis were performed. In another case associated with similar complication we performed endoureterotomy and stenting of the ureter. According to all patients the kidney function was restored. There were no complications in patients underwent laparoscopic appendicocan灶omosis. CONCLUSIONS: This study shows the feasibility of successful open and laparoscopic substitution of any part of the right ureter and pelvis part of the left ureter with appendix.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: The present study was designed to investigate the risk factors that affecting conversion to open surgery in Laparoscopic nephrectomy of nonfunctioning renal tuberculosis. METHODS: The records of 119 patients who had a Laparoscopic nephrectomy of non-functioning renal tuberculosis procedure by a single surgeon were retrospectively reviewed. The following patient characteristics was analyzed: age, sex, BMI, diabetes status, hypertension status, size of kidney, surgeon’s experiences and degree of calcification. Univariate analyses and multivariate step regression analyses were used for statistical assessment.
**RESULTS:** The mean age was 44.2 years. 11 patients were converted to open surgery, and the conversion rate was 9.2%. In the univariate analyses, BMI, diabetes status, hypertension status, size of kidney, surgeon’s experiences and degree of calcification were the risk factors for conversion to open in laparoscopic nephrectomy of nonfunctioning renal tuberculosis. Multivariate stepwise regression analyses showed that there was an association between BMI, diabetes status, size of kidney and surgeon’s experiences with the increase in risk of conversion to open surgery. The following covariates were not associated with increased risk of conversion to open surgery: age, sex, side, and degree of calcification.

**CONCLUSIONS:** BMI, diabetes status, size of kidney and surgeon’s experiences were the risk factors that affecting conversion to open surgery in laparoscopic nephrectomy of non-functioning renal tuberculosis.

**SOURCE OF FUNDING:** None

**MP07-12 IMPACT OF RIGHT NEPHRECTOMY ON LONG-TERM OUTCOMES IN RETROPERITONEOSCOPIC LIVE DONOR NEPHRECTOMY**

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**INTRODUCTION AND OBJECTIVES:** In order to assess the long-term graft survival of right retroperitoneoscopic live donor nephrectomy (RPLDN), we reviewed and compared the outcome of right and left RPLDN.

**METHODS:** Seven hundred sixty three patients underwent live donor renal transplantation with allografts procured by RPLDN at our institute. Of these, 31 (4.1%) cases were of right sided RPLDN. Study variables included operative time, time to retrieval of the kidney, blood loss, warm ischemic time (WIT), cold ischemic time (CIT), hospital stay, incidence of slow graft function (SGF; serum creatinine level is more than 3.0 mg/dL at 4 days after transplantation), and graft and patient survival rate.

**RESULTS:** No significant differences were found between right and left RPLDN group regarding operative time (305 ± 70 vs. 285 ± 79 min, P = 0.166), time to retrieval of the kidney (246 ± 68 vs. 227 ± 71 min, P = 0.144), mean blood loss (51 ± 53 vs. 47 ± 56 mL, P = 0.654), CIT (103 ± 27 vs. 98 ± 31 min, P = 0.377), and hospital stay (4.0 ± 1.1 vs. 3.7 ± 1.4 days, P = 0.239). Despite statistically significantly increased WIT (6.0 ± 1.9 vs. 4.6 ± 1.5 min, P < 0.001) in right RPLDN compared to that in left RPLDN, there is no significant difference between 2 groups regarding incidence of SGF, long-term patient and graft survival rate.

**CONCLUSIONS:** Right RPLDN could be an option for laparoscopic live donor nephrectomy because of excellent long-term outcomes.

**SOURCE OF FUNDING:** None

**MP07-13 RENAL SURGERY IN THE ELDERLY - VALIDATION OF PERIOPERATIVE OUTCOMES AND POSTOPERATIVE COMPLICATIONS IN 160 CONSECUTIVE PATIENTS UNDERGOING RETROPERITONEOSCOPIC PARTIAL NEPHRECTOMY**

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**INTRODUCTION AND OBJECTIVES:** Indication for partial nephrectomy depends on tumor size and anatomical complexity, as well as the general condition of the patient. Demographic changes and advanced imaging lead to high numbers of renal tumors detected increasingly in elderly patients. We analyzed perioperative outcomes in an elderly population undergoing retroperitoneoscopic partial nephrectomy (RPN) in a single surgeon series.

**METHODS:** We retrospectively evaluated 160 patients who underwent RPN between 04/2010 and 08/2013. Patients were divided in age-groups < 75 years and > 75 years. Age and ASA-score and perioperative parameters such as operation-time, warm ischemia time (WIT), estimated blood loss, complications and length of hospital stay, were analyzed for both groups.

**RESULTS:** Median age was 66 (31–83) years. 122 (76.25%) and 38 (23.75%) patients were < 75 and > 75 years, respectively. 19 patients were > 80 years. PADUA-score was balanced in both groups. Median ASA-Score was 2.1 and 2.4 in patients < 75 and > 75 years, respectively (p > 0.05). In the group of elderly patients, operating time and blood loss were not different than in the younger group. However, elderly patients had a significant higher complication rate (p < 0.001), longer WIT (p < 0.05) and longer length of hospital stay (p < 0.05), ASA-Score correlated with longer hospital stay (p < 0.05).

**CONCLUSIONS:** Elderly patients have a significant higher risk for postoperative complications than younger patients when undergoing RPN. Elaborate preoperative assessment could minimize the risk of surgery and improve outcome. Prospective evaluation of perioperative parameters in elderly patients may lead to better patient selection for operations, ablative therapies and active surveillance.

**SOURCE OF FUNDING:** None

**MP07-14 TRIFECTA OUTCOMES IN RETROPERITONEOSCOPIC PARTIAL NEPHRECTOMY - A SINGLE SURGEON SERIES OF 180 CONSECUTIVE CASES**

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**INTRODUCTION AND OBJECTIVES:** Minimally-invasive partial nephrectomy is increasingly offered to patients qualifying for nephron-sparing surgery for renal tumors. Reporting outcome in the literature is heterogenous but 3 key outcomes (1.) warm-ischemia time (WIT) below 20 minutes, (2.) negative surgical margins (SM) and (3.) no complications) are mostly mentioned. We report trifecta outcome in a single-surgeon series of retroperitoneoscopic partial nephrectomy (RPN).

**METHODS:** 180 patients underwent RPN at our institution (surgeon: C.W.) between April 2010 and October 2013 applying a standardized surgical procedure. Two barbed sutures used as a double-layer running suture with additional Surgicel® were applied. Perioperative parameters were collected and Trifecta key outcome parameters were analyzed for the whole patient group and for the three subgroups 1st, 2nd and 3rd 60 patients, respectively.

**RESULTS:** In all 180 patients, positive surgical margins occurred in 3 patients (1.7%). WIT could be kept below 20 minutes in 142 cases (78.9%). Complications happened in 28 patients (15.5%). Trifecta of these three key parameters were achieved in
111 of 180 patients, accounting for a trifecta rate of 61.7%. In the 1st, 2nd and 3rd 60 cases, trifecta was achieved in 51.7%, 58.3% and 75.0%, respectively.

**CONCLUSIONS:** Combining standard RPN with the double-layer barbed suture-technique leads to favorable trifecta outcome. Investigating the learning curve of the procedure, trifecta rates were higher (75%) in the third 60 patients, accounting for a learning curve of about 100 to 150 cases. Trifecta should be a routine reporting system in future studies about minimally-invasive partial nephrectomy.

**SOURCE OF FUNDING:** Supported by a Research Grant provided by Asklepios Kliniken Hamburg GmbH.

**MP07-15 RISK FACTORS OF BLADDER RECURRENT AFTER HAND ASSISTED RETROPERITONEOSCOPIC NEPHROURETERECTOMY FOR PRIMARY UPPER TRACT URINARY TRACT UROTHELIAL CANCER**

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**INTRODUCTION AND OBJECTIVES:** To determine the incidence and risk factors of intravesical recurrence in patients with primary upper urinary tract urothelial cancers after hand assisted retroperitoneoscopic nephroureterectomy.

**METHODS:** We retrospectively reviewed patients with upper urinary tract SCC undergone hand assisted retroperitoneoscopic nephroureterectomy from December 2004 and July 2009 at National Cheng Kung University Hospital. We excluded patients with distant metastases, those with a less one year of follow-up, and those having a previous history or concomitance of bladder cancer. We review the demographic, clinical, surgical, and pathological data to determine what clinical and pathologic variables significantly affected the initial intravesical recurrence of cancer.

**RESULTS:** The incidence rates of recurrent bladder tumors s were 30% at a mean interval of 14.7 months. Univariate analysis revealed that risk factors of intravesical tumor recurrence were male gender, initial presentation with hematuria, preoperative serum creatinine greater than 2.0, extent (multifocality), tumor size greater than 3.0 cm, presence of lymphovascular invasion and pathologic stage. Multivariate analysis revealed that male gender was the only significant independent risk factor for intravesical recurrence, other clinicopathological variables failed to reach statistical significance.

**CONCLUSIONS:** Bladder tumors occurred in 30% after treatment for primary UUT-SCC after hand assisted retroperitoneoscopic nephroureterectomy. Male gender was the only significant risk factors. Rigorous follow-up cystoscopy at regular intervals will be suggested in patients with high risk of bladder recurrence.

**SOURCE OF FUNDING:** None

**MP07-16 RETROPERITONEAL LAPAROSCOPIC LIVING DONOR NEPHRECTOMY: REPORT OF 180 CASES**

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**INTRODUCTION AND OBJECTIVES:** To summarize our experience of 180 retroperitoneal laparoscopic living donor nephrectomies and to report a single-center experience and technical modifications of retroperitoneoscopic live donor nephrectomy (RPLDN).

**METHODS:** A total of 180 donors underwent retroperitoneal laparoscopic living donor nephrectomy from Dec 2003 to May 2014. The operation was performed through 3 lumbar ports; after the kidney was liberated fully and the ureter was severed 7–8 cm under the lower pole of kidney, the renal artery and vein were blocked with Endo-cut or hem-o-lok separately and then severed. Endo-cut was used in 3 patients and hem-o-lok in 177 donors. The tributaries of renal artery and vein were transected using a harmonic scalpel after both ends of the tributary were coagulated intermittently until the color turned light yellow. Transection was made using shifting coagulation. A longitudinal 6–8-cm skin incision was extended inferiorly from the primary trocar with muscles intact. Then the kidney was taken out quickly from the donor and infused with 4°C kidney preserving fluid immediately.

**RESULTS:** The 180 operations were successful. Operation time was 78 min (48–180 min) and blood loss was 46 ml (15–200 ml), no patient needed blood transfusion. Warm ischemia time was 3.6 min (2–8 min). 3 patients had hematoxia of renal fossa after operation and they required no further treatment. Hospital stay after operation was 4.5 days (3.5–9 days). 171 of 180 donors were followed up for 78 months (27–120 months).

**CONCLUSIONS:** RPLDN is a safe and reliable method and it can replace the traditional open surgery. The modified RLDN can lower the learning curve of the surgery.

**SOURCE OF FUNDING:** None

**MP07-17 MINIMALLY INVASIVE PYELOPLASTY IN CHILDREN: THE OPTIMAL APPROACH?**

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**INTRODUCTION AND OBJECTIVES:** Open dismembered pyeloplasty has long been considered the gold standard for the treatment of pelvi-ureteric junction (PUJ) obstruction in children. Although laparoscopic transperitoneal pyeloplasty has been shown to be comparable to open pyeloplasty in adults, uptake of minimally invasive techniques in children has been limited. We aimed to evaluate our experience with laparoscopic dismembered pyeloplasty in the paediatric population.

**METHODS:** We retrospectively reviewed the records of 61 children undergoing laparoscopic pyeloplasty for PUJ obstruction at a single institution over an 8-year period. Data was collected on demographics, operating time, complications, hospital stay and outcome. All patients were assessed for symptomatic and radiological improvement following surgery. Complications were graded by the Clavien classification system.

**RESULTS:** Median age was 9. 35 (57%) were left sided procedures. A crossing vessel was found in 30 patients. Median operating time was 120 minutes. Twelve patients had extra-renal drains placed. Median length of stay was 2 days. There were no conversions to open surgery. The overall post-operative complication rate was 18%, most of which were minor (Clavien Grade I-II). There were two Grade III complications. There were no blood transfusions, Grade IV or V complications. The estimated overall success rate was 96%. Two patients required redo pyeloplasty in the long term due to recurrent PUJ obstruction at 4 and 4.5 years respectively.

**CONCLUSIONS:** Laparoscopic pyeloplasty is safe, reliable and reproducible in children with good short-term and long-term
results in our study. Laparoscopic pyeloplasty represents an attractive alternative to a conventional open procedure in the paediatric population.

**SOURCE OF FUNDING:** None

**MP07-18 LAPAROSCOPIC LIVING DONOR NEPHRECTOMY IN INDONESIA: REPORT OF OUR INITIAL EXPERIENCE**

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**INTRODUCTION AND OBJECTIVES:** Laparoscopic living donor nephrectomy (LLDN) has become the preferred method for procuring kidney grafts from living donors worldwide. This study aimed to evaluate variables related to the surgical and direct postoperative outcomes of our experience on 122 cases of Laparoscopic living donor nephrectomies conducted at Cipto Mangunkusumo Hospital, Jakarta, Indonesia.

**METHODS:** This retrospective analysis describes 122 laparoscopic nephrectomies in living donors performed in Cipto Mangunkusumo Hospital. All surgeries were performed by the same surgical team. Variables related to the surgical and postoperative outcome and complications in donors were evaluated and analyzed.

**RESULTS:** The average age of the donors was 32.91 years with a male: female ratio of 1.7:1. Left donor nephrectomy was done in 81% of the procedure and 19% for right nephrectomy. We found 17 cases (13.9%) of multiple renal vessels. The mean operation time was 261 ± 49 min, first warm ischemia time was 5.82 ± 3.9 min and estimated blood loss was 259.2 ± 248.2 cc. The hospital stay was 4.5 ± 1.4 days, VAS in the day one after surgery was 1.9 ± 1.1. Time to return to work was 19.2 ± 13.8 days. There were two patients had intraoperative bladder rupture, and three patients needed post operative blood transfusion as post operative complications.

**CONCLUSIONS:** Laparoscopic living donor nephrectomy results in acceptable blood loss, less postoperative pain, shorter hospital stay and time to return to work, therefore promising to be the gold standard among living donor nephrectomy surgical options.

**SOURCE OF FUNDING:** Department of Urology, Cipto Mangunkusumo Hospital

**MP07-19 FEASIBILITY OF LAPAROSCOPIC PYELOPLASTY IN CHILDREN; COMPARISON BETWEEN CHILDREN AND ADULTS WITH SYMPTOMATIC URETEROPELVIC JUNCTION OBSTRUCTION**

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**INTRODUCTION AND OBJECTIVES:** Laparoscopic dismembered pyeloplasty (LP) is indicated even in children with ureteropelvic junction obstruction (UPJO). We compared surgical outcomes of LP between children and adults.

**METHODS:** Since August 2001, 45 LPs were performed in 45 patients with symptomatic UPJO. Patients were divided into 2 groups; children (15 years or younger) and adults (more than 15 years). Surgical findings, perioperative complications were compared between 2 groups.

**RESULTS:** Mean age at surgery was 10.3 years in children (n = 16) and 34.1 years in adults (n = 29). The mean number of surgical ports was 3.2 in children and 3.5 in adults (p = 0.07). During surgery, crossing vessel was identified in 2 (12.5%) in children and 14 (48.3%) in adults (p = 0.02). Open conversion was required in one adult case. Ureteral stent was inserted at surgery in all except 1 child. Mean operative time was 251 min in children and 276 min in adult (p = 0.23). Transfusion was not required in any cases. Perioperative complications categorized as Clavien grade 3 or higher were noted in 8 cases; urine leakage after stentless surgery in 1, dislocation of ureteral stent in 1 and obstruction of stent in 6. The incidence of the complication was 31.2% (5/16) in children and 10.7% (3/28) in adults, but the difference was not significant (p = 0.11).

**CONCLUSIONS:** No significant difference was identified in the number of surgical ports, operative time and the incidence of complications between both groups. Although the incidence of perioperative complication was slightly higher in children, LP would be a reasonable option in children with symptomatic UPJO.

**SOURCE OF FUNDING:** None

**MP07-20 HAND ASSISTED RETROPERITONEOSCOPIC LIVE DONOR NEPHRECTOMY: A CONSECUTIVE EXPERIENCE OF 80 CASES IN SINGLE INSTITUTION**

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**INTRODUCTION AND OBJECTIVES:** Living donor kidney transplantation has been carried out in consecutive 90 patients since March 2003 until June 2013 at our institution. After 10 successful open donor nephrectomy, hand-assisted retroperitoneoscopic nephrectomy was started. In this presentation, we will show the change in operative techniques with time and analyze clinical outcomes of laparoscopic living donor nephrectomy.

**METHODS:** Changes in operative techniques over time were separately analyzed according to the early 25 patients and the latter 55 patients. Operation time, warm ischemic time, time to urine production after revascularization and complications were investigated.

**RESULTS:** Differences in operative techniques between the two periods were 1) timing of hand-assistance 2) frequency of vessel sealing device usage 3) way of kidney removal. The mean operation time was significantly longer in early group than latter group (321 ± 14 minutes v.s. 279 ± 7 minutes P = 0.015). Mean warm ischemic time of the earlier group was 288 ± 33 seconds and that of the latter group was 212 ± 18 seconds (P = 0.054). Mean Time to urine production after revascularization was 24 minutes in the early group and 15 minutes in the latter group (P = 0.34). There was no graft function delay. Open conversion was required in 1 case in the earlier group.

**CONCLUSIONS:** The intraoperative and perioperative parameters as to our laparoscopic donor nephrectomy in the current half cases have improved as compared to the earlier cases although they did not reach statistical significance without operation time. The hand-assisted retroperitoneal approach of laparoscopic donor nephrectomy is certainly safe and less invasive without compromising the harvested kidney function.

**SOURCE OF FUNDING:** None
A RETROSPECTIVE ANALYSIS OF LAPAROSCOPIC PARTIAL NEPHRECTOMY WITH SEGMENTAL RENAL ARTERY CLAMPING AND THE COMPARISON OF DIFFERENT PARAMETERS IN ESTIMATING RENAL FUNCTION AFTER PARTIAL NEPHRECTOMY

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INTRODUCTION AND OBJECTIVES: To study the feasibility and efficiency of LPN with segmental renal artery clamping in comparison with main renal artery control, and evaluate the correlation of estimated glomerular filtration rate (eGFR) and kidney volume against glomerular filtration rate (GFR).

RESULTS: LPNs were completed in all 466 cases without conversion to open or total nephrectomy. The novel technique slightly increased operative time (p < 0.001), WI time (p < 0.001) and intraoperative blood loss (p < 0.001), while it provided better postoperative affected renal function (p < 0.001) compared with the conventional technique. During 6–70 mo follow-up, 3 patients developed local recurrence and other 2 patients found lung metastasis. The correlation analysis showed eGFR presented better correlation against GFR compared to kidney volume (R² = 0.437 versus R² = 1.840) in predict renal function after PN.

CONCLUSIONS: LPN with segmental artery clamping minimizes intraoperative WI injury and provides better early postoperative affected renal function compared with clamping the main renal artery. Functional outcomes and volume preservation shown that kidney volume play a significantly inferior role compared with eGFR in predict preserved renal function.

SOURCE OF FUNDING: None

RETROPERITONEOSCOPIC RESECTION OF PRIMARY RETROPERITONEAL TUMOR

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INTRODUCTION AND OBJECTIVES: To summarize the experience of retroperitoneal laparoscopic resection of primary retroperitoneal tumor and to improve on the technique.

METHODS: To review and analyse the clinical materials of 9 cases of our hospital with primary retroperitoneal tumor undergoing retroperitoneal laparoscopic resection from Sep 2008 to Dec 2013, including pathologic types, operative method, et al.

RESULTS: All operations were accomplished successfully by retroperitoneal laparoscopy. None transferred open. The mean operative time was 55 min and intraoperative hemorrhagewas 55 ml. The average length of hospita stay was 5 d. The postoperative pathologic types were benign.

CONCLUSIONS: The primary retroperitoneal tumor have a variety of pathologic types and anatomical positions. If to prepare enough perioperatively and hold indication strictly, the retroperitoneal laparoscopic resection of primary retroperitoneal tumor is minimal invasive, safe and effective.

SOURCE OF FUNDING: Item of national key clinical department

RETROPERITONEOSCOPIC NEPHROURETERECTOMY OF DUPLEX KIDNEY (REPORT OF 8 CASES)

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INTRODUCTION AND OBJECTIVES: To explore the method and effect of retroperitoneoscopic nephroureterectomy in duplex kidney.

METHODS: We analyzed the clinic materials of 8 patients diagnosed duplex kidney in our hospital from 2008 to 2013 retrospectively. There were 1 male and 7 females, 2 in Left and 6 in right. We diagnosed 7 hydronephrosis of upper kidney and 1 hydronephrosis of below kidney, 7 complete duplex kidney and 1 incomplete. 5 patients underwent CTU, the other 3 patients only had enhanced CT scan. Retroperitoneoscopic nephroureterectomy was operated in all the cases.

RESULTS: All the cases were accomplished successfully. The mean operation time was 115–130 min. 1 case occurred complication of urine leakage. It recovered after drainage eventually. Complications did not appear in other cases. We followed up them from 6 months to 3 years. None of them appeared abnormal.

CONCLUSIONS: Retroperitoneoscopic nephroureterectomy of duplex kidney is a safe, effective and minimally invasive technique which can spread.

SOURCE OF FUNDING: None

THE TREATMENT OF NEPHROGENIC CHYLURIA IN RETROPERITONEOSCOPIC PERINEPHRIC LYMPHATIC LIGATION

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INTRODUCTION AND OBJECTIVES: To probe the therapy of retroperitoneoscopic peinephric lymphatic ligation to treat nephrogenic chyluria and to assess the effect of it.

METHODS: 88 patients with nephrogenic chyluria in our hospital from 2008 to 2014 were analyzed retrospectively of which 63 males, 25 females, average age 63 years old. 32 patients were left nephrogenic chyluria, others were right. All the cases of chylus qualitative were positive and underwent the cystoscopy among which 32 cases had retrograde pyelography. All the cases were operated with retroperitoneoscopic peinephric lymphatic ligation.

RESULTS: All the cases were accomplished successfully in retroperitoneoscopy. Average operation time was 65 min, average blood loss was 55 ml. One case had recurrence. The symptom had gone after low fat diet. Another one case had recurrence in the opposite side.
CONCLUSIONS: Retroperitoneoscopic peinephric lymphatic ligation to treat nephrogenic chyluria is a safe, effective and minimally invasive technique which can be promoted.

SOURCE OF FUNDING: Item of national key clinical department.

MP07-25 COMPARISON OF CONVENTIONAL LAPAROSCOPIC AND HAND-ASSISTED LAPAROSCOPIC DONOR NEPHRECTOMY BY A SINGLE SURGEON

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INTRODUCTION AND OBJECTIVES: We compared perioperative donor outcomes of conventional laparoscopic donor nephrectomy (CLDN) and hand-assisted laparoscopic donor nephrectomy (HALDN) consecutively performed by a single surgeon.

METHODS: From 2012 to 2014, 56 donor nephrectomies were performed by a single surgeon. The approach changed from HALDN (former 30 cases) to CLDN (latter 26 cases) over the course of the series. Operative and convalescence parameters, and intraoperative and postoperative complications were compared between the groups. Intraoperative and postoperative complications within 90 days of surgery were graded using the Satava and modified Clavien classifications, respectively.

RESULTS: The patient demographics and preoperative characteristics were similar between CLDN and HALDN, except age and ASA score. CLDN patients were significantly older (46.5 vs. 40.6 years, \( P=0.04 \)) and more likely to have ASA score 2 (42.3 vs. 10.0\%, \( P=0.012 \)). There was no significant difference in operative and convalescence parameters between CLDN and HALDN. There was no significant difference in intraoperative complication between CLDN and HALDN. CLDN patients tended to be less likely to have postoperative complication (62 vs. 87\%, \( P=0.061 \)). Most postoperative complications were grade I, with two exception (grade II chyle leakage in one HALDN patient and grade IIIa wound dehiscence in one CLDN patient). There was no significant determinant of any intraoperative complications. Only learning curve was a significant determinant of any postoperative complications (OR 0.50, \( P=0.004 \)).

CONCLUSIONS: Our comparative study confirms that CLDN was no significant determinant of any intraoperative and postoperative complications. CLDN patients ten-

SOURCE OF FUNDING: None

MP07-26 LOCALLY ADVANCED RENAL CELL CARCINOMA TREATED BY PRESURGICAL TARGETED THERAPY AND LAPAROSCOPIC RADICAL NEPHRECTOMY – TWO CASE REPORTS

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INTRODUCTION AND OBJECTIVES: Tyrosine kinase inhibitors have recently been used in neoadjuvant approach for patients with locally advanced renal cell carcinoma (RCC), which at first seemed to be absolutely inaccessible by nephrectomy. Although surgical tumor resection after targeted therapy using these agents is feasible, significant complications can occur as a potential consequence of compromised tissue or vascular damage. Laparoscopic radical nephrectomy (LRN) is more effective, regarding rapid recovery, compared with open radical nephrectomy. However, for advanced RCC LRN is a technically difficult, challenging procedure and it should only be attempted by surgeons with significant experience. Herein, we report about two patients with RCC as well as two patients with LRN.

RESULTS: A 63-year-old man who had a large (12 cm in diameter) left RCC that directly invaded the diaphragm. A 73-year-old man who had a large (10 cm in diameter) left RCC with renal vein tumor thrombus and ostium wall invasion. To reduce the tumor burden and potential operative complications, we administered sunitinib and axitinib achieved a 16% and 18% reduction of tumors, and these patients could subsequently undergo LRN.

CONCLUSIONS: Our cases demonstrate that the combination of using targeted therapy as a presurgical therapy and LRN is feasible and effective for some patients with advanced RCC.

SOURCE OF FUNDING: None

MP07-27 LAPAROSCOPIC RADICAL ADRENALECTOMY FOR MALIGNANCY IN 14 PATIENTS

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INTRODUCTION AND OBJECTIVES: Surgical treatment for adrenal tumors is controversial. Laparoscopic adrenalectomy (LA) is considered as an optimal approach for the treatment of adrenal tumors. We evaluated technical feasibility and analyze outcome of LA in 14 patients with adrenal malignancy.

METHODS: Between March 2011 and February 2013, 14 patients with adrenal metastases underwent LA. 7 lesions were on the right side, and 5 on the left site. Both sides were diagnosed in 2 patients. Patient characteristics (age, BMI, gender, pathology, histology, location of hospital stay, all operative and post-operative details) were evaluated. Operations were performed under the lateral position with traditional four transperitoneal approach.

RESULTS: All of 14 patients were operated successfully. Mean adrenal tumor size was 3.5 cm (range 1.5 to 5). The mean operative time was 125 min, mean blood loss was 120 ml and mean hospital stay was 3.5 days. There was no operative mortality. The pathological diagnoses were metastatic renal cell carcinoma in 10, primary adrenal malignancy in 4.

CONCLUSIONS: LA is safe and feasible method for treatment of adrenal tumors. LA has several advantages including less bleeding, less complications, less traumatic and rapid recovery.

SOURCE OF FUNDING: None

MP07-28 LAPAROSCOPIC-ASSISTED URETEROURETEROSTOMY FOR DUPLICATION ANOMALIES IN CHILDREN

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INTRODUCTION AND OBJECTIVES: To describe a novel laparoscopic assisted technique for ureteroureterostomy for the surgical treatment of a completely duplicated collecting system with an obstructed or ectopic ureter.

METHODS: A camera is placed through a 5-mm infra-umbilical port and the duplicated ureters identified and delivered through a small inguinal incision with a laparoscopic Babcock clamp. The ureteroureterostomy is performed in an open fashion. The mean operative time, length of stay, success, and complications of 9 patients who underwent this technique were reviewed and compared with a cohort of patients who underwent open ureteroureterostomy at a single institution. In addition, the existing literature on laparoscopic and robotic assisted ureteroureterostomy is reviewed.

RESULTS: There were no statistically significant differences in operative time (134 vs 133 mins, p = 0.950), length of stay (0.32 vs 0.33 days, p = 0.929), complications (2 and 2, p = 0.574), or rates of success (95% vs 100%, p = 1.00) between the open and laparoscopic assisted ureteroureterostomy groups. In addition, the operative times and length of stay in our laparoscopic cohort were shorter than a majority of the laparoscopic and robotic cases reported in the literature.

CONCLUSIONS: Laparoscopic assisted ureteroureterostomy is a successful technique for the treatment of an ectopic or obstructed ureter in a completely duplicated collecting system. This technique combines the speed and ease of the open technique with the improved cosmesis and visualization of a laparoscopic approach and is thus a useful tool in the pediatric urologist's surgical armamentarium.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Laparoscopic surgery to remove adrenal tumors is now considered as treatment of choice due to its less invasiveness and comparable outcomes. When compared to open adrenalectomy, laparoscopic approach can achieve superior surgical outcomes, including recovery to normal life and perioperative complications. Here, we provide 15-years experiences of laparoscopic adrenalectomy by a single surgeon in Korea.

METHODS: We collected data from 89 consecutive patients who underwent laparoscopic adrenalectomy by a single urologist at Seoul National University Hospital from September 1997 through December 2013. We evaluated various parameters, such as the clinical characteristics of patients and perioperative outcomes related to the surgery.

RESULTS: Mean patients age was 48.39 years old and the proportion of male patients was about 45.0%. Mean body mass index was 24.18 (kg/m2). Left adrenal mass was detected in 49 patients (55.0%) and mean tumor size was 29 mm in a diameter. Preoperatively, incidentaloma was the most common lesion (38.2%) and aldosterone-producing tumor was the second most common tumor (30.3%). Preoperative time was about two hours (129.58 minutes) and estimated blood loss was less than 100 ml (86.63 ml). There were few intra- (2.2%) and post-operative complications (4.5%). Hospital stay was four days after surgery. In the pathologic findings, adrenal corticaladenoma was the most common mass (73.0%), whereas pheochromocytoma was only detected at 6.7%.

CONCLUSIONS: In summary, laparoscopic adrenalectomy is safe and feasible surgical approach to treat adrenal gland tumors regardless of tumor size and pathologic findings. This study can provide the valuable information for laparoscopic approach to treat adrenal tumors.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: We report two cases of pheochromocytoma in the contralateral adrenal gland after unilateral adrenalectomy that were treated with laparoscopic partial adrenalectomy to preserve adrenal function.

METHODS: Case 1. Patient was a 48-year-old woman with the presence of medullary thyroid carcinoma and a 1.5-cm pheochromocytoma in the left adrenal gland. She underwent left adrenalectomy for treatment of pheochromocytoma at 28-year-old. Laparoscopic left partial adrenalectomy was performed. The tumor was located in the lower pole of the adrenal gland. After transection of the left adrenal central vein, the tumor including the marginal normal tissue were removed. Approximately two-thirds of the upper pole of the adrenal gland was left intact. Case 2. Patient was a 49-year-old woman who underwent left adrenalectomy for pheochromocytoma, and was diagnosed with MEN 2a at 28-years-old. A 2.5-cm pheochromocytoma was found in the right adrenal gland during follow-up. Laparoscopic right partial adrenalectomy was performed. The tumor was located in the midportion to the lower pole, and the tumor including the marginal normal tissue were removed. The right adrenal central vein was preserved. Approximately 15% of the upper pole of the adrenal gland was adhered to the liver, was preserved.

RESULTS: There were no postoperative complications in both cases. In case 1, corticosteroid replacement was not needed. In case 2, supplemental corticosteroids were given during and after surgery, and it was tapered and stopped at 9 weeks postoperatively.

CONCLUSIONS: Laparoscopic partial adrenalectomy for pheochromocytoma in the contralateral adrenal gland after adrenalectomy is a minimally invasive and cortico-sparing treatment that avoids Addisonian crisis.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: The purpose of this study was to compare the clinical outcomes following pure laparoscopic donor nephrectomies (LDN) with flank incision versus hand-assisted laparoscopic donor nephrectomies (HALDN).

METHODS: In this retrospective study, we included all patients submitted to LDN with flank incision group (n = 19) and HALDN group (n = 57) between September 2011 and April 2014. The primary end point of the study was patients’ postoperative scar satisfaction. The operation parameters, patient’s pain scores and inter and postoperative complications were also compared.

RESULTS: Mean operative time was longer in the HALDN group (181.4 vs 149.2 minutes, p = 0.001) but there was no difference in postoperation hemoglobin drop (0.3 vs 0.1 g/dL, p = 0.158) and complication rate of inter and postoperation (3.5 vs 5.3%, p = 0.584). Mean warm ischemia time was longer in LDN with flank incision group (4.5 vs 3.9 minutes, p = 0.044) but there was no difference in donor and recipient graft function at 1 month after operation (p = 0.130 and p = 0.961, respectively). Mean incision length was shorter (5.2 vs 7.1 cm, p < 0.001) and the scar satisfaction score was higher (8.6 vs 7.7, p = 0.001) in LDN with flank incision group. The postoperative pain scores were higher (p = 0.025) in LDN with flank incision group but analgesic requirements were similar in both groups (p = 0.565).

CONCLUSIONS: LDN with flank incision had cosmetic satisfaction and comparable graft function, although challenging to the surgeon with longer warm ischemia time and higher postoperative pain.

SOURCE OF FUNDING: None

MP08 ROBOTIC SURGERY LOWER TRACT

MP08-01 IS TUMOR UPGRADING AND/OR UPSTAGING SIGNIFICANT FOR PATIENTS WITH CLINICAL LOW RISK PROSTATE CANCER?

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INTRODUCTION AND OBJECTIVES: We hypothesize that patients upgraded from Gleason score (GS) 6 on prostate biopsy (PBx) will be GS 3+4=7 at radical prostatectomy (RP) and will have similar outcomes to patients that remain GS 6. We sought to identify the percentage of upgrading/staging in patients with GS 6 on PBx who underwent robotic prostatectomy (RAPR). We also compared biochemical recurrence (BCR) rates between patients who remained GS 6 at RARP to patients who were upgraded to GS 7.

METHODS: A RARP database was searched between the years 2002 and 2008 for patients with cT1c/2a GS 6 on PBx and PSA <10. Clinical and pathologic data as well as date of BCR were collected. Upgrading was defined as GS ≥7; and upstaging, as T3a/b.

RESULTS: 179 (45%) of 395 patients were upgraded. 170 (95%) were upgraded to GS 7. 146 (86%) and 24 (14%) were 3+4 and 4+3, respectively. Upstaging occurred in 25% of patients who were upgraded to GS 7. With a median follow-up of 61.6 months (range 1.6 to 130), BCR developed in 7.1% (28/395) of the total cohort, 10 of whom remained GS 6 and 15 who were upgraded to GS 7 (P value 0.109).

CONCLUSIONS: Most patients who were upgraded became GS 3+4=7 at RP. The risk of significant upgrading/staging was 20%. The BCR rates for GS 7 and GS 6 patients were not statistically significant. Patients with clinical low risk prostate cancer can be placed on AS protocols and should be accurately counseled about the relatively low risk of significant undergrading/staging.

SOURCE OF FUNDING: None

MP08-02 NEW INSIGHT INTO POST-ROBOTIC PROSTATECTOMY BLADDER NECK CONTRACTURE: THE ROLE OF EXTRUDED HEM-O-LOCK CLIPS

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INTRODUCTION AND OBJECTIVES: Post robotic assisted laparoscopic radical prostatectomy (RALP) bladder neck contracture (BNC) is moderate to severe scarring involving the urethrovesical (U-V) anastomosis resulting in bladder outlet obstruction. Hemo-o-Lock Weck clips are used to secure the prostatic pedicles and to aid in dissection of the neurovascular bundles. The aim of our study was to examine the prevalence of post RALP BNC in terms of incidence, clinical presentation, cystoscopic findings, possible associated risk factors and response to treatment.

METHODS: Data of 1772 men with prostate cancer who underwent RALP by a high volume surgeon were retrospectively analyzed to investigate prevalence and risk factors for BNC. Clinical presentation, cystoscopic findings, possible associated risk factors and response to treatment.

RESULTS: Prevalence of post-RALP BNC after a median follow-up period of 30 months, was 43/1772 (2.4%). BNC developed after a mean and median period of 9.9 and 6 months respectively. Based on cystoscopic findings 23 patients (53%) had pure BNC and 20 patients (46.5%) had Weck clip related BNC, in which Hemolock clips were extruded at the anastomatic site. Recurrence rates of BNC were higher in the weck clip (60%) than in the pure BNC group (26%) (p = 0.025).

CONCLUSIONS: Extruded Hemolock clips at the vesicourethral anastomosis in patients post RALP, constitutes a significant predisposing factor for nearly half of the cases of bladder neck contracture and is responsible for its recurrence. Use of a “uniclip” technique can help circumvent this
problem. Use of biodegradable clips though expensive is also an option.

**SOURCE OF FUNDING:** None

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**MP08-03 COMPARATIVE ANALYSIS OF OVER 100 MINIMALLY INVASIVE URETERONEOCYSTOTOMIES**

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**INTRODUCTION AND OBJECTIVES:** Laparoscopic (lap) and robotic assisted laparoscopic (RAL) approaches have been applied to ureteroneocystotomies though such experience has been limited to small number of patients and limited follow-up. Herein we detail our experience with over 100 minimally invasive ureteroneocystotomies, the largest such series to date.

**METHODS:** All minimally invasive ureteroneocystotomies performed at our institution between 1997 and 2013 and all open ureteroneocystotomies performed between 2008 and 2013 were identified. Perioperative parameters of relevance were identified and recorded. Chi-squared and ANOVA with post-hoc Tukey analysis were performed for all categorical and continuous variables, respectively.

**RESULTS:** A total of 139 patients met our study criteria. 103 underwent minimally invasive approach (18 RAL and 85 lap). Mean follow-up duration was 504 days. Perioperative variables are summarized in table 1. Patients in the RAL, lap, and open cohorts were of similar age, gender and laterality distribution, American Society of Anesthesiologists (ASA) score, BMI, history of previous abdominal surgery, and history of prior treatment for the ureteral lesion. EBL was significantly lower in the RAL cohort. Mean Length of Stay (LOS) was lowest for RAL cohort. Overall major complications were limited to 12% (11% for RAL and 5% for lap) not significantly different then the 16% noted for open.

**CONCLUSIONS:** Minimally invasive ureteroneocystostomy allows for improvement in EBL, LOS, and stent duration. Such techniques were associated with lower re-admission and major complication rates compared to the open cohort, though not significantly so. RAL or laparoscopic ureteroneocystostomy is feasible, safe, and comparable to open technique with some perioperative benefit.

**SOURCE OF FUNDING:** None

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**MP08-05 SOLIFENACIN SUCCINATE VERSUS PLACEBO ON URINARY CONTINENCE AFTER ROBOTIC PROSTATECTOMY: EFFECT OF DOSE ESCALATION**

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**INTRODUCTION AND OBJECTIVES:** Reduced compliance, decreased capacity, and hyperactivity influence recovery of urinary continence after Robot-Assisted Laparoscopic Prostatectomy (RALP). NCT01371994 (Vanguard Trial) is a multi-center, randomized, double-blind study assessing the effects of postoperative Solifenacin succinate (SS) vs placebo on return to continence after RALP.

**METHODS:** Continence outcomes were collected daily and transmitted to dedicated servers with a smartphone device (SPH) provided to patients. Those with 2 to 10 pads per day (PPD) incontinence during the last week of the 21 day screening phase were randomized to 5 mg SS or placebo, using the SPH for 12 weeks, recording daily pad use. Time from randomization to continence (primary endpoint, 0 PPD/completely dry security pad for 3 days), average PPD change from baseline each visit (secondary endpoint) and number of patients who reached 0–1 PPD use on any day of study was analyzed.

**SOURCE OF FUNDING:** None
MP08-07 THE IMPACT OF ANATOMIC EXTENT OF\n\nPelvic Lymph Node Dissection on Sexual Function Recovery After Nerve-Sparing Robot-Assisted Laparoscopic Prostatectomy

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INTRODUCTION AND OBJECTIVES: To evaluate the efficacy and safety of tadalafil 5 mg once daily use in the treatment of erectile dysfunction (ED) after robot-assisted laparoscopic radical prostatectomy (RAPL).

METHODS: The study retrospectively evaluated 92 patients who underwent RALP at Dong-A University Medical Center. The patients were surveyed based on the abridged five-item version of the International Index of Erectile Function (IIEF-5) Questionnaire, which was self-administered before the surgery, and at 6 months and 1 year after the surgery. The 92 patients were classified into the tadalafil group (n=47) and the non-tadalafil group (n=45). Each group was then classified depending on the nerve-sparing (NS) procedure: bilateral NS and unilateral NS.

RESULTS: At 6 months, the total IIEF score of the tadalafil group and that of the non-tadalafil group were 10.0 ± 3.4 and 7.0 ± 4.0, respectively. At 1 year, the total IIEF-5 score in the tadalafil group was significantly greater than that of the non-tadalafil group (13.2 ± 5.6 vs 7.7 ± 4.8) (p < .0001). Statistically significant improvements (P < 0.05) were observed in the tadalafil group for all 5 domains of IIEF-5 score, while in the non-tadalafil group there was no significant improvement in any of
INTRODUCTION AND OBJECTIVES: The presence of lymph nodes within the prostatic anterior fat pad (PAFP) has been noted in several reports. Metastatic cancer can be found in PAFP lymph nodes. The characteristics of patients with PAFP lymph node metastasis are not well described in Taiwanese patients.

METHODS: From December 2006 to May 2014, 770 consecutive patients received robot-assisted radical prostatectomy (RARP) with PAFP dissection by a single surgeon, Yen-Chuan Ou. Mean age was 65.1 ± 7.1 years. PAFP was removed for pathological examination to evaluate the presence of lymphoid tissue and the involvement of prostate cancer.

RESULTS: Among these 770 patients, 61 (7.92%) patients were detected to have 1 to 3 PAFP lymph nodes. 52 patients had one node, 7 patients had two nodes, and 2 patients had three nodes. 6 (0.82%) patients had positive metastasis. In these 6 patients, 2 patients had PAFP metastases only and the other 4 patients had concomitant pelvic lymph nodes metastases. The other 55 patients had PAFP nodes but tested negative for malignancy.

CONCLUSIONS: Prostate cancer with metastases to the PAFP nodes has positive correlation with patients who had a high risk of prostate cancer preoperatively. The removal of the PAFP can facilitate the dissection of the prostate apex and bladder neck, and can also result in pathological upstaging if metastasis was present.

SOURCE OF FUNDING: None

MP08-09 A WELL-DESIGNED TRAINING PROGRAM. THE REPORT OF INITIAL 100 CASES OF ROBOTIC PROSTATECTOMY IN RIO DE JANEIRO

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INTRODUCTION AND OBJECTIVES: Robotic assisted laparoscopic radical prostatectomies (RALPs) is usually associated with a steep learning curve. We believe that a well-designed training program can shorten this curve and provide safety to the patient. We report the perioperative results of initial 100 cases done in Rio de Janeiro.

METHODS: Since December, 2012 five surgeons with previous experience radical prostatectomy started a training program. Each surgeon performed 20 cases of RALP, under the supervision of a proctor with huge surgical experience, and served as an assistant in the same number of cases. All trainees were present in all procedures. A transperitoneal six-port approach was used in each case. Data were collected and analyzed after 100 procedures. The first and last 50 patients were divided into 2 groups.

RESULTS: The mean operative time was 169 min. There was no conversion to another technique, transfusion or complication. The average blood loss was 247 ml. 99% of patients were discharged home with up to 2 days (mean 1.6 days). The mean duration of catheterization was 6.7 days. The overall positive surgical margin rate was 19%. On pT2 tumors 12 % in the first 50 cases, and 4 % in the last 50. The overall biochemical recurrence free (PSA <0.01 ng/ml) survival was 91%. Continence in the first group was 74% and 94% in 3 and 6m respectively, with an average time of 5 weeks for recovery of continence.

CONCLUSIONS: A structured program optimizes outcomes and offer more security, allowing the patient is not affected by the learning curve.

SOURCE OF FUNDING: None

MP08-10 ANALYSIS OF PROSTATE CANCER PATIENTS WITH INVOLVEMENT OF PROSTATIC ANTERIOR FAT PAD

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INTRODUCTION AND OBJECTIVES: The presence of lymph nodes within the prostatic anterior fat pad (PAFP) has been noted in several reports. Metastatic cancer can be found in PAFP lymph nodes. The characteristics of patients with PAFP lymph node metastasis are not well described in Taiwanese patients.

METHODS: From December 2006 to May 2014, 770 consecutive patients received robot-assisted radical prostatectomy (RARP) with PAFP dissection by a single surgeon, Yen-Chuan Ou. Mean age was 65.1 ± 7.1 years. PAFP was removed for pathological examination to evaluate the presence of lymphoid tissue and the involvement of prostate cancer.

RESULTS: Among these 770 patients, 61 (7.92%) patients were detected to have 1 to 3 PAFP lymph nodes. 52 patients had one node, 7 patients had two nodes, and 2 patients had three nodes. 6 (0.82%) patients had positive metastasis. In these 6 patients, 2 patients had PAFP metastases only and the other 4 patients had concomitant pelvic lymph nodes metastases. The other 55 patients had PAFP nodes but tested negative for malignancy.

CONCLUSIONS: Prostate cancer with metastases to the PAFP nodes has positive correlation with patients who had a high risk of prostate cancer preoperatively. The removal of the PAFP can facilitate the dissection of the prostate apex and bladder neck, and can also result in pathological upstaging if metastasis was present.

SOURCE OF FUNDING: None

MP08-11 OPEN VERSUS TOTALLY INTRACORPOREAL ROBOT-ASSISTED RADICAL CYSTECTOMY, BILATERAL EXTENDED PELVIC LYMPH NODE DISSECTION AND STUDER URINARY DIVERSION FOR BLADDER CANCER

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INTRODUCTION AND OBJECTIVES: To compare open versus totally intracorporeal robotic-assisted radical cystectomy (RARC), bilateral extended pelvic lymph node dissection (BEPLND) and Studer urinary diversion in bladder cancer patients.

METHODS: Retrospective comparison of open (n = 42) versus totally intracorporeal (n = 32) RARC, BEPLND and Studer urinary diversion was made.

RESULTS: Patient demographics and pT stages were similar. Positive surgical margin rates were 2.4% (open) and 6.3% (robotic) (p > 0.05). Mean estimated blood loss was significantly lower in robotic (412.5 ± 208.3 mL) versus open (1314.3 ± 987.1 mL, p = 0.000) group. More patients underwent bilateral neurovascular bundle (NVB) sparing surgery (93.7% versus 64.3%, p = 0.004) and BEPLND (100% versus 71.4%, p = 0.001) in robotic group. Significantly higher mean lymph node (LN) yield was detected in robotic group (25.4 ± 9.7 versus 17.2 ± 13.5, p = 0.005). Following the exclusion of patients with standard pelvic LN dissection in open group, higher mean LN yield rate was detected in robotic group (25.4 ± 9.7 versus 20.4 ± 14.6, p = 0.118). Number of postoperative readmissions due to minor complications was significantly lower in robotic group (n = 0 versus n = 7, p = 0.017). Minor and major complications and readmission rates due to major complications during perioperative period (0–30 days) and postoperative 31–90 days were similar. Although not significant, better outcomes of day-time continence with no pad use (robotic = 84.6% versus open = 75%, p > 0.05) and severe day-time incontinence (robotic = 8.3% versus open = 16.6%, p > 0.05) were detected in robotic group. Postoperative mean IIEF scores were similar (p > 0.05).

CONCLUSIONS: Decreased blood loss, better preserving NVBs and decreased hospital readmissions due to minor complications seem to be advantages of RARC. Additionally, robotic approach seems to carry better trends related with the outcomes of day-time continence and LN yield.

SOURCE OF FUNDING: None
MP08-13 EARLY DISCHARGE FOLLOWING ROBOT-ASSISTED RADICAL PROSTATECTOMY: AN ANALYSIS FROM THE NATIONAL SURGICAL QUALITY IMPROVEMENT PROJECT (ACS-NSQIP)

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INTRODUCTION AND OBJECTIVES: The benefits of robot assisted radical prostatectomy (RALP) decreased morbidity, specifically decreased length of stay (LOS). Initially reductions in LOS were seen only at high-volume centers. We examined contemporary trends of early discharge and risk of readmission after RALP.

METHODS: We identified all men undergoing RALP in the NSQIP database and then stratified them by LOS (early ≤ 1 and routine ≥ 2). Perioperative and clinical parameters were compared. Logistic regression analysis was used to identify characteristics associated with early discharge and readmission following RALP.

RESULTS: 12,742 RALPs were identified from 2007–2012. Overall, 65.0% were discharged early. The mean LOS for RALP was 1.66, 0.98, 2.92 for overall, early, and delayed groups, respectively. A greater percentage of early discharge patients were White versus African-American overweight, younger, had a shorter operative time, and received a pelvic lymph node dissection (PLND), (p < 0.001). The only predictor of early discharge was performance of PLND (OR = 1.3, p < 0.001). When analyzing predictors of readmission following RALP, early discharge was actually associated with a decreased risk of readmission on multivariate analysis (OR = 0.6, p < 0.001).

CONCLUSIONS: The current rate of early discharge following RALP is greater than previously published and has increased over time while LOS continues to decrease. Early discharge was not associated with readmission following RALP and actually was associated with a lower readmission rate. Further research is needed to examine the effect of standardized postoperative care pathways on LOS and readmission rates.

SOURCE OF FUNDING: None

MP08-14 ROBOTIC-ASSISTED TECHNIQUE FOR BOARI FLAP URETERAL REIMPLANTATION: IS THE ROBOTIC-ASSISTANCE BENEFICIAL?

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INTRODUCTION AND OBJECTIVES: Ureteral reconstructive surgery requires adequate exposure of the ureteral lesion and results in large abdominal incisions. Robotic-assistance allows the performance of complex ureteral reconstructive surgery through small incisions. The current series includes cases of Boari flaps performed by robotic-assistance with replication of the open technique.

METHODS: Eight patients underwent ureteral reimplantation by Boari flap technique. The indications for the performance of the procedure included ureteral stricture due to iatrogenic injury (n = 3), recurrent ureteral stricture after multiple endoscopic stone management procedures (n = 1), ureteral stricture due to previous malignant disease in the pelvis or abdomen (n = 3) and ureteral stricture due to trauma (n = 1). Five cases were located in the left side and 3 cases in the right side. A variety of parameters were recorded in a prospective database. The follow-up was extended up to 12 months after the procedure.

RESULTS: Mean age of the patients was 50.8 (range 39–62) years and mean Body Mass Index of 26.2 (range 23.2–29.29) kg/m2. Operative time ranged 115 and 240 (mean 171.9) min. Mean blood loss was 161.3 (50–250) ml. Conversion to open surgery did not take place in the current series. No intra-operative complications were observed. Post-operative complications included one case of prolonged anastomotic leakage.

CONCLUSIONS: The Robotic-assisted approach is efficient in the performance of ureteral reimplantation with Boari flap. Low blood loss, short catheterization time, low complication rate and excellent reconstructive outcome are associated with the
MP08 ROBOTIC SURGERY LOWER TRACT

MP08-15 EXTRAPERITONEAL APPROACH FOR ROBOTIC-ASSISTED SIMPLE PROSTATECTOMY
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INTRODUCTION AND OBJECTIVES: The current study presents the experience with the extraperitoneal approach for Robotic-assisted Simple Prostatectomy (RASP) in a technique replicating the vesicapsular incision technique of open surgery.

METHODS: RASP was performed to patients with prostate volume of more than 80 cm3 with indication for open enucleation of the prostate. Preoperatively, all patients were evaluated by uroflowmetry, PSA and post-void residual measurement as well as International Prostate Symptom Score questionnaire (IPSS). All peri-operative data were recorded in a prospective database. Follow-up appointments included the above measurements and were scheduled at 1 month and 6 months postoperatively.

RESULTS: 10 RASP were successfully performed by the extraperitoneal approach. Mean patient age and prostate volume were 63.1 (55–74) years and 129.4 (range 90–170) cm3, respectively. Mean operative time was 122.5 (range 85–140) min and represented the time from the first incision to the closure of the all incisions. The estimated blood loss was minimal (mean value 230 ml). Transfusions were not necessary. The mean catheterization period was 7.4 (range 6–8) days. The symptomatology, as reported by IPSS score, was improved at the follow-up appointments in comparison to the baseline values. One case of prolonged fever was noted postoperatively and managed by antibiotics.

CONCLUSIONS: The extraperitoneal approach for RASP proved to be efficient in the management of large prostates. The results are directly comparable to current available experience with transperitoneal RASP. The extraperitoneal RASP seems to favorably compare to the OSP, while the results are at least comparable to those of conventional laparoscopic approach.

SOURCE OF FUNDING: None

MP08-17 PSA RECURRENCE IN PATIENTS TREATED WITH ROBOT ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY AND EXTENDED PELVIC LYMPH NODE DISSECTION
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INTRODUCTION AND OBJECTIVES: To analyze the factors for PSA recurrence in patients treated with robot assisted radical prostatectomy (RARP) and extended pelvic lymph node dissection (ePLND).

METHODS: Between March 2005 and May 2014, 878 RARPs were performed in our department. Patients with intermediate or high risk factors according to D’Amico criteria had undergone pelvic lymph node dissection (PLND). Extended template was used after June 2007. The patients with limited PLND were excluded from study. Extended PLND was performed in 381 patients. There were 323 patients with a minimum follow up of 12 months. Age, preoperative PSA, postoperative Gleason score, positive surgical margin rate and tumor volume were analyzed for PSA progression. Two consecutive PSA values above 0.2 ng/ml were defined as PSA recurrence.

RESULTS: The patient characteristics are summarized in Table 1. The PSA recurrence rate was 15% (49/323). There were 43 (13.3%) patients with lymph node invasion (LNI). The age was similar in both groups, PSA level was higher in the PSA recurrence group (12.36 vs 10.10 ng/ml, P = 0.003). Pathology Gleason score (7.47 vs 6.92, P < 0.0001), positive surgical margin rate (40.8% vs 17.8%, P < 0.0001), Lymph node invasion rate (35% vs 5.8%, P < 0.0001) and tumor volume (12.79 vs 3.43 cc, P < 0.0001) were higher in the PSA recurrence group.

CONCLUSIONS: PSA level, lymph node invasion rate, positive surgical margin rate and tumor volume are important for PSA recurrence.

SOURCE OF FUNDING: None

MP08-16 ONCOLOGICAL OUTCOMES AFTER RADICAL PROSTATECTOMY FOR HIGH RISK PROSTATE CANCER
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INTRODUCTION AND OBJECTIVES: To analyze oncological outcomes after radical prostatectomy for high risk prostate cancers.

METHODS: From November 1996 to January 2014, all D’Amico high risk prostate cancers with radical prostatectomy performed were included. Pathological and oncological outcomes were analyzed.

RESULTS: 92 patients with 24 open, 7 laparoscopic, and 61 robotic prostatectomies were included. Pre-operative mean PSA was 25.4 +/- 23 ng/ml, and 48.9% had palpable prostate nodule. 57.6% patients had pre-operative Gleason score 8–10. Pathological staging showed 25.0% T2c, 31.5% T3a and 25.0% T3b. Pathological N1 was seen in 8.7% patients. There were 35.2% Gleason 7 and 34.3% Gleason 8–10. Positive surgical margin rate was 34.8%. There was a trend towards lower positive surgical margins in robotic group (29.5%) compared with laparoscopic (42.9%) and open (45.8%) groups. Excluding 13 patients with early post-operative androgen deprivation therapy (ADT), 71.8% had undetectable PSA nadir, and there was no difference comparing different surgical approaches. At a median follow-up of 4.5 (range 0.1–17.5) years, 18.2% had biochemical recurrence, 11.7% had adjuvant radiotherapy, 10.4% had salvage radiotherapy, 14.4% had early ADT, 22.2% had late ADT, 6.7% had metastasis, 3.3% reached castration resistant status, and 3.3% died of prostate cancer. On the whole, 48.9% patients required adjuvant therapy. For patients with N1 disease with early ADT given, 12.5% had castration resistance but none of them died at a median follow-up of 10 years.

CONCLUSIONS: Radical prostatectomy with adjuvant therapy provided good cancer control and long-term survival in high risk prostate cancers.

SOURCE OF FUNDING: None

MP08-16 ROBOTIC SURGERY LOWER TRACT

approach. Robotic-assistance seems to be beneficial for ureteral reconstructive surgery.

SOURCE OF FUNDING: None
MP08-18 UTILIZATION AND TIMING OF BLOOD TRANSFUSIONS FOLLOWING OPEN AND ROBOT-ASSISTED RADICAL PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: The shift from open to robotic assisted prostatectomy technique has resulted in lower operative blood loss, and reduced the need for blood transfusions. We analyzed the American College of Surgeons National Surgical Quality Improvement Project (NSQIP) database to compare real-world, contemporary trends in utilization and timing of blood transfusion following open (ORP) and robotic assisted radical prostatectomy (RALP).

METHODS: We identified men undergoing both RARP and ORP and then queried for patients who received a blood transfusion in the perioperative period. The outcomes of interest were need and timing of perioperative blood transfusion (PBT), which was categorized into early (post-operative day ≤ 1) or late (post-operative day ≥ 2). Logistic regression analysis was used to identify variables associated with the need and timing for perioperative blood transfusion.

RESULTS: A total of 16,144 men who underwent prostatectomy were identified from 2007–2012. The overall PBT rate was 3.1%. Highest rate of transfusions occurred on day of surgery for patients undergoing ORP, and first postoperative day for patients undergoing RARP. On multivariate analysis significant predictors of blood transfusion included history of bleeding disorder (OR:2.8, p = 0.002), preoperative dyspnea (OR:1.7, p = 0.03), starting hematocrit <42% (OR:1.9, p <0.001), open approach (OR:0.09 p <0.001), year of surgery (OR:0.5, p <0.001), resident involvement (OR:1.6, p = 0.003), and operative time (OR:4.4, p < 0.001). The only predictor of receiving a blood transfusion on POD 2 or later was having the procedure performed through a robot-assisted approach (OR:3.7 p < 0.001).

CONCLUSIONS: The rate of perioperative transfusions is lower than previously published. A clear separation in timing of blood transfusion following open (ORP) and robotic assisted radical prostatectomy (RALP).

SOURCE OF FUNDING: None

MP08-19 TRANSITIONING TO ROBOTIC ASSISTED LAPAROSCOPIC PROSTATECTOMY (RALP): AN ANALYSIS OF TWO SURGEONS’ EXPERIENCE AND LEARNING CURVES

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INTRODUCTION AND OBJECTIVES: We devised single-step posterior reconstruction (PR) technique, which opposes median dorsal raphe solely to the posterior counterpart of the detrusor apron, rather than the Denonvilliers’ fascia. We demonstrated that this new PR method during robot-assisted laparoscopic prostatectomy (RALP) significantly shortens the time to the recovery of continence by a retrospective study. We investigated it as a prospective clinical trial.

METHODS: A single-blind, parallel group, randomized controlled trial was designed. One hundred men who underwent RALP by a single surgeon at a referral center were randomly allocated to intervention group (n = 50) or control group (n = 50) from October 2012 through August 2013.

RESULTS: In the control group, one and four patients were excluded due to open conversion and withdrawal to participate. Baseline characteristics and perioperative outcomes were similar between groups. Median duration of complete continence recovery (no pad) was not significantly different (106 days vs. 119 days, p = 0.890). However, social continence recovery (0 or 1 pad per day) was significantly shorter in the interventional group (median 18 days) than control group (median 30 days, p = 0.024). At 6 months, 88.0% and 75.6% patients in the intervention and control groups regained complete continence, respectively.

SOURCE OF FUNDING: None

MP08-20 EFFECT OF SINGLE-STEP POSTERIOR RECONSTRUCTION METHOD ON RECOVERY OF CONTINENCE AFTER ROBOT-ASSISTED LAPAROSCOPIC PROSTATECTOMY: RESULTS FROM A PROSPECTIVE, SINGLE-BLIND, RANDOMIZED CONTROLLED

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INTRODUCTION AND OBJECTIVES: The rate of perioperative transfusions is lower than previously published. A clear separation in timing of blood transfusion following open (ORP) and robotic assisted radical prostatectomy (RALP)

METHODS: A prospectively collected database of 2,239 RALPs collected over 8 years performed by 22 urologists at a single institution. We compared positive surgical margin (PSM) percentages with a moving average plot for an experienced laparoscopic surgeon and an open surgeon for their first 130 RALP cases.

RESULTS: We plotted a simple moving average of percentage PSM over 25 consecutive RALP cases each surgeon had performed. There is a significant difference (p < 0.0001) between the moving average points for the open and laparoscopic surgeon. However, after case number 56 the moving average points for the open surgeon are no longer significantly higher (p >0.05) than those of the laparoscopic surgeon. The cohorts of 130 patients for each surgeon were comparable in terms of pathological stage: pT2 in 78.1% and 78.0%, and pT3 in 21.9% and 22.0% (p = 0.979) for the open and laparoscopic surgeon respectively.

CONCLUSIONS: We observed that beyond 56 personal cases percentage PSM rates were equivocal for both surgeons. Our data suggests that an open surgeon has a steeper learning curve than a laparoscopic surgeon but reaches parity in margin positivity rates at around 50–60 cases.

SOURCE OF FUNDING: None

- A74-
INTRODUCTION AND OBJECTIVES: Robot assisted radical prostatectomy (RARP) has been dramatically spread in Japan. RARP is reported to have a potential to lead to early recovery of erectile function and continence compared with conventional open surgery. We analyzed the predictor for the early recovery from erectile dysfunction (ED) following RARP.

METHODS: Of 180 patients who underwent RARP at Teikyo University hospital and Juntendo University hospital since December 2011, we assessed 80 patients whose data at 6 months after the surgery were available. We included the patients with nerve-sparing and excluded those with neo-adjuvant androgen ablation. Finally we assessed 25 patients for free testosterone level, EPIC, EHS, SHIM, and sleep related erection.

RESULTS: Median age was 64 years (50–73), and median PSA level: 6.7 (2.5–21.3). Free testosterone level was 5.4 pg/ml (1.9–8.4). Of 25 patients, 11 (44%) achieved sufficient erection (EHS ≥ 3) at 6 months after surgery with phosphodiesterase-type 5 inhibitor (PDE5i). We carried out the multivariate analysis for the predictor of the sufficient erection with PDE5i using parameters including age ≥ 65 years, inter- or intra-fascial technique, free testosterone level, rehabilitation, and institution. Logistic regression analysis revealed free testosterone level was a single significant predictor.

CONCLUSIONS: Our study suggested that testosterone level before surgery is the predictor for the early achievement of sufficient erection with PDE5i after surgery. Neo-adjuvant androgen ablation might deteriorate the recovery from ED following RARP.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: PSMs in Robot-assisted radical prostatectomy (RARP) specimens are a frequent indication for adjuvant therapy. However, the association between PSMs and prostate cancer–specific oncologic outcome is unclear. Besides, the role of adjuvant therapy or salvage therapy in PSMs is still controversial. We analyze the association of PSMs with adjuvant therapy, and oncologic outcome of salvage therapy.

METHODS: Data was retrospectively reviewed from 59 patients from the Chang-Gung Memorial Hospital, Linkou, with pT2–4 N0 prostate cancer (PCa) undergoing RARP with PSMs between January 2006 to December 2012. All patients were divided to salvage therapy and non-salvage therapy. We recorded the tumor stage, positive location, initial PSA and post operation PSA, and Gleason grade in these two groups. The Kaplan-Meier method and log rank test were used to determine differences in progression-free probability among positive margin features.

RESULTS: A total of 59 patients were included. Mean age was 65 year-old. The Five-year Kaplan-Meier estimates for BCR-free survival were 76% for salvage therapy, 51% for patients without salvage therapy (p = 0.403) that didn’t differ significantly. Besides, progress-free survival and PCA-specific mortality (PCSM) also did not differ significantly between two groups. Patients who received salvage therapy can get well oncologic outcome if PSMs with biochemical failure.

CONCLUSIONS: There were no significant difference in biochemical recurrence-free, progress-free survival or prostate cancer-specific mortality between those patients receive adjuvant therapy and don’t receive adjuvant therapy in PSMs. However, adjuvant treatment has trend to avoid reaching biochemical failure. Salvage therapy can also get well prognosis in PSMs after RARP.

SOURCE OF FUNDING: None
carefully may avoid this condition. Immediately removal of the Weck clip and repair possible injury could minimize the damage.

**SOURCE OF FUNDING:** None

**MP08-24** ROBOT-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY: ONCOLOGIC AND FUNCTIONAL OUTCOMES OF INITIAL 97 CASES IN THE LOW VOLUME INSTITUTE

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**INTRODUCTION AND OBJECTIVES:** Robot-assisted radical prostatectomy (RALP) was approved by Japanese national health insurance in April/2012. The study aims to evaluate the initial oncological and functional outcomes of 97 RALPs in Japanese rural hospital.

**METHODS:** A retrospective study was performed in the initial 97 consecutive RALP cases between April 2012 and May 2014 in our hospital. The procedures were performed by single surgeon. A transperitoneal or retroperitoneal approach was selected up to the history of abdominal operation.

**RESULTS:** Median age was 68 years (range: 48–79), body mass index was 23 (range: 15.4–31.3) and preoperative prostate-specific antigen level was 9.08 ng/mL (range: 0.5 – 64.8). 31.1% of the patients had a history of abdominal surgery. The median estimated blood loss was 100 ml (range: 50–500) with no autologous or allogenic blood transfusion. 72.5% patients had pT2 disease, 16.3 % had pT3a, 10.2% had pT3b and 1.0 % had pT4. Positive surgical margin rates was 29.2%. Positive surgical margin rates for pT2, pT3a and pT3b were 20.3 %, 50.0% and 60% respectively. Continence rate was 82 % at 3 month and 97% at 12 month. No major complication was observed.

**CONCLUSIONS:** Postoperative oncological and functional outcome was acceptable in the low volume institute. Even during the learning curve period, RALP appears to be safe and promising procedure.

**SOURCE OF FUNDING:** None

**MP08-25** EVALUATING PATIENTS ELIGIBLE FOR ACTIVE SURVEILLANCE WHO CHOSE TO UNDERGO PROSTATECTOMY: THE DIFFERENCES BETWEEN PROSTATE CANCER FEATURES ON BIOPSY AND FINAL PATHOLOGIC REPORT

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**INTRODUCTION AND OBJECTIVES:** Active surveillance (AS) is an acceptable management option for localized prostate cancer with clinical features of low risk of progression. We sought to evaluate how the preoperative data correlated with post prostatectomy specimens in patients who were eligible for AS but chose to undergo robotic-assisted radical prostatectomy (RARP).

**METHODS:** We performed a single-institution; single-surgeon review of 2917 patients who underwent RARP from 2005 to 2012 under an IRB approved protocol. The inclusion criteria were: PSA ≤ 10, clinical stage T1–T2a, Gleason score 6 or less on biopsy, less than 33% of cores positive and less than 50% of tumor percentage in one core. We compared preoperative data with the pathological features of prostate cancer using t-test (continuous) and chi-square test (categorical).

**RESULTS:** 2,591 patients had all data points available and of these patients, 1027 qualified for AS. Among them, 504 (49.1%) were found to have upgraded Gleason scores on their prostatectomy specimen. There were 484 patients upgraded to Gleason 7, 18 to Gleason 8, and 2 to Gleason 9. Only 1 patient downgraded from Gleason 6 to 5. Positive margins were found in 100 patients (9.7 %), 29 of those being focally positive (2.8%). Pathologic stage T3 was identified in 101 patients (9.8%). No patient presented with lymph node involvement on path report.

**CONCLUSIONS:** We found an alarming number of patients whose Gleason score was upgraded following RARP. AS is a promising tool in the management of prostate cancer; however, appropriate education should be given to patients about the risks associated with this management style.

**SOURCE OF FUNDING:** None

**MP08-26** LOW LEVELS OF TESTOSTERONE IN MIDDLE AGED MALES (AGE 45–64) MAY HAVE AN IMPACT ON PATHOLOGIC FEATURES OF PROSTATE CANCER

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**INTRODUCTION AND OBJECTIVES:** Serum levels of testosterone decrease with age and aging is a major risk factor for prostate cancer (PCA) with the majority of tumors being diagnosed in patients 65 years or older. We sought to evaluate the relationship of pre-operative testosterone and PCA pathologic features in patients who underwent surgery for PCA at our institution.

**METHODS:** We reviewed patients that underwent robotic-assisted radical prostatectomy from September 2010 to January 2013 under an IRB approved protocol. Only patients (n = 605) who had testosterone levels measured using Elecsys Testosterone II Immunoassay were included. We excluded patients (n = 92) who had either pre-operative hormone therapy, uncontrolled diabetes, thyroid disease, or prior history of prostate surgery. The threshold for hypogonadism was set at free testosterone (FT) < 47 pg/ml and at total testosterone (TT) < 193 ng/dL. We analyzed clinical and pathological features of PCa between the groups of patients using STATA version 12.0.

**RESULTS:** In middle aged men (45 to 64 years; n = 368), low FT and low TT groups had a greater BMI (p < 0.01) and a higher percentage of Gleason 8–10 (13.3% vs. 4.8%, p = 0.011 and 19.2% vs. 5.1%, p = 0.012). Patients with low FT had higher number of positive cores on biopsy (3.89 vs. 3.04 p = 0.019) and greater tumor volume (7.9 ml vs. 6.1 ml, p = 0.045). Among men
Among men aged 45–64 years low serum
CONCLUSIONS: Among men aged 45–64 years low serum
pretreatment FT and TT predicted more aggressive features of
PCa in prostatectomy specimens. In middle aged patients low
free testosterone levels measured pre-operatively may indicate
more aggressive disease parameters.
SOURCE OF FUNDING: None

MP08-27 ROBOTIC ASSISTED RADICAL CYSTECTOMY:
INITIAL EXPERIENCE IN 9 CASES AND PROBLEMS
WE MET
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INTRODUCTION AND OBJECTIVES: Radical cystectomy
with urinary diversion is a complicated urological procedure and
often performed in open method. After the first series of robotic
assisted radical cystectomy reported in 2003, it gain popular with
time. Several studies showed promising surgical result. A recently
study revealed similar oncology outcome of robotic radical cy-
stectomy compare to open in 12 years follow up. We had reviewed
robotic radical cystectomy in out institute and the problems we met.
METHODS: From 2012 to 2014, 9 patients received robotic
radical cystectomy in our institute. Four patients had extra-
corporeal urinary diversion include two ileal conduit and two
studer pouch. Other five patients had end-stage renal disease
(ESRD) and removed all urinary system.
RESULTS: 9 patients, 4 male and 5 female with mean age
63±12 years old received robotic radical cystectomy. The
overall mean operation time is 471.1±238.5 mins. In ilea-
conduit group is 316.5 mins and 875.5 mins in studer pouch group.
The mean blood loss is 168±121ml. The median lymph nodes
harvest is 26 (12–55). Margin positive happened in one patient
(11.1%) The complication happened in 4 patients (44%) include
the other two are Clavien grade II (urinary tract infection, vagina bleeding).
Minimal dissection of sphincteric complex, preservation of
puboprostatic ligament, selective ligation of deep venous com-
plex and both posterior and anterior reconstruction using Von
Velthoven stitch. Intra operative bladder fill test was done at the
end of anastomosis to rule out urine leak. Check cystogram was
done prior to catheter removal in the outpatient department.
Patients were subsequently followed at regular intervals re-
sulting the status of urinary continence. All patients irrespective
of adjuvant therapy were included in the analysis.
RESULTS: Five people have received hormone therapy plus
radiotherapy and with good response according to PSA level
during at least 1 year follow up. However, CRPC develop in the
other two people.
CONCLUSIONS: Despite there is still lack propective study for
oncology control in this kind of patient, there is still some benefit
in PSA control in concerned of stops the deluge of shed meta-
static cells and debulking. Furthermore, it’s also good for local
symptom control.
SOURCE OF FUNDING: None

MP08-28 IT'S THERE ANY BENEFIT OF ROBOTIC AS-
SISTED RADICAL PROSTATECTOMY IN METASTATIC
PROSTATE CANCER? A SINGLE CENTER CASE SERIES
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INTRODUCTION AND OBJECTIVES: Traditionally, rad-
cial prostatectomy is not suggested in patient with metastasis
prostate cancer and more reserved in organ confined disease. As a
result, hormone therapy and radiotherapy is more preferable in
clinical advanced or metastasis disease. With the advanced in
surgical technique, the term “cytoreductive surgery” is more
acceptable and the most important determinant of patient sur-
vival in some kind of cancer such as renal cell carcinoma. It’s
also proof that there is cancer specific survival benefit of radical
prostatectomy in lymph node positive disease. Besides, robotic
assisted system for radical prostatectomy has been proved in better
surgical margin, operative complication and continence rate. So,
is there any benefit under current condition?
METHODS: During the past eight year, there is total 750
patients with prostate cancer received robotic assisted radical
prostatectomy in our hospital. Among them, seven patients
has showed PSA failure immediately after operation and me-
tastasis disease was proved. Trace back their history, there is
also some hint indicate metastasis disease may have develop
before surgery. We want to clarify any benefit in this clinical
condition.
RESULTS: Five people have received hormone therapy plus
radiotherapy and with good response according to PSA level
during at least 1 year follow up. However, CRPC develop in the
other two people.
CONCLUSIONS: Despite there is still lack propective study for
oncology control in this kind of patient, there is still some benefit
in PSA control in concerned of stops the deluge of shed meta-
static cells and debulking. Furthermore, it’s also good for local
symptom control.
SOURCE OF FUNDING: None

MP08-29 CONTINENCE OUTCOMES FOLLOWING RO-
BOTIC RADICAL PROSTATECTOMY: OUR EXPERIENCE
FROM 150 CONSECUTIVE INDIAN PATIENTS
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INTRODUCTION AND OBJECTIVES: Evaluation of conti-
nence outcomes following Robot Radical Prostatectomy (RARP)
and double layered urethrovaginal reconstruction.
METHODS: One hundred fifty consecutive patients undergoing
RARP and double layer urethrovaginal reconstruction were
prospectively studied for preoperative, intraoperative and post
operative parameters. Key points followed during surgery were:
Minimal dissection of sphincteric complex, preservation of
puboprostatic ligament, selective ligation of deep venous com-
plex and both posterior and anterior reconstruction using Von
Velthoven stitch. Intra operative bladder fill test was done at the
end of anastomosis to rule out urine leak. Check cystogram was
done prior to catheter removal in the outpatient department.
Patients were subsequently followed at regular intervals re-
garding the status of urinary continence. All patients irrespective
of adjuvant therapy were included in the analysis.
RESULTS: The mean age was 64 yr (standard deviation ± 6.88),
and mean serum PSA was 20.2 ng/ml. Mean BMI 25.6
(SD: ± 3.84). Mean prostate weight was 44.09 gm (range 18–
103 gm, SD: ± 15.59). Median days to catheter removal after
surgery were 7 (range 4–14 days) days. Cystographically deter-
mined urinary leaks were seen in 2 patients. Urine leak was
managed by delaying catheter removal for another 1 week.
Minimum 6 month follow up was available in 126 patients. ‘No
pad’ status at 1 week, 1 month, 3 months, 6 months and 1 year
was 15.1%, 54.9%, 78%, 90.5% and 94.1% respectively.
CONCLUSIONS: Excellent continence outcomes are observed in
patients undergoing double layered urethrovaginal reconstruction.
SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: It became controversial that the timing of dorsal vein complex (DVC) ligation during robotic assisted laparoscopic radical prostatectomy (RARP) because RARP does not always require DVC ligation prior to apical dissection. We examined the merit and safety of delayed dorsal vein complex ligation technique during RARP.

METHODS: We reviewed Teine Keijinkai Hospital Database to collect operative records about patients who underwent RARP between November 2011 and April 2014. We analyzed data and divided patients to Delayed or Standard group. The Standard group patients got the prostatic apex dissected after the DVC ligation. In contrast, apical dissection was completed prior to the DVC ligation in the Delayed group. We retrospectively evaluated clinical and pathological records to investigate merits and demerits of the delayed DVC ligation technique.

RESULTS: Two hundred and twenty four patients were enrolled in this study. Among them 51 were in the Delayed group and the rest 173 were in the Standard group. Age, serum PSA level, and clinical stage were similar in the two groups. Operative time of the Delayed group (194 min) was shorter than one of the standard group (243 min) (p<0.01). Estimated blood loss (226 vs. 288 ml), postoperative continence rate (61 vs. 67% at one month), and positive resection margin rate (23.5 vs. 28.3%) were similar (respectively).

CONCLUSIONS: A delayed DVC ligation technique brings the advantage in the operative time compared with a standard ligation technique without hampering the surgical and oncological outcome.

SOURCE OF FUNDING: None
colic (4.3%) and obstructive uropathy (3.6%). There was neither perioperative mortality nor adjacent organ injury in this study.

CONCLUSIONS: PNIL with direct endoscopic fascial dilatation is a feasible option for patients requiring standard PNL treatment.

SOURCE OF FUNDING: None

MP09-02 SINGLE-TRACT, LOWER POLE ACCESS TECHNIQUE TO MANAGE STAGHORN CALCULI PROVIDES SUPERIOR PERCUTANEOUS NEPHROLITHOTOMY OPERATIVE OUTCOMES

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INTRODUCTION AND OBJECTIVES: Percutaneous nephrolithotomy (PCNL) is the standard treatment for patients with staghorn calculi. Upper pole access has traditionally provided more complete stone clearance; however, this increases the risk for pneumo- and hemo-thorax. We evaluate the effectiveness of our technique of single-tract, lower pole access to manage staghorn calculi.

METHODS: Consecutive patients undergoing PCNL for staghorn calculi were prospectively enrolled. Number of tracts, puncture locations, stone-free status, and complications were recorded. A single percutaneous access to the lower pole was initially attempted; however, if this was not possible or not sufficient to remove all calculi, additional tracts to the interpolar or upper pole calyces were established. Our technique will be described in detail.

RESULTS: 79 patients underwent PCNL for staghorn calculi. 45 patients (57%) had successful PCNL with a single tract, lower pole access. Of the 34 patients who required alternative access, thirteen (38%) patients required additional punctures after initial lower pole access. Average blood loss (31.44 mL vs. 79.26 mL, p = 0.015) and OR times (113 min vs. 148 min, p = 0.006) were less for patients with a single-tract access to the lower pole than for those requiring alternative access. The single-tract, lower pole group also had a higher stone-free rate (78% vs. 65%), although not significant.

CONCLUSIONS: Single-tract, lower pole staghorn extraction provides excellent outcomes in a majority of patients with a high stone-free and low complication rate compared to traditional techniques.

SOURCE OF FUNDING: None

MP09-03 RANDOMIZED, DOUBLE-BLIND AND SHAM-CONTROLLED PILOT STUDY OF ACUPUNCTURE FOR THE TREATMENT OF POST-OPERATIVE PAIN FOLLOWING PERCUTANEOUS NEPHROLITHOTOMY

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INTRODUCTION AND OBJECTIVES: Although percutaneous nephrolithotomy (PCNL) is a minimally invasive procedure for treatment of kidney stones, post-operative pain management remains a challenge. We sought to evaluate the efficacy of pre-operative acupuncture for post-operative pain relief in subjects undergoing PCNL.

METHODS: We conducted a double-blinded randomized, sham controlled pilot study to compare patients who received preoperative true electro-acupuncture (group 1) vs. pre-operative sham-electro-acupuncture (group 2). All investigators, surgeons, anesthesiologists, nurses, and subjects were blinded, except for the acupuncturist. PCNL was performed according to standard protocol, but no intra-operative nerve block was administered. Post-operative pain was assessed by visual analog scale (VAS) immediately after the procedure (time 0) and over the subsequent 4 hours post-operatively and on post-operative day 1. Additionally, we recorded narcotic usage, incidence of post-operative nausea and vomiting, size of referred pain area and length of hospital stay.

RESULTS: A total of 8 patients have been enrolled in this study. There were 5 patients in group 1 and 3 in group 2. Mean VAS score immediately post-operatively was 2.58 for group 1 vs. 2.00 for group 2. Mean VAS score at 4 hrs was 2.00 and 3.33 for group 1 and 2, respectively. All 8 patients enrolled required narcotic usage (p = 0.293). Mean operation time was 113 minutes in group 1 and 65.0 minutes in group 2 (p = 0.073).

CONCLUSIONS: Our pilot data demonstrated that VAS scores were lower in the immediate postoperative period for patients who received true acupuncture. All subjects required the use of narcotics. Further patient recruitment is in progress.

SOURCE OF FUNDING: None

MP09-04 WHAT DETERMINES STONE DURILITY DURING PCNL: A QUALITATIVE AND QUANTITATIVE ANALYSIS

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INTRODUCTION AND OBJECTIVES: It has been purported that the fragility of stones during lithotripsy may be predicted by radiologic characteristics and their biochemical composition. We sought to determine preoperative, intraoperative and postoperative factors that influence stone durability during percutaneous nephrolithotomy.

METHODS: We prospectively reviewed data of the patients that were undergoing PCNL at our Institute by a single surgeon. The CT scan characteristics were analyzed for mean attenuation value (MAV in HU), stone volume was computed using ellipsoid formula. Surgeon used 10-point scale to qualitatively assess the hardness of the stone. The number of impulses with the same pneumatic lithotripter to fragment the stone, time to fragmentation and stone composition were documented.

RESULTS: 21 patients (9 males, 12 females, mean age 56.8 years) were included. Mean stone volume and MAV were 263 mm3 (range 4.53–964) and 1001.3 HU (range 288.4–1850). 17.8% had uric acid stones, 75.06% mixed calcium stones (47.56% calcium oxalate monohydrate, calcium oxalate dehydrate and 27.5% calcium phosphate), 7.14% other. Mean surgeon score of overall stone hardness was 6.47 (range 2–10). Mean stone score for uric acid stones was 6.3, calcium oxalate and calcium phosphate were 6.75 and 7.46 respectively. Mean impulses per volume and time per volume was 9.66 (range 0.0031–11.08) and 1.08 (range 0.00321–1.008) respectively. The correlation between Hounsfield units and durility (measured by impulses/volume) were statistically significant, as well as the differences between stone compositions (p < 0.05).
CONCLUSIONS: We conclude that stone composition and density on CT do correlate with stone durability as measured by impulses per volume to fragment stones.

SOURCE OF FUNDING: None

MP09-05 THE MODERN ERA STRUVITE STONE: PATTERNS OF URINARY INFECTION AND COLONIZATION

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INTRODUCTION AND OBJECTIVES: We sought to offer a modern assessment of struvite stone formation by examining both the characteristics of struvite formers and the nature of associated infectious organisms.

METHODS: We retrospectively identified patients who underwent PCNL between February 2009 and August 2013. Pre-disposing characteristics and clinical history of UTI were assessed. Urine cultures (pre-operative free catch and intra-operative renal pelvic) and stone cultures were reviewed for evidence of infection.

RESULTS: Struvite formers represented 38 (8%) of 474 patients. 83% of struvite formers were female (vs 46% in non-struvite formers, P < 0.001). 94% of struvite formers had a history of recurrent/recent UTI and 60% exhibited a UTI risk factor. A greater percentage of struvite formers demonstrated growth on pre-operative urine (45% vs 22%, P = 0.003) and stone cultures (69% vs 23%, P < 0.001) compared to non-struvite formers. Stone cultures were positive for urea-splitting organisms in 29% of struvite formers (vs. 10% non-struvite formers, P = 0.001). 31% of struvite stones were sterile and 49% grew non-urea-splitting organisms, including E. coli and Enterococcus spp.

CONCLUSIONS: While demographic data, clinical history and culture results suggest a significant predisposition to infection among struvite formers, urea-splitting organisms could not be identified in association with all struvite stones in this series. The additional finding of sterile struvite stones prompts consideration of antibiotic mediated sterilization and lends support to pre-operative renal pelvic and stone cultures were reviewed for evidence of infection.

SOURCE OF FUNDING: None

MP09-06 FEASABILITY OF PERCUTANEOUS NEPHROLITHOTOMY IN PATIENTS WITH HEPATIC INSUFFICIENCY

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INTRODUCTION AND OBJECTIVES: Patients with liver disease are at increased risk of morbidity often due to malnutrition and coagulopathy. We assess the feasibility and safety of percutaneous nephrolithotomy (PCNL) in patients with hepatitis or cirrhosis.

METHODS: We retrospectively reviewed our experience with PCNL in patients with hepatic compromise. 10 patients with chronic hepatitis or cirrhosis underwent PCNL at Tulane between 2007 and 2014. All patients were male with an average age of 58.7 years, BMI of 25.7 kg/m², and MELD score of 10.3 (range 6–22). Etiology of liver disease included viral hepatitis (6), alcoholic hepatitis (2), cryptogenic cirrhosis (1), and hepatocellular carcinoma status post chemoembolization (1). 7 patients had confirmed cirrhosis, of whom two were awaiting transplant and one patient had previously received liver transplantation. Percutaneous access was performed on the day of surgery, and three patients required two accesses.

RESULTS: All PCNLs were successfully completed. Of the 10 procedures, two patients were transfused with platelets and fresh frozen plasma immediately before the surgery due to thrombocytopenia (< 100 k). Mean stone size was 1.9 cm and mean estimated blood loss was 169 mL with no patient requiring transfusion post-op. Average hospital stay was 1.2 days (range 1–3). One patient with a MELD of 22 was readmitted with hepatic decompensation, and represents the sole complication. Only one patient required an auxiliary ureteroscopy due to inadequate percutaneous access placement.

CONCLUSIONS: Liver disease does not preclude percutaneous treatment of nephrolithiasis with PCNL. A meticulous preoperative workup to determine the extent of liver dysfunction is instrumental prior to treatment.

SOURCE OF FUNDING: None

MP09-07 STATIN USE AND RATES OF SEPSIS FOLLOWING PERCUTANEOUS NEPHROLITHOTOMY

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INTRODUCTION AND OBJECTIVES: Recent empirical work suggests that statin medications may have anti-inflammatory and anti-endotoxin properties. While the effectiveness of statins in reducing the risk of sepsis in some medical and surgical populations has been examined, no study, as of yet, has explored it in patients undergoing percutaneous nephrolithotomy (PCNL).

METHODS: Using MarketScan® Commercial Claims and Encounters Database (2002 to 2006), we identified working-age adults aged with urinary stone diseases, who were treated by PCNL. Among them, we determined those with a prescription fill for a statin agent preceding their surgery. The overall incidence of sepsis post procedure (1.52% vs. 1.29%, respectively; P = 0.314) did not differ between statin users and non-users (P = 0.602). Use of intensive care services and mean length of hospitalization also did not differ between statin users and non-users (P = 0.553 and P = 0.314, respectively).

CONCLUSIONS: Our study does not support the use of statins for decreasing the risk of sepsis in patients undergoing PCNL. Practicing urologists should consider other known measures to prevent sepsis in this population.

SOURCE OF FUNDING: None
MP09-08 COMPARISON OF STERILE WATER AND NORMAL SALINE AS IRRIGATING FLUID DURING PERCUTANEOUS NEPHROLITHOTOMY (PCNL)
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INTRODUCTION AND OBJECTIVES: The irrigation fluid that used during percutaneous nephrolithotomy has systemic absorption and may lead to hyponatremia. To prevent these complications, normal saline has recommended for irrigation during PCNL. In otherwise Sterile water is available and cheap that can be used instead of normal saline. We compare sterile water and normal saline in PCNL.

METHODS: Ninety four adult patients older than 18 years old with renal or upper ureteral stones candidate for PCNL randomly allocated in two groups. Patient with electrolyte imbalance, coagulopathy or active infection excluded from study. From all patient serum base laboratory and serum electrolyte was taken. Then PCNL with standard method and with use of normal saline was done in first group. In second group sterile water was used as irrigating fluid in PCNL. Preoperative, intraoperative and postoperative variables such as serum sodium, potassium and haemoglobin, cost and duration of surgery, pulmonary and cardiovascular complications compared between two groups by statistical tests.

RESULTS: Two groups were similar in preoperative electrolytes, time of operation and volume of irrigation fluid. Mean postoperative potassium in group one and two were 4.13±3.5 meq and 4.23±0.25 meq respectively. (p=0.021). Fever in group one and two were developed in 5% and 28.7% respectively (p=0.026). Mean cost in group one and two were 6 USD $ and 0 respectively (P=0.001). There were no cardiovascular and pulmonary complications.

CONCLUSIONS: Sterile water is inexpensive, safe and more available and has minor complications in comparison with normal saline that can be used as an alternative fluid in PCNL operation.

SOURCE OF FUNDING: None

MP09-09 CHANGING STONE COMPOSITION IN PATIENTS UNDERGOING PERCUTANEOUS NEPHROLITHOTOMY
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INTRODUCTION AND OBJECTIVES: While calcium oxalate has been the predominant stone type for many years, there is evidence of increasing calcium phosphate nephrolithiasis in adults and children. To further assess this trend, we performed a retrospective review of patients undergoing percutaneous nephrolithotomy (PCNL) with the hypothesis that composition of calculi will exhibit a similar shift.

METHODS: After obtaining approval from our Institutional Review Board, retrospective chart review was performed on all cases of PCNL done at Wake Forest Baptist Health from 2000–2012 for which stone analyses were available. A comparison of patients managed from 2000–2005 (P1) and 2006–2012 (P2) was undertaken. Analysis was performed with Statsplus® using non-parametric statistics.

RESULTS: A total of 706 cases were identified. There was no difference in the mean age between cohorts, although there were significantly more females in P2 than P1 (40.3% versus 51.7% respectively, p=0.0031). Furthermore, there was a significant increase in the percentage of patients having calcium phosphate stones (CaP) in P2 compared to P1 (35.3% versus 27.6% respectively, p=0.035). All other stone compositions were not statistically different between P1 and P2. Post-hoc analysis revealed that these findings were specific to the female population, as females demonstrated significantly more CaP stones between P1 and P2 (30.6% vs 47.1% respectively, p=0.033). Men showed no significant difference in CaP composition during this time period.

CONCLUSIONS: An increasing proportion of patients undergoing PCNL have CaP calculi. However on further analysis, this appears to be a predominantly a female phenomenon. Further research is needed to elucidate the etiology behind these observations.

SOURCE OF FUNDING: None

MP09-10 THE CHARACTERIZATION OF STONE COMPOSITION IN RECURRENT STONE FORMERS UNDERGOING PERCUTANEOUS NEPHROLITHOTOMY
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INTRODUCTION AND OBJECTIVES: In recurrent stone formers (rSF), a shift in stone composition from calcium oxalate (CaOx) to calcium phosphate (CaP) has been observed. We performed a retrospective analysis to determine if similar trends in stone composition exist for rSF undergoing percutaneous nephrolithotomy (PCNL) as compared to first time stone formers (fSF).

METHODS: All cases of PCNL done at Wake Forest Baptist Health from 2000–2012 for which stone analyses were available were reviewed. A comparison of rSF and fSF undergoing PCNL was undertaken. ICD-9 codes were collected on each of the patients. A comparison of first and last stone composition was performed. Analysis was done with Statsplus® statistical software.

RESULTS: 706 PCNL cases were analyzed. Of these, 39 cases were rSF. There were no differences in the age, gender, preoperative creatinine, or BMI between rSF and fSF. rSFs were more likely to have neurogenic bladder, hyperparathyroid, or chronic kidney disease (p<0.05). There was a significantly lower proportion of CaOx stones in rSF than fSF (30.2% versus 48.8%, p=0.018), and a trend towards higher proportion of CaP stones (44.2% versus 30.8% respectively, p=0.067). 70% of rSF had the same stone composition across stone episodes. rSF with CaOx stones had a lower body mass index (BMI) compared to all other rSF (27.2 versus 33.9 respectively, p=0.034).

CONCLUSIONS: rSFs represent a unique population when compared to fSFs. This data shows that rSF have a CaP predominance. Recognizing the difference in these populations may lead to better management.

SOURCE OF FUNDING: None

MP09-11 PREDICTORS OF NARCOTIC USE AFTER PERCUTANEOUS NEPHROLITHOTOMY
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INTRODUCTION AND OBJECTIVES: Percutaneous nephrolithotomy (PCNL) is associated with significant variability in postoperative pain and subsequent narcotic use. The purpose of this study was to determine preoperative, intraoperative and postoperative factors associated with high narcotic usage following PCNL.

METHODS: A single-center retrospective review of 242 patients undergoing initial PCNL between 2002 and 2012 was performed. The primary outcome variable was mean narcotic usage on postoperative days 1 and 2, standardized to intravenous morphine-equivalents. In order to identify patients with high narcotic use, we compared patients in the lowest 75th percentile to those in the highest 25th percentile. Univariate and multivariate analysis was performed, with p < 0.05 considered significant.

RESULTS: 243 patients had complete data regarding narcotic usage and were included in the analysis. By quartile, patients used 2.3, 8.4, 15.6, and 41.7 mg of morphine-equivalents per day. On univariate analysis, predictors of high narcotic use included age 20–39 (p < 0.001), preoperative narcotic use (p < 0.001), presence of a postoperative complication (p = 0.044), and high stone burden (p = 0.002). Age < 20 (p < 0.001) and > 60 years (p = 0.014) were associated with low narcotic use. On multivariate analysis, age 20–39 (OR 6.87, 95% CI 2.22–21.23, p = 0.001), male gender (OR 2.47, CI 1.05–5.81, p = 0.037), and preoperative narcotic use (OR 3.27, CI 1.41–7.60, p = 0.006) were associated with high narcotic use. No variables were associated with low narcotic use.

CONCLUSIONS: Patients aged 20–39, males, and those with a prior prescription for narcotic pain medication used the highest doses of narcotics postoperatively. These patients may benefit from alterations in pain control strategies during the perioperative period.

SOURCE OF FUNDING: None

MP09-12 INTRAOPERATIVE NOISE POLLUTION AND ITS EFFECT UPON COMMUNICATION

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INTRODUCTION AND OBJECTIVES: Instruments utilized during endourologic surgery may contribute significantly to ambient noise in an operative theater. This study seeks to determine ambient noise, noise contributed by endourologic equipment, and the interference in verbal communication resulting from this noise.

METHODS: Ambient noise in the endourologic suite determined by a digital decibel meter was compared to noise from normal conversation, a high-pressure suction system, an ultrasonic lithotripter, and background music. Furthermore, the noise increase produced by the addition of each factor was determined. Additionally, four subjects—the surgeon, surgical assistant (0.8 m from the surgeon), anesthesiologist (1.8 m), and the circulator (2.5 m)—were positioned in the operating room to simulate the surgical team. Five trials with 20 differing medical words/phrases were spoken by the surgeon. Trials were performed with only ambient sound, ambient/ suction/ lithotripsy, ambient/suction/lithotripsy/music. Statistical analyses were performed using a student t-test.

RESULTS: The average baseline noise was 53.49 dB(A). As conversation, suction/lithotripsy, and music were added, noise levels were 61.82 dB(A), 77.96 dB(A), and 87.33 dB(A), respectively. At baseline noise, the assistant, anesthesiologist and circulator correctly recorded 100%, 100% and 96% of the words, respectively. The correct response rate by the subjects decreased to 97% (p = 0.172), 81% (p < 0.001) and 56% (p < 0.001) with suction/lithotripsy and 90% (p = 0.006), 48% (p < 0.001) and 13% (p < 0.001) with suction/lithotripsy/music.

CONCLUSIONS: As this study demonstrates, barriers to effective communication exist and are perpetuated by increased noise associated with surgical instruments, distance from the surgeon, and background music. Errors in communication may compromise operating room safety and efficiency.

SOURCE OF FUNDING: None

MP09-13 THE SEVERE HEMORRHAGIC COMPLICATIONS AFTER PERCUTANEOUS NEPHROLITHOTOMY

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INTRODUCTION AND OBJECTIVES: To present angiographic findings and interventional radiological management of the severe hemorrhagic complications of percutaneous nephrolithotomy (PNL).

METHODS: We retrospectively reviewed the data of patients who had undergone PNL for removal of renal calculi at our institute between January 2008 and May 2014. Postoperative patients with gross hematuria, hypotension, and decreasing hematocrit that does not respond to conservative management underwent renal angiography and subsequent selective embolization.

RESULTS: Of the 789 patients, 9 (1.14%) required angiography and embolization for bleeding control. The mean time to the onset of severe hemorrhage was 8.2 days (range, 2 to 17). Renal arteriographies revealed pseudoaneurysm in 5, arteriovenous fistula (AVF) in 1, a combination of active contrast extravasation and AVF in 1, two separate segmental artery lesions (a pseudoaneurysm with active contrast extravasation into calyceal system, and an AVF) and large pseudoaneurysms with AVF in a segmental artery and a small pseudoaneurysm in another segmental artery in 2 patients. Superselective catheterisation of the injured vessels was performed with a coaxial microcatheter and 0.018-inch fibered platinum microcoils (mean number, 4.9; range, 1 to 9) were used to occlude the lesions completely. Successful embolization was achieved without complications in all patients and none required a postprocedural blood transfusion.

CONCLUSIONS: Massive hematuria is a rare complication of PNL that can be successfully managed with selective embolization.

SOURCE OF FUNDING: None

MP09-14 IMPLEMENTATION OF ULTRA-MINI PERCU TANEOUS NEPHROLITHOTOMY FOR TREATMENT OF 2− 3 CM KIDNEY STONE: A PRELIMINARY REPORT

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INTRODUCTION AND OBJECTIVES: Recently, retrograde intrarenal surgery (RIRS) and miniature percutaneous
nephrolithotomy techniques like microperc and ultra-mini PCNL are increasingly used in the treatment of renal stones. However, they are indicated for renal stones <2 cm. We present our report of treating 2–3 cm renal stone using ultra-mini nephrolithotomy associated with intermittent suction through the modified nephroscope sheath and retrograde urethral access sheath.

METHODS: We implemented 3.5Fr ultra-thin telescope with 6Fr inner sheath through a modified 10Fr closed nephroscopy sheath. The stone was disintegrated with a 200-µm holmium laser fibre. Intermittent suction was for active removal of stone fragments. A retrograde 9.5/11.5Fr ureteral access sheath was positioned for maintaining low intraoperative renal pelvic pressure and debris drainage. During April to August 2013, the technique was applied on 15 renal stones cases under ultrasonographic guidance with patient in 45° semi-supine combined with lithotomy position. A 6Fr DJ stent and a 8Fr nephrostomy tube was placed at the end of the procedure.

RESULTS: All cases were successfully completed. Mean (SD) stone size was 2.50 (0.31) cm, operative time 123.5 (42.4) mins, intraoperative estimated blood 30.3 (48.0) ml, hospital stay 3.6 (0.5) days. Nephrostomy tube was removed within 48 h while DJ stent was removed after 4 weeks. Complete stone clearance was 73.3% with UMP alone while it was 93.3% when associated with RIRS. No major complications occurred.

CONCLUSIONS: Implementation of Ultra-mini percutaneous nephrolithotomy for renal stones 2–3 cm is feasible and safe. The procedure is less invasive and has faster recovery period. Intraoperative retrograde ureteral sheath facilitates simultaneous RIRS, decrease intrapelvic pressure and facilitates removal of stone fragments.

SOURCE OF FUNDING: None

MP09-15 SOLO SONOGRAPHICALLY GUIDED PCNL
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INTRODUCTION AND OBJECTIVES: The well-known serious harms of radiation have encouraged surgeons to use it as low as necessary. Hence, sonography was brought in PCNL as an adjunct to X-Ray to restrict radiation exposure. This study was designed to respond this question that is sonography proper enough to supersede X-Ray in PCNL?

METHODS: 180 consecutive cases from Labbafinejad Hospital, Tehran, Iran were enrolled. All steps of access to the system, single shot tract dilatation and reside checking were performed solely under sonography guidance; i.e. without any usage of x-ray. Decision to place a nephrostomy tube was based on the surgeon’s judgement on the system injury or bleeding.

RESULTS: Male to female ratio was 3/2. Mean age was 44±16 years. Forty percent of kidneys had hydronephrosis and 20 percent of stones were nonopaque. Mean stone burden was 660±411 mm2. Mean duration of surgery was 43±16 minutes. Mean operation time was 43±22 minutes. Stone free rate was 85% in patients with single pelvic stone and 75% in staghorn cases. Mean residual stone size was 12±7 mm. Admission time was 2 days on average. Rate of complication based on Clavien classification was 20 % and only 3 percent showed more than class II complications. Complication was directly related to surgery duration.

CONCLUSIONS: Sonographically guided PCNL is feasible with acceptable stone free rate and complications.

SOURCE OF FUNDING: This study is funded by kidney research center, Shahid Beheshti university of medical sciences (SBMU).

MP09-16 ANTIMICROBIAL UTILIZATION PRIOR TO ENDOUROLOGICAL SURGERY FOR UROLITHIASIS: ENDOUROLOGICAL SOCIETY SURVEY RESULTS
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INTRODUCTION AND OBJECTIVES: To determine variations in antimicrobial use prior to endourological surgery for urolithiasis and to correlate these variations to site, pattern and volume of clinical practice.

METHODS: An online survey was distributed by e-mail to members of the Endourologic Society. The survey queried the duration of antimicrobial therapy prior to uncomplicated ureteroscopy (URS) and percutaneous nephrolithotomy (PNL) with negative and asymptomatic positive pre-operative urine cultures.

RESULTS: The response rate was 18.5% with 369 responders (40% from U.S., 61% academic and 64% endourology fellowship trained). The majority of respondents reported giving a single perioperative dose in patients with a negative urine culture (71% and 59% prior to URS and PNL; respectively). In patients with positive cultures, there were more heterogeneous responses. In presence of positive culture prior to PNL: 13% preferred single perioperative dose, 29% preferred 1–3 days, 46% preferred 4–7 days and 12% preferred >7 days of antibiotics before the procedure. In presence of positive culture prior to PNL: 11% preferred single perioperative dose, 24% preferred 1–3 days, 49% preferred 4–7 days and 16 % preferred >7 days. There were significant variations in antimicrobial utilization prior to endourological management by geographical location of practice (p<0.05).

CONCLUSIONS: There are considerable variations in antimicrobial utilization prior to endourological surgery for urolithiasis worldwide. According to current guidelines, almost 1/3 of urologists are over-utilizing antibiotics prior to stone management in patients with negative cultures. Well-designed prospective randomized studies are needed to guide appropriate duration of antibiotics in patients with positive cultures before these procedures.

SOURCE OF FUNDING: None

MP09-17 DIRECT ENDOSCOPIC VISUALIZATION COMBINED WITH ULTRASOUND GUIDED ACCESS DURING PERCUTANEOUS NEPHROLITHOTOMY
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**INTRODUCTION AND OBJECTIVES:** PCNL access is challenging and requires significant radiation exposure. In an attempt to reduce radiation exposure, we employed a novel technique combining direct ureteroscopic visualization of access location with ultrasound guidance.

**METHODS:** Fluoroscopyless ureteroscopy allowed selection of the optimal calyx for access. Percutaneous ultrasound guided delivery was used to advance a Chiba needle into the desired calyx identified using deflection of the ureteroscope tip. A wire was then advanced into the calyx and pulled into the ureter using a basket. Balloon and nephrostomy tube placement were performed under ureteroscopic guidance. 20 consecutive patients undergoing this technique were matched against 20 patients who had undergone conventional fluoroscopic access. Outcomes compared were fluoroscopy time, operative time, EBL, stone free rates and complications. Mann-Whitney U and Pearson Chi-square tests were used for comparisons, with \(p < 0.05\) considered significant.

**RESULTS:** Using this novel technique, mean fluoroscopy time needed to obtain access was 3.5 seconds (0–27.9), mean total fluoroscopy time was 8.8 seconds (0–47.1), mean operative time was 233 minutes (87–533), EBL was 111 ml, stone free rate was 65% and complications were 25%. Comparing these 20 patients to 20 matched conventional PCNL patients, there was no difference in operative time (p = 0.76), EBL (p = 0.64), stone free rates (p = 0.52) or complications (p = 0.71). However, the novel technique resulted in significant reduction in fluoroscopy time to achieve access (3.5 vs. 915.5 sec; \(p < 0.001\)) and total fluoroscopy time (8.8 vs 1028.7 sec; \(p < 0.001\)).

**CONCLUSIONS:** This study demonstrates the feasibility of combined US and ureteroscopic assisted access for PCNL. In addition, a >95% reduction in fluoroscopy time was achieved using this technique.

**SOURCE OF FUNDING:** None

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**MP09-18 AN EVALUATION OF THE LITHOCLAST MASTER COMBINED PNEUMATIC/ULTRASONIC PROBE IN THE PERCUTANEOUS THERAPY OF STAGHORN KIDNEY STONES**

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**INTRODUCTION AND OBJECTIVES:** We have evaluated the efficacy and safety of percutaneous nephrolithotomy (PCNL) for the therapy of staghorn stones, comparing the EMS Lithoclast Master combined pneumatic/ultrasonic probe, introduced recently into our practice, with separate pneumatic and ultrasonic probes.

**METHODS:** We have analyzed two groups of patients diagnosed with incomplete and complete staghorn stones, which underwent PCNL in our Department. The first group included patients operated between 01 May 2013 and 30 October 2013, which were treated with separate pneumatic and ultrasonic probes, while the second group included the patients operated between 01 November 2013 and 30 April 2014, which were treated with the EMS Lithoclast Master combined probe.

**RESULTS:** There were 37 patients in the first group and 34 in the second group. The mean age of the patients was 47.53 years for the first group and 49.38 years for the second group. A number of 20 patients from the first group and 18 patients from the second group underwent PCNL in prone position, while 17 patients from the first group and 16 patients from the second group underwent PCNL in supine position. The mean duration of the procedure was 57.19 minutes for the first group and 52.47 minutes for the second group (\(p < 0.01\)). The stone-free rate after one procedure was 68.84% for the first group and 76.15% for the second group (\(p < 0.01\)). The complication rates were similar.

**CONCLUSIONS:** The use of the Lithoclast Master combined probe offers superior efficacy, shorter operating time and similar safety, when compared with separate pneumatic and ultrasonic probes.

**SOURCE OF FUNDING:** None

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**MP09-19 DECREASED RENAL FUNCTION IN PATIENTS UNDERGOING MULTI-ACCESS PERCUTANEOUS NEPHROLITHOTOMY**

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**INTRODUCTION AND OBJECTIVES:** Previous studies have demonstrated minimal renal injury with PCNL, as measured by estimated glomerular filtration rate. Technetium 99m-MAG3 nuclear renography is an alternative marker of renal activity and can delineate individual renal unit function. We hypothesize that multi-tract PCNL should cause more renal injury and therefore negatively affect split-renal function as assessed by MAG3 renography.

**METHODS:** We performed a retrospective review of 307 consecutive patients undergoing PCNL from 2011–2012 at Wake Forest Health. Perioperative Tc99m-MAG3 nuclear renography along with other patient parameters were assessed within 1 year of the procedure. Groups were stratified by single vs multi-access (\(\geq 2\)) PCNL. ICD-9 codes were used to ascertain comorbidities.

**RESULTS:** One-hundred and ten patients met the study criteria. Both groups were similar in terms of baseline serum creatinine, BMI, age, and sex. Serum creatinine was not significantly different between the two cohorts postoperatively (\(p = 0.09\)). There was a significant decrease in split function in the affected kidney for patients with multiple accesses (2.28% decrease, \(p < 0.01\)) but not single access PCNL (0.39% decrease, \(p > 0.05\)). Successive decrease in renal function is suggested with increasing number of percutaneous accesses, but was not significant (\(p = 0.23\)). No significant relationship between change in split function and concurrent presence of hypertension, diabetes mellitus, chronic kidney disease, and pyelonephritis was noted.

**CONCLUSIONS:** Multi-tract PCNL is associated with a decline in split renal function independent of numerous comorbidities. Further review of patient and post operative parameters as well as larger patient cohorts are needed to better elucidate this relationship.

**SOURCE OF FUNDING:** None

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**MP09-20 PERCUTANEOUS NEPHROLITHOTOMY IN KIDNEYS WITH A FUSION ANOMALY: A SINGLE CENTER EXPERIENCE**

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**INTRODUCTION AND OBJECTIVES:** We have evaluated the relationship between the number of tracts and the split function, comparing outcomes between patients with single access PCNL and patients with multiple accesses PCNL for staghorn kidney stones.

**METHODS:** We have analyzed 93 patients treated with percutaneous nephrolithotomy for staghorn kidney stones between January 2011 and December 2012. The patients were divided into two groups: single access PCNL (43 patients) and multi-tract PCNL (50 patients). The split function was measured by MAG3 renography.

**RESULTS:** The mean age of the patients was 47.3 years for the single access group and 49.5 years for the multi-tract group. There was a significant decrease in split function in the affected kidney for patients with multiple accesses (2.28% decrease, \(p < 0.01\)) but not single access PCNL (0.39% decrease, \(p > 0.05\)). Successive decrease in renal function is suggested with increasing number of percutaneous accesses, but was not significant (\(p = 0.23\)). No significant relationship between change in split function and concurrent presence of hypertension, diabetes mellitus, chronic kidney disease, and pyelonephritis was noted.

**CONCLUSIONS:** Multi-tract PCNL is associated with a decline in split renal function independent of numerous comorbidities. Further review of patient and post operative parameters as well as larger patient cohorts are needed to better elucidate this relationship.

**SOURCE OF FUNDING:** None
INTRODUCTION AND OBJECTIVES: Percutaneous nephrolithotomy is a “Gold Standard” in the treatment of large kidney stones. Nephrolithiasis in congenitally abnormal kidneys like horse-shoe kidney present a challenge to the urologist. The purpose of this study is to evaluate whether the presence of horse-shoe kidney affects the outcomes of PNL.

METHODS: Between September 1998-May 2014, 50 patients with ‘horse-shoe kidneys’ underwent 58 PNL procedures on 56 renal units (RU). The mean age of the patients were 51.3 years (3–72) and the average stone burden was 460.9 mm². In 44 procedures pneumatic lithotriptor was used for the fragmentation of the calculi and in 14, stones were extracted by forceps. Due to the deep localization of horse-shoe kidneys flexible nephroscope and flexible zero-tip nitinol basket were required to extract the fragmented stones.

RESULTS: In 48 procedures (82.3%) single access and in 10 multiple accesses were used. Forty-eight RU (82.7%) were stone–free at the time of discharge. Four had clinically insignificant residual fragments. A shock wave treatment was planned for one patient and follow up for the three patients with clinically significant residual fragments. Because of intraoperative hemorrhage two units of blood transfusion were required in one patient and no other serious complication was seen. The mean hospital stay was 3.7 days.

CONCLUSIONS: PNL in horse-shoe kidneys for the treatment of renal stone disease has some special features due to ectopia, malrotation and vascular alterations. PNL is a safe and effective option for the stones in the horse-shoe kidney when few technical modifications are performed like use of upper pole access, flexible nephroscope and holmium laser. With meticulous and cautious surgery, it is possible to obtain high success rates as in normal kidneys.

SOURCE OF FUNDING: None

MP09-22 SEVENTEEN YEARS OF EXPERIENCE IN PERCUTANEOUS NEPHROLITHOTOMY FROM A SINGLE CENTER

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INTRODUCTION AND OBJECTIVES: Percutaneous nephrolithotomy (PNL) is a widely accepted modality in the treatment of kidney stones and increasingly being used in our country. Experience and outcomes of 3969 PNL’s from a single center are presented in this study.

METHODS: Between June 1997 and May 2014, data of PNL procedures performed in 3854 patients were recorded. Stone burden, operative and fluoroscopy times, number of intercostal access and skin incisions, stone-free status, types and sizes of nephrostomy catheters, blood transfusions, days of nephrostography and nephrostomy removal, hospital stay and complications were the parameters that were discussed in this presentation.

RESULTS: Of the cases, 2281 (59.2%) were male and the mean age was 39.4 (9 months – 86) years. In the pediatric age group there were 565 patients (14.6%). The mean stone size was 518.7 mm², (100–8500) mean operative and fluoroscopy times were 68 and 10 minutes, respectively. Intercostal access was performed in 184 (5.5%) procedures. In 311 (9.3%) cases, there was a second skin incision. Stone free rate was 79.7%. Blood transfusions were needed in 404 patients (10.4%). Mean nephrostomy removal time was 2.4 days. Mean hospitalization time was 4.1 days. Renal vascular embolization was performed in 12 patients due to hemorrhage. There were 3 pleural and 8 colonic injuries. Time to nephrostography and nephrostomy removal as well as hospital stay were decreased in recent years.

CONCLUSIONS: PNL is a successful and safe procedure in the treatment of renal calculi greater than 2 cm. Serious complications are rare in an experienced clinics and they can be managed conservatively. PNL can also be performed in complicated cases.

SOURCE OF FUNDING: None

MP09-23 TRACT CLOSURE WITH GELATIN-THROMBIN MATRIX AFTER TUBELESS MINI-PERCUTANEOUS NEPHROLITHOTOMY: IS IT NECESSARY?

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INTRODUCTION AND OBJECTIVES: Finishing an uncomplicated mini-percutaneous nephrolithotomy tubeless is supposed to lower the morbidity of the procedure. Often, a sealing of the access tract with gelatin-thrombin matrix is performed. Aim of this study was to test if omitting the tract closure leads to an inferior outcome.

METHODS: In this prospective, non-randomized trial we evaluated 20 consecutive patients undergoing mini-percutaneous nephrolithotomy between 04/2013 and 05/2014 at our department. All procedures were performed in prone position with sonographic/radiologic puncture, using 18 FR tract and 14 FR instrument size, and were completed tubeless. In every other procedure the tract closure was omitted. Patient related data, stone size/localization, complications, surgery time, stone clearance and hemoglobin drop were recorded. Retrograde pyelographies were performed before removal of the ureteral catheter after 1–2 days in every other procedure without tract closure. Univariate statistical analysis was performed comparing the groups with and without tract closure.

RESULTS: Each group contained 10 patients. Patient related data and stone size/localization were comparable in both groups. There was no significant difference in any of the measured outcome parameters: stone free rate 90% vs 90% (p = 1), complications excluding Clavien I 30% vs 40% (p = 1), surgery time 61.9  +/− 17.89 vs 60.8  +/− 20.47 min (p = 0.85), hemoglobin drop 1.16 +/− 0.51 vs 1.51 +/− 1.15 (p = 0.02). There were 4 Grade III complications (JJ insertions) and no Grade IV or V in both groups (3 with tract closure vs 1 without). There was no extravasation in any retrograde pyelography.

CONCLUSIONS: There seems to be no disadvantage due to omitting the tract closure after uncomplicated mini-percutaneous nephrolithotomy.

SOURCE OF FUNDING: None

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MP09-24 INFLUENCE OF PELVICALICEAL ANATOMY ON MINI-PERCUTANEOUS NEPHROLITHOTOMY

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INTRODUCTION AND OBJECTIVES: The configuration of the pelvicaliceal anatomy is a proven influence factor for extracorporeal shockwave lithotripsy (SWL) and flexible ureterorenoscopy (URS) for lower pole stones. We analyzed safety and efficiency of miniaturized percutaneous nephrolithotomy using a lower pole access -as an alternative treatment option for lower pole stones- depending on the collecting system’s configuration.

METHODS: We reviewed a consecutive sample of 50 mini-percutaneous nephrolithotomies for lower pole stones between 07/2009 and 01/2014 from our prospectively kept database. All procedures were performed in prone position with lower pole access under sonographic/radiologic control, using 18 FR shaft and 14 FR instrument size. Infundibular length, width and infundibular-pelvic angle were measured and the data was stratified for stone-free-status and complications classified by Clavien-Dindo scale. Univariate and multifactorial statistical analysis was performed.

RESULTS: Treated lower pole stones ranged from 8–20 mm (mean 14.2). The overall stone-free-rate was 90%, the complication rate without Clavien I 16%, the mean surgery time 82.82 ± 33.74 minutes. The only anatomical parameter influencing stone free rate only in univariate and surgery time in univariate and multifactorial analysis was infundibular length (univariate/multifactorial, stone-free-rate: p = 0.026/0.096, surgery time: p = 0.005/0.036). The incidence of complications was not influenced by pelvicaliceal anatomy.

CONCLUSIONS: Mini-percutaneous nephrolithotomy using a lower pole access is a safe and efficient treatment option for intermediate sized lower pole kidney stones. Of the measured anatomical parameters, only a long infundibulum seems to negatively affect stone-free-rate and surgery time but not complication rate. Mini-percutaneous nephrolithotomy seems to be less compromised by extreme pelvicaliceal anatomy than SWL or URS.

SOURCE OF FUNDING: None

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MP09-25 ULTRA MINI PCNL: A MINIMALLY INVASIVE PERCUANEOUS APPROACH

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INTRODUCTION AND OBJECTIVES: The search for ways to reduce the morbidity and invasiveness of PCNL has included attempts at reducing the size of the tract. We present our experience of an approach using further miniaturization, named ‘Ultra-mini’ PCNL, using sheath of only size 11–13 F, as opposed to the conventional 24–30 F.

METHODS: 120 patients with single kidney stone of size between 0.8–2.0 cm underwent PCNL using a novel device called ‘Ultra-mini’ PCNL. We reviewed a consecutive sample of 50 mini-percutaneous nephrolithotomies for lower pole stones between July 2012 and March 2014. This system uses a 3 F telescope, 7.5 F inner sheath and 11 or 13 F outer metallic Amplatz sheath. Stones fragmentation was achieved with Holmium laser (Lumenis), using up to 40 W (2.0 J/pulse, 20 pulses/sec) energy. All procedures were done ‘tubeless’, with only a ureteric catheter left indwelling to provide drainage.

RESULTS: Complete fragmentation of stone was achieved with the ‘Ultra-mini’ PCNL in 114 out of 120 patients, whereas conversion to ‘Mini-PCNL’ (12.5 F nephroscope and 15 F Amplatz sheath) was required in 6 patients. The mean operating time was 39.7 ± 15.4 minutes. Non-contrast CT scan at 2 weeks postoperatively confirmed complete stone clearance in all patients. There was no significant blood loss and no patient required blood transfusion. The average hospital stay was less than 24 hours (22.3 ± 2.2 hours). Majority of patients reported back to work within one week.

CONCLUSIONS: ‘Ultra-mini’ PCNL is a promising and effective minimally invasive approach to percutaneous renal stone removal in selected stone population. Further studies are ongoing to validate these early results.

SOURCE OF FUNDING: None

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MP09-26 A RANDOMIZED TRIAL OF TWO DIFFERENT OPIOIDS FOR PAIN MANGEMENT AFTER PERCUTANEUS NEPHROLITHOTOMY

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INTRODUCTION AND OBJECTIVES: The search for ways of reducing the morbidity and invasiveness of percutaneous nephrolithotomy.
INTRODUCTION AND OBJECTIVES: According to previous studies oxycodone might have some advantages over morphine in the treatment of visceral pain. This study investigated the opioid consumption (primary outcome), pain relief and side effects (secondary outcomes) of morphine versus oxycodone after percutaneous nephrolithotomy using a method where the somatic pain component was minimized.

METHODS: Forty-four adult patients were studied. The patients were randomised to receive either morphine or oxycodone intravenously as postoperative pain treatment. During the first 4 h after surgery the opioid consumption, pain scores and side effects (nausea, dizziness, sedation, respiratory effects and itching) were registered.

RESULTS: The postoperative opioid consumption varied considerably between the patients but the mean opioid consumption in the morphine and oxycodone group was comparable (18.93 mg versus 16.15 mg, P = 0.7). Nausea was significantly less frequent with morphine (P = 0.03).

CONCLUSIONS: In this study morphine and oxycodone produced similar analgesia the first 4 h after surgery but the frequency of nausea was significantly less patient-reported with morphine. The hypothesis that oxycodone would be superior in the treatment of visceral pain after percutaneous kidney stone operation was not confirmed.

SOURCE OF FUNDING: None

MP09-27 PERCUTANEOUS NEPHROLITHOTOMY IN PEDIATRIC PATIENTS WITH SOLITARY KIDNEY

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INTRODUCTION AND OBJECTIVES: In this study, the safety and efficacy of percutaneous nephrolithotomy (PCNL) was assessed on the treatment of solitary kidneys with stone disease in children.

METHODS: Between September 1997–May 2014, PCNL was performed on 17 pediatric patients who had solitary kidney with stone disease. Eleven patients had non-functioning kidney, 4 patients had agenessia, 1 had atrophic and 1 had nephrectomy in the past. Mean age was 8.5 years (2.5 – 14 years), 13 (76 %) patients were male and 4 (24 %) patients were female. Four (26.6 %) patients had previous open renal surgery. Initially open tip ureter catheter was inserted under fluoroscopy in lithotomy position. Following percutaneous needle access to an appropriate renal calyx, tract was dilated by the help of amplatz dilators and a renax tube with a minimum required diameter is inserted. Stones were visualized with a rigid nephroscope or a ureteroscope and extracted after pneumatic, ultrasonic or holmium laser lithotripsy when necessary.

RESULTS: Fifteen (94.1 %) patients were rendered stone-free. No blood transfusion was required. Two patients had fever at postoperative days. There was no impairment in renal functions after the surgery.

CONCLUSIONS: PCNL is postulated as a gold standard for the treatment of kidney stones and it is also effective and reliable in the treatment of solitary kidneys with stone disease.

SOURCE OF FUNDING: None

MP09-28 CONTEMPORARY PRACTICE PATTERNS ASSOCIATED WITH PERCUTANEOUS NEPHROLITHOTOMY AMONG CERTIFYING UROLOGISTS

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INTRODUCTION AND OBJECTIVES: Percutaneous nephrolithotomy (PNL) is a specialized surgical procedure utilized for patients with complex stone burdens. We performed a study to assess the effect of urologist training and practice parameters on the utilization of PNL.

METHODS: Self-reported 6 month case logs submitted to The American Board of Urology (ABU) for initial or recertification were analyzed between 2004 and 2013. Surgeons who performed PNL were identified by CPT coding: 50080 and 50081; percutaneous access was identified by CPT 50395. Urologist fellowship training, practice type, and practice population, were used to further stratify the cohort performing these procedures. Trends were examined over the study period.

RESULTS: 7,278 urologists submitted case logs to the ABU between 2004–2013. A greater proportion of newly certified urologists performed PNL (53%) compared to the most senior urologists (29%). Urologists with fellowship training in stones also were much more likely to utilize PNL (66%) and be high-volume surgeons (>10/case log) (26.4%). PNL utilization increased significantly during the study period, with 1,330 procedures performed in 2004 and 2,888 procedures performed in 2012 (117% increase). Urologist access increased 29% over the study period. Certification status did not correlate with urologist-directed access. High-volume PNL surgeons were more concentrated in urban and academic practice environments.

CONCLUSIONS: Younger and fellowship-trained urologists are the primary utilizers of PNL, and the majority of senior urologists do not perform this operation. Overall use of PNL and urologist-directed access is increasing over time. Our findings can serve to inform future discussions on the regionalization of specialized urologic care.

SOURCE OF FUNDING: None

MP09-29 S.T.O.N.E. NEPHROLITHOMETRY IS ASSOCIATED WITH COMPLICATIONS AFTER PERCUTANEOUS NEPHROLITHOTOMY: A MULTI-INSTITUTIONAL ANALYSIS

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INTRODUCTION AND OBJECTIVES: The S.T.O.N.E. nephrolithometry was previously developed to quantitate stone complexity and predict outcomes of PCNL. We sought to assess the ability of nephrolithometry score to predict perioperative variables in a multicenter database of patients undergoing PCNL.

METHODS: We performed a multicenter review of patients undergoing PCNL. Preoperative CT images were reviewed and S.T.O.N.E. score was assigned to each patient. The association of S.T.O.N.E. score with patient demographics, stone characteristics and surgical outcomes was performed.

RESULTS: Total of 706 patients were included in the analysis. The mean overall nephrolithometry score was 8.2 (range 5–13). Overall complication rate was 18%. Bleeding and sepsis were the most frequent complications. S.T.O.N.E. score was significantly associated with overall complication rate (P = 0.008), EBL (P = 0.001), and operative time (P < 0.001), and length of stay (P = 0.016). For each point increase in the score there is a 12.6 mL increase in EBL. For each point increase in the score there is a 10.7 min increase in OR time. In risk stratification, medium-risk patients (8–10) and high-risk patients (11–13) had significantly higher EBL and OR time compared to low-risk patients with 5–7 scores (mean EBL 139, 197 and 132, OR time 132, 170 and 102, respectively, p = 0.001). Scoring system was not predictive of transfusion rates and fluoroscopy time in this cohort.

CONCLUSIONS: Our multicenter data demonstrated that S.T.O.N.E. nephrolithometry accurately predicted surgical outcomes following PCNL, including overall complications, EBL and operative time. The scoring system obtained from computed tomography imaging may be effectively used in preoperative patient counseling and prediction of PCNL outcomes.

SOURCE OF FUNDING: None

MP09.30 DEGREE OF HYDRONEPHROSIS DOES NOT AFFECT PERIOPERATIVE OUTCOMES OF PCNL

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INTRODUCTION AND OBJECTIVES: The degree of hydronephrosis is commonly cited to be a predictive factor of severe post PCNL bleeding and affects duration of surgery. We aim to analyse the perioperative outcomes of PCNL in patients with no or mild hydronephrosis (Group A) versus patients with moderate or severe hydronephrosis (Group B).

METHODS: We did a retrospective review of 156 consecutive patients who underwent PCNL between July 2008 and September 2013.

RESULTS: The patients were similar in age, race, gender at baseline. The number of stones, site of puncture and grade of surgeon were also comparable between the two groups. Mean size of stone was 30.4 mm in group A and 31.3 mm in group B (p = 0.662). Mean duration of surgery in group A was 160 min vs group B 171 min (p = 0.254). Both groups had post-op hemoglobin drop of 1.6 g/dL (p = 0.907). 11.5% in group A received post-op transfusion compared to 13.3% in group B (p = 0.728). 45.7% in group A vs 32.2% in group B achieve stone free status post-op (p = 0.046). 24.5% in group A and 36.2% in group B required additional procedure after PCNL to clear residual stones (p = 0.215). There was also no statistical significance with regards to the types of additional procedure (ESWL, URS or PCNL) required between the groups.

CONCLUSIONS: The degree of hydronephrosis is not associated with duration of PCNL, significant post-op bleeding, the need for additional procedure and the types of additional procedure required. No or mild hydronephrosis are associated with higher stone free rate.

SOURCE OF FUNDING: None

MP10 ENDOUROLOGY: URETEROSCOPY 2

MP10-01 A COMPLETE ENDOSCOPIC TREATMENT AT FIRST URETEROSCOPY REDUCES THE RISK OF UNDERGOING A RADICAL NEPHROURETERECTOMY OVER TIME IN PATIENTS DIAGNOSED WITH UPPER TRACT UROTHELIAL CARCINOMA (UTUC)

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INTRODUCTION AND OBJECTIVES: We looked for predictors of progression to radical nephroureterectomy (RNU) over time in patients with endoscopically treated upper tract urothelial cancer (UTUC).

METHODS: From January 2003 to December 2013, 88 patients diagnosed with UTUC at ureteroscopy (URS) were consensually treated with holmium-YAG laser photovaporisation. Of those, 11 patients required a second treatment to achieve a complete tumor ablation. Since January 2009 we have offered an early second look (within 6–8 weeks) in all patients diagnosed with UTUC (n = 36). The remaining patients received a regular follow-up according to the European guidelines. When a conservative treatment was no longer feasible, the patient was addressed to RNU. We relied on multivariable Cox regression analyses to identify predictors of progression to RNU.

RESULTS: At a mean (median) follow-up of 33.1 (29) months, 26 patients (29.6%) were addressed to RNU. The rate of progression to RNU over time in patients who required a second treatment was 66.7%, compared to 26.7% in patients for whom a complete tumor ablation was achieved after the first URS treatment.
INTRODUCTION AND OBJECTIVES: We investigated causes of the failure when patients diagnosed with upper ureter stones were operated ureteroscopic lithotripsy.

METHODS: Between Jan, 2009 to Dec, 2013, 88 patients who underwent ureteroscopic lithotripsy after they were diagnosed with upper ureter stones. We classified Group 1 which was 62 patients succeeded in removal of stones and Group 2 which was 26 patients failed. Each group was compared with age, sex, stone size, the number of stones, Previous SWL history, lithotripter use status, body mass index, pyuria status, hydronephrosis status, acute pyelonephritis status, Previous URS history, safety guide wire use status, complications and operation time.

RESULTS: There is no statistically significant difference between two groups about age, sex, stone size, the number of stones, Previous SWL history, body mass index, pyuria status, hydronephrosis status, acute pyelonephritis status, Previous URS history, lithotripter use status and operation time. However, statistically significant success rate was observed when we used lithotripsy machine (p < 0.001) and safety guide wire (p = 0.006). There is no difference between two groups in complication rate. Causes of the failure were stone migration 20 patients (77%), ureteral injuries 2 patients (8%), access failure of ureteroscopy to stones 2 patients (8%), stone impaction 1 patient (4%) and renal pelvis stricture 1 patient (4%).

CONCLUSIONS: We expect that using lithotripsy machine and safety guide wire during ureteroscopic lithotripsy for upper ureter stone can help reduce operation failure.

SOURCE OF FUNDING: None

MP10-02 A SHORT LEARNING CURVE OF ROBOTIC ASSISTED FLEXIBLE URETEROSCOPY MAY HELP THE TRAINEES

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INTRODUCTION AND OBJECTIVES: Current literature lacks studies on learning curves of Robot Assisted Flexible Ureteroscopy (RAFURS), in this study we aimed to compare learning curves of manual and robotic FURS procedures in experts and trainees.

METHODS: A unique kidney model contains open calices to insert a standard 500 mm³ artificial stones and 2 mm holes on the bottom of it, is used to overcome the shortcomings of in-vivo studies such as respiration movement, different anatomy and stone composition. Experts group (n = 5) consisted of urologists with an experience of greater than 50 cases of FURS. Participants in the trainees group (n = 5) had no prior experience with FURS. Each participant fragmented artificial stones with a volume of 500 mm³ using 230 micron laser fiber, with energy of 800 mJ and frequency of 8 Hz. and the time recorded. They repeated the procedure either robot assisted or manually at least 5 times each.

RESULTS: Mean duration of the first and fifth manual procedure in the expert group were 24 and 20.8 minutes while mean duration of first and fifth robotic procedures were 34.6 and 26.2 minutes respectively. In the trainees group, mean duration of first and fifth manual procedures were 43.6 and 31.6 minutes while they were 37 and 25.4 minutes with Roboflex respectively.

CONCLUSIONS: Duration of fragmentation seems to decrease even after the second procedure, both for experts and trainees. Additionally duration of the fragmentation seems to be shorter with Roboflex than with manual FURS in the trainees group. RAFURS appears to lessen the learning curve for flexible ureteroscopic procedures.

SOURCE OF FUNDING: ELMED Medical Systems, Ankara, Turkey

MP10-04 SAFETY AND EFFECTIVITY OF ROBOFLEX AVICENNA, THE NEW ROBOT FOR FLEXIBLE URETEROSCOPY

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INTRODUCTION AND OBJECTIVES: Flexible ureteroscopy (FURS) represents a technically challenging procedure requiring specific endourologic skills. Based on preclinical studies, we present early clinical experience with treatments performed by 7 different experienced endourologists (IDEAL phase 2) who have used the Roboflex Avicenna device (ELMED, Turkey) developed for remote controlled flexible ureteroscopy. We searched the safety and effectiveness of this new device.

METHODS: After Ethical approval, a total 81 patients (mean age 42, range 6–68) were treated. We used Roboflex Avicenna. After locking the flexible endoscope, all functions could be controlled remotely from the console, out of the radiation exposure field, without wearing a lead apron. Operation time and...
pulverisation time were recorded. After one and three months from the operation we checked the residual fragments by KUB and ultrasonography. We requested from all 7 surgeons to fill out the validated questionnaire.

**RESULTS:** All patients had renal calculi with a mean CT calculated volume of 1296 mm³. Access sheath was used in 72 of patients. Mean time to dock the robot was 59.6 (35–124) seconds, mean fragmentation time was 46 (15–118) minutes corresponding to a mean fragmentation speed of 29.1 (18–46) mm³/min. Mean console time was 53 (23–135) minutes. Complete stone disintegration was accomplished in 79 patients (96%). After 3 months 65 patients (80%) were stone-free. Robotic FURS showed significantly better ergonomics.

**CONCLUSIONS:** Robotic-assisted flexible ureterorenoscopy using the Avicenna Roboflex provides a suitable, safe and effective platform for FURS with significant improvement of ergonomics. Future studies will also evaluate the impact of the device on clinical outcome of FURS.

**SOURCE OF FUNDING:** ELMED Medical Systems Ankara, Turkey

**MP10-05 THE CLINIC EXPERIENCE OF SEPTIC SHOCK AFTER URETEROSCOPIC LITHOTRIPSY IN THE TREATMENT OF URETERAL CACULI**

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**INTRODUCTION AND OBJECTIVES:** To explore the clinical experience of septic shock after ureteroscopic lithotripsy in the treatment of ureteral calculi.

**METHODS:** We retrospectively analyze 5 patients. All patients were diagnosed ureteral calculi and hydronephrosis after ultrasonography, CT and IVP examination. Preoperative routine urianalysis had some WBC. Ureteroscopic Holmium laser lithotripsy was carried under general anesthesia. In procedures, stones have been encapsulated with mucosa. After breaking stones, cloudy urine was carried under general anesthesia. In procedures, stones have been encapsulated with mucosa. After breaking stones, cloudy urine can be seen. 5 ml urine sample was collected to do urine culture and drug sensitivity test. The irrigation should be slower. After procedures, D-J stent and catheter should be indwelled.

**RESULTS:** All 5 patients had symptoms of rigor, fever, tachycardia and hypotension at postoperative 2–5 h. Increasing pressure and perfusion were carried on immediately. Meropenem was administrated. Septic shock in all patients was proved after urethral dilation. 2 cases with failed urethral dilation and urine streams became weak gradually. 5 cases were intraperitoneal infection. The catheters were indwelled for 3 days after the surgery. The D-J stents were removed at 1 month after the surgery. There were no residual stones in all patients during following up.

**CONCLUSIONS:** It is difficult to insert the ureteroscope during the rigid ureteroscopic lithotripsy for distal ureteral calculi. For the cases in which guidewires cannot run through stones location, the procedure require patience.

**SOURCE OF FUNDING:** None

**MP10-07 TRANSURETHRAL URETEROSCOPIC CATHETERIZATION IN THE TREATMENT FOR ACUTE URETHRAL INJURY**

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**INTRODUCTION AND OBJECTIVES:** To explore the effect of transurethral ureteral catheterization in the treatment for acute urethral injury.

**METHODS:** We retrospectively analyze 25 male patients with acute urethral injury. All patients were suffered from trauma but with stable vital signs. 18 cases were bulbar urethral injury and 7 cases were membranous urethral injury. Urethrography demonstrated urethra was partial disruption, but preoperative urethral catheterization was failed. In the operations, injured urethral bleeding and disrupted tissue can be seen from ureteroscope. After injecting water to burst clot and disrupted tissue, we can observe the injured location. Guide wire was inserted into bladder and then ureteroscope was removed. We cut the tip of F18 three-channel catheter but not broke the balloon. Then the catheter would be inserted along the guide wire and 10 ml saline would be filled in the balloon. Do not extract guide wire unless urine flow can be seen. The catheters were indwelled for 4–6 weeks.

**RESULTS:** With following up for 6–12 months, 17 cases had a good and strong urine stream, while 8 cases experienced dysuria and urine streams became weak gradually. 5 cases were improved after urethral dilation. 2 cases with failed urethral dilation underwent ureteroscopic Holmium laser internal urethrotomy of urethral stricture.

**CONCLUSIONS:** Treating acute urethral injury through ureteroscopic catheterization has advantages of little trauma and pain. It has the comparable effect comparing to the open surgery.

**SOURCE OF FUNDING:** None
**MP10-08 DIFFERENT OUTCOMES OF UVENTATM METALLIC STENT FOR BENIGN AND MALIGNANT URETERAL OBSTRUCTIONS**

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**INTRODUCTION AND OBJECTIVES:** The aim of this study is to present our experience to find out the optimal applications of the Uventa metallic ureteral stent.

**METHODS:** Medical records of consecutive 90 patients who underwent Uventa stent placement for benign or malignant ureteral obstruction from December 2009 to June 2013 were reviewed. All stents were indwelled retrograde approach by ureteroscopy under general anesthesia. We evaluated the clinical outcomes, complications and reasons and results about stents removal.

**RESULTS:** Median age of patients was 54.5 (range: 28–91) and median follow-up was 10.7 (0.9–41) months. Of total 125 ureteral units (UU), benign ureteral structures were 24 UU and malignant ureteral obstructions were 101 UU. Initial technical successes were achieved in all patients. Overall success rate was 70.8% in benign obstructions and 84.2% in malignant obstructions. Major reasons for treatment failure were stent migration (12.5%) in benign and tumor progression (11.9%) in malignant obstructions. Overall complication rate was similar between benign and malignant obstructions (58.3% and 43.6%) but severe complications which are Clavien class 3 or more were 41.7% in benign and 4.0% in malignant obstructions. Most common complications were stent migration (25.0%) in benign and persistent pain (17.8%) in malignant obstructions. Uventa stent removal was done in 16 UU and among them surgical removal was necessary in 7 UU.

**CONCLUSIONS:** Uventa stent placement is one of good options for palliative treatments of benign and malignant ureteral obstructions. However, careful consideration about complications should be paid because some serious complications could happen especially in benign obstructions.

**SOURCE OF FUNDING:** None

**MP10-10 RETROGRADE INTRARENAL SURGERY WITH COMBINED SPINAL–EPIDURAL VS. GENERAL ANESTHESIA: A PROSPECTIVE RANDOMIZED CONTROLLED TRIAL**

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**INTRODUCTION AND OBJECTIVES:** Retrograde intrarenal surgery (RIRS) involves a minimal invasive stone surgery, lending itself potential to combined spinal-epidural anesthesia (CSEA), although it is performed preferably under general anesthesia (GA). This prospective, randomized study was undertaken to evaluate the feasibility and efficacy of CSEA for patients undergoing RIRS.

**METHODS:** 70 consecutive patients who were scheduled for RIRS were randomized to receive CSEA (n = 35) or GA (n = 35). Operative time, stone clearance rate, 100-mm visual analog scale (VAS) of pain, complication rate, anesthetic cost, and hospital stay were compared between two groups.

**RESULTS:** A total of 65 patients randomized to CSEA (31) or GA (34) completed the study. The 2 groups were comparable with respect to age, body mass index, distribution of stone location, and stone burden. In CSEA group, all procedures were completed and there were no anesthetic conversions. There were no statistically significant difference in operative time, stone fragmentation time and postoperative VAS pain score at 6 hour and 24 hour between two groups. No statistically significant differences existed between the 2 groups with respect to the incidence of complications, stone-free rate, mean hemoglobin drop and hospital stays. In addition, the anesthetic cost was much cheaper in CSEA group (183.8 ± 31.4 vs. 391.9 ± 59.1 dollars).

**CONCLUSIONS:** RIRS with CSEA can be completed with no anesthetic conversions and with the same efficacy and safety compared to that with GA. When considering economical aspects, CSEA appears to be a preferable alternative to GA for patient the general health status of whom permits it.

**SOURCE OF FUNDING:** None

**MP10-09 ANALYSIS OF THERAPEUTIC EFFECTS BETWEEN RETROPERITONEAL LAPAROSCOPIC URETEROLITHOTOMY AND URETEROSCOPIC LITHOTRIPSY FOR UPPER URETERAL CALCULI**

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**INTRODUCTION AND OBJECTIVES:** To evaluate the effect of retroperitoneal laparoscopic ureterolithotomy (RPUL) and ureteroscopic lithotripsy (URL) for upper ureteral calculi.

**METHODS:** 78 cases treated by RPUL and 216 cases by URL from January 2004 to April 2014 were reviewed. In RPUL and URL group, the diameter of stone was (1.42 ± 0.63) cm vs (1.51 ± 0.48) cm, ipsilateral hydronephrosis was (2.79 ± 0.78) cm vs (2.75 ± 0.81) cm. There were no significant differences. Data on the operation time, the hospital stay after operation, the operation, success rate, complication incidence and stone—free—were compared between the 2 groups.

**RESULTS:** Comparisons between RPUL group and URL group included the following: the operation time was (79.4 ± 28.7) min VS(61.5 ± 13.2) min, the hospital stay after operation was (6.5 ± 1.5) d VS(4.0 ± 1.0) d. There were significant differences. The operation successful rate was 97.4% (76/78) in RPUL group and 84.7% (183/216) in URL group. The complications incidence rate was 2.6% (2/78) in RPUL group and in URL group. The stone-free rate was 100.0% (78/78) in RPUL group and 88.4% (191/216) in URL group. The differences were significant (P < 0.05).

**CONCLUSIONS:** RPUL and URL had the advantages of less trauma and blood loss and rapid recovery, RPUL had fewer complication and higher success rate than URL, it could be a safe and effective method for the treatment of ureteral calculi.

**SOURCE OF FUNDING:** None
INTRODUCTION AND OBJECTIVES: To evaluate the efficacy and safety of retrograde intrarenal surgery (RIRS) for treatment of renal stones.

METHODS: We retrospectively reviewed the records of 493 renal units (RUs) undergoing RIRS for renal stones from December 2012 to March 2014. The stone free rate and complications were analyzed according to patients’ preoperative and intraoperative data.

RESULTS: Mean ± SD stone size, stone area, stone fragmentation time and postoperative hospital stay were 23.8 ± 16.5 mm, 246.1 ± 274.1 mm², 33.5 ± 18.8 minutes and 2.3 ± 2.0 days, respectively. The overall failure rate of ureteral access sheath placement was 5.2% (26/493), and the rate decreased to 2.1% (6/277) in patients with preoperative stent placement. These patients were performed RIRS after stent placement 14 days. The stone free rate with a single procedure was 66.5% with 91.1%, 88.1%, 68.2%, 31%, 9.7% for stones size < 10, 10–20, 20–30, 30–40, > 40 mm as well as with 89.4%, 68.3%, 21.5% for stone area < 150,150–300, >300 mm², respectively. There were 68 patients (13.8%) undergoing one or more complications. Five cases (1.0%) underwent false passage of ureter orifice causing slight ureteral wall injuries during the procedures. Overall postoperative fever rate was 10.3% (51/493). Only 6.5% (32 cases) of the patients had systemic inflammatory response syndrome, and urosepsis in 18 cases (3.6%). The remaining complications were renal colic caused by stone-strasse in 9 cases (1.4%) and ureteral perforation in 3 (0.6%).

CONCLUSIONS: RIRS could be considered as a safe and effective treatment for renal stones especially for stone less than 20 mm or stone area.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: The accuracy of predictive tools in confirming the presence and grade of upper tract urothelial carcinomas (UTUC) is limited. We evaluate the diagnostic value of various pre- and intraoperative parameters in the detection of UTUC.

METHODS: Of 186 consecutive patients who underwent diagnostic ureteroscopies (URS) at our centre between 2005 and 2014, 102 (55%) had UTUCs confirmed endoscopically or post-nephroureterectomy. Preoperative workup included voided urine cytology in 136 (73%) and imaging with 170 (91%) had CT. Retrograde pyelography was undertaken in 155 (83%) cases. During URS, visualised abnormalities were reported in 101 (54%), 145 (78%) selective cytologies and 99 (53.2%) biopsies were obtained. 60 (32.3%) patients went on to have a nephroureterectomy.

RESULTS: Abnormal cytology, CT findings (mass/filling defect) and retrograde pyelography, were able to predict the presence of an UTUC, although hydroureter on imaging did not. Preoperative and selective cytology predicted UTUC with a sensitivity/specificity of 62%/67% and 77%/73% respectively, compared to that for CT of 95%/26%. Comparing endoscopic biopsies to final histopathology grade, 20 (50%) and 18 (45%) were identical or upgraded respectively, while 2 (5%) were downgraded. Preoperative and selective cytology also predicted tumour invasiveness (HR:6.67, CI:1.28–34.84, p=0.025) and (HR:9.33, CI:1.87–46.57, p=0.006) respectively. Comparing our unmatched series of endoscopically managed patients, survival was not significantly different compared with nephroureterectomy (Kaplan Meier χ² = 0.176, log rank p = 0.675).

CONCLUSIONS: Despite the relative merits of obtaining cytology, we demonstrate that URS and CT alone are able to identify and predict the grade of UTUC found in the nephroureterectomy specimen with good accuracy.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: We evaluated the cancer detection rate (CDR) of an early second look and its impact on the following endoscopic evaluation in patients conservatively treated for upper tract urothelial carcinoma (UTUC).

METHODS: From January 2003 to December 2013, 81 patients diagnosed with UTUC at ureteroscopy (URS) were consensually treated with holmium-YAG laser photovaporisation. Initially, the endoscopic follow-up was started according to the European guidelines (namely, at 3 months after the first URS). Since January 2009 we have offered an early second look (within 6–8 weeks) in all patients diagnosed with UTUC. Chi-square test was used to compare the CDR at the following endoscopic evaluation of patients with an early second look with patients on a regular follow-up.

RESULTS: CDR of patients who underwent an early second look (n = 36) was 58.3%. At the following endoscopic evaluation, CDR of this patient group was 58.1%. When considering only patients with a negative early second look (n = 15) or also patients with a persistence of tumor at early second look but with a complete laser ablation afterwards (n = 26), the CDRs at the following evaluation were 28.6 and 53.8%, respectively, compared to 59.1% in patients on a regular follow-up (n = 45, p = 0.05 and p = 0.6, respectively).

CONCLUSIONS: An early second look in patients endoscopically treated for UTUC revealed a tumor recurrence rate of 58.3%, which decreased at 28.6% at the following endoscopic evaluation if no tumor recurrence was found at early second look. Further studies are needed to investigate the benefit of such an approach on the outcome of these patients.

SOURCE OF FUNDING: None

MP10-15 RISK FACTORS FOR URETERAL STRICTURES FOLLOWING SEMI-RIGID URETEROSCOPIC HOLIUM LITHOTRIPSY: A SINGLE CENTER’S EXPERIENCE IN CHINA

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INTRODUCTION AND OBJECTIVES: Ureteral strictures is a common complication following semi-rigid ureteroscopic lithotripsy. This study we designed to analyse the risk factors of the development of strictures after semi-rigid ureteroscopy.

METHODS: The clinical dates of patients who underwent semi-rigid ureteroscopic Holium lithotripsy from January 2006 to January 2014 were retrospectively analyzed. Various preoperative and operative factors were assessed for their association with ureteral stricture using univariate, forward multivariate regression and correlation analysis.

RESULTS: Between January 2006 to January 2014, 932 consecutive ureteroscopic procedures were performed for ureteric stones. The mean patient’s age was 44.5 ± 12.4 years (range 19 to 78), and the mean follow up time was 38.2 ± 11.5 months (range 3–96). 34 ureteral strictures (3.65%) were subsequently treated. Upper ureteral stones, severity of hydronephrosis, recurrent UTI, impacted stones, stone size and mucusa hyperplasia were the most important factors for ureteral strictures. Multivariate stepwise regression analyses showed that there was an association between upper ureteral stones, recurrent UTI, impacted stones, and mucusa hyperplasia with the ureteral stricture.

CONCLUSIONS: Ureteroscopic Holium lithotripsy is a safe and effective procedure for the treatment of stones in this modern era. Ureteric stricture formation following lithotripsy is rare complication, and upper ureteral stones, recurrent UTI, impacted stones, and mucusa hyperplasia seem to contribute towards the development of strictures. This may help in counselling of patient about likelihood of ureteral strictures.

SOURCE OF FUNDING: None

MP10-16 USE OF THE HEMOSTATIC MATRIX FLOSEAL® TO MANAGE UPPER URINARY TRACT BLEEDING DURING URETEROSCOPIC SURGERY

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INTRODUCTION AND OBJECTIVES: Upper urinary tract (UUT) bleeding during ureteroscopic surgery may impair visibility and maneuverability of the instruments thus leading to the interruption of the procedure. We describe the use of the hemostatic matrix FloSeal® in cases of bleeding from UUT during ureteroscopic surgery.

METHODS: From January 2011 to September 2013 clinically significant bleeding from the UUT occurred in 7/320 patients (1.8%) undergoing ureteroscopic surgery. In all cases, 5 mL of FloSeal® was injected into the UUT through the ureteroscope.

RESULTS: In all cases, the use of the hemostatic matrix FloSeal® stopped the bleeding, improved visibility and allowed the completion of the procedure. The post-operative course was uneventful. Not significant post-operative bleeding, sepsis, obstruction or pain occurred.

CONCLUSIONS: Transureteroscopic injection of the hemostatic matrix FloSeal® may represent a valid strategy in cases of bleeding from the UUT during ureteroscopic surgery.

SOURCE OF FUNDING: None
culture was seen in 5 (14%). The energy source used for fragmentation was laser in 31 (86%) patients, lithoclast in 1 (3%) with the remaining 4 (11%) having basket extraction. Twenty (56%) had post-operative stent insertion. Mean hospital stay was 1.5 days (range: 0–5 days). Only two minor complication was observed, one patient needed additional oral antibiotics for UTI and a second patient with stent encrustation needed a ureteroscopic retrieval.

CONCLUSIONS: All patients were stone free at the end except for one patient who chose to undergo surveillance. Ureteroscopy for stone disease in children is feasible with a low complication rate and high stone free rate.

SOURCE OF FUNDING: Nil

MP10-18 RIRS FOR STONE SIZE > 1 CENTIMETER

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INTRODUCTION AND OBJECTIVES: The retrograde intrarenal surgery (RIRS) is widely used for upper ureteric and renal stone size <1 centimeter. The goal of this study is to evaluate the efficacy of RIRS for upper ureteric and renal stone size >1 centimeter.

METHODS: This is retrospective study in which we reviewed the RIRS procedures done in tertiary care urological hospital from January 2013 to March 2014. The demographic parameters, Intraoperative parameters and postoperative parameters of the patients were analysed.

RESULTS: Totally 103 patients and 106 renal units were treated. The average age, stone size, Hounsfield units, operative time, haemoglobin drop, VAS at 6 hours and 24 hours, analgesic requirement, hospital stay were 44.5 ± 13.8 years, 19.1 ± 9 millimeters, 1191.3 ± 259 Hounsfield units, 51.7 ± 21.1 minutes, 0.5 ± 0.3 grams/deciliter, 2 ± 0.8, 1.2 ± 0.4, 39.7 ± 13.4 milligrams of tramadol, 44.4 ± 10.46 hours. 4 patients required preoperative stenting. 17 patients had Clavien-Dindo grade 1 complications and 5 had grade 2 complications. Stone free status at 1 month was 88.4% for those performed by specialists and 48.7% for those performed by residents in training.

CONCLUSIONS: RIRS is safe and efficacious modality even for stone disease in children. The patients in groups 1 and 2, respectively (P<0.05). The mean operative times for groups 1 and 2 were 35.7 ± 6.8 and 32.2 ± 6.34 minutes, respectively (P<0.05). In group 1, stone migration was observed in 16.6% of patients. In 5.5% of patients in group 1, reaching to the stone was not possible because of the ureteral kinking or stenosis. Postoperative hematuria was detected in 25% and 8% of patients in groups 1 and 2 (P<0.05). Mucosal injury was observed in 16.6% and 8% of the patients in groups 1 and 2, respectively (P<0.05). No major complications were noted in either group.

CONCLUSIONS: A flexible ureteroscope can achieve higher stone-free rates and lower complication rates in treating upper ureteral Stones when compared with semirigid ureteroscope.

SOURCE OF FUNDING: None

MP10-19 COMPARISON OF FLEXIBLE URETEROSCOPE AND SEMIRIGID URETEROSCOPE IN TREATING UPPER URETERAL STONES

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INTRODUCTION AND OBJECTIVES: To compare the outcomes of semirigid ureteroscope and flexible ureteroscope in treating upper ureteral stones.

METHODS: 36 patients with upper ureteral stones, who were treated with 8.5–11.5 F semirigid ureteroscope (group 1) and 25 patients who were treated with 7.5 F flexible ureteroscope (group 2) were enrolled in the study. The stones were fragmented with Holmium-YAG laser. The pre-operative, operative and post-operative outcomes of both groups were analyzed retrospectively.

RESULTS: The size, lateralization, and impaction of the stones and also the patient age, gender, body mass index, and the presence of hydronephrosis were similar between the groups. The stone-free rates were 77.8% in group 1 and 100% in group 2 (P<0.05). The mean operative times for groups 1 and 2 were 35.7 ± 6.8 and 32.2 ± 6.34 minutes, respectively (P>0.05). In group 1, stone migration was observed in 16.6% of patients. In 5.5% of patients in group 1, reaching to the stone was not possible because of the ureteral kinking or stenosis. Postoperative hematuria was detected in 25% and 8% of patients in groups 1 and 2 (P<0.05). Mucosal injury was observed in 16.6% and 8% of the patients in groups 1 and 2, respectively (P<0.05). No major complications were noted in either group.

CONCLUSIONS: The surgeon experience is considered to be an important factor for the efficacy and safety of the retrograde ureteroscopy. The aim of our study was to evaluate the impact of surgeon experience on semirigid retrograde ureteroscopy success rate and intraoperative incidents and complications.

SOURCE OF FUNDING: None

MP10-20 LEARNING CURVE IN RETROGRADE SEMIRIGID URETEROSCOPY

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INTRODUCTION AND OBJECTIVES: The surgeon experience is considered to be an important factor for the efficacy and safety of the retrograde ureteroscopy. The aim of our study was to evaluate the impact of surgeon experience on semirigid retrograde ureteroscopy success rate and intraoperative incidents and complications.

METHODS: Between June 1994 and February 2014, 10001 semirigid ureteroscopic procedures for ureteral lithiasis were performed in 9124 patients. We used semirigid ureteroscopes (8/9.8F Wolf, 8 and 10F Storz, Olympus Endoeye digital 8.5/9.9 F). Lithotripsy was done with pneumatic, electrohydraulic or Ho:YAG laser lithotripters. In cases 7745 the procedures were done by specialists, others 2256 being performed by residents in training.

RESULTS: The global success rate of the retrograde ureteroscopy was 90.9%, 92.6%, for interventions performed by specialists and 88.4% for those performed by residents in training. Significant differences were described in also in terms of intraoperative incidents (4.1% vs 4.9%) and complications (2.5% vs 3.9%).

CONCLUSIONS: The experience of the operator is significantly associated with higher success rate and decreased incidents and complications risk. Supervision by an experienced endourologist is recommended when the procedure is performed by residents in training.

SOURCE OF FUNDING: None

MP10-21 MANAGEMENT OF URETERAL STRUCTURE AFTER URETEROSCOPIC LASER LITHOTRIPSY

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INTRODUCTION AND OBJECTIVES: The surgeon experience is considered to be an important factor for the efficacy and safety of the retrograde ureteroscopy. The aim of our study was to evaluate the impact of surgeon experience on semirigid retrograde ureteroscopy success rate and intraoperative incidents and complications.

METHODS: Between June 1994 and February 2014, 10001 semirigid ureteroscopic procedures for ureteral lithiasis were performed in 9124 patients. We used semirigid ureteroscopes (8/9.8F Wolf, 8 and 10F Storz, Olympus Endoeye digital 8.5/9.9 F). Lithotripsy was done with pneumatic, electrohydraulic or Ho:YAG laser lithotripters. In cases 7745 the procedures were done by specialists, others 2256 being performed by residents in training.

RESULTS: The global success rate of the retrograde ureteroscopy was 90.9%, 92.6%, for interventions performed by specialists and 88.4% for those performed by residents in training. Significant differences were described in also in terms of intraoperative incidents (4.1% vs 4.9%) and complications (2.5% vs 3.9%).

CONCLUSIONS: The experience of the operator is significantly associated with higher success rate and decreased incidents and complications risk. Supervision by an experienced endourologist is recommended when the procedure is performed by residents in training.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: Ureteral stricture after ureteroscopic lithotripsy (URS) is sometimes reported, but established causes and management still remain unknown. We discuss the adverse effect, and the efficacy of balloon dilation and end-to-end anastomosis.

METHODS: From August 2011 to May 2013, in total of 403 patients treated with URS, we experienced 7 patients (2%) with ureteral stricture after therapy, and analyzed the management retrospectively.

RESULTS: In 7 patients, median age was 51 (45–75), 5 patients were male, mean size of stone was 11.7 (9.5–14) cm, 5 cases had upper stone and 2 cases had middle stone. Previously, 2 patients experienced URS, shock wave lithotripsy was underwent in 3 patients. In URS, mean time was 63.4 (38–95) minutes, mean total energy was 7.5 (1.1–13.2) kJ, and 3 cases had impacted stone. Mean duration of post stenting was 29 (17–62) days. After removal of ureteral stent, 7 patients still had hydrenephrosis and lower back pain. Retrograde pyelography showed that mean length of stricture was 21.3 (10–40) mm. Balloon dilation was underwent in all 7 patients and hydrenephrosis improved in 4 patients (57%). End-to-end anastomosis of ureter was underwent in 3 cases and succeeded. In 3 cases, patients have diabetes mellitus and length of stricture was over 25 mm.

CONCLUSIONS: We suggest that balloon dilation is recommended as initial management for the ureteral stricture after URS. However, when the length of stricture is >25 mm and patient have micro-angiopathy caused by diabetes, we may have to consider another management such as end-to-end anastomosis.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: The causes of and countermeasures against the failure of ureteroscopic holmium: YAG laser lithotripsy.

METHODS: A retrospective analysis of our hospital from 2012 September to 2013 October underperform ureteroscopic holmium: YAG laser lithotripsy in 160 cases. The operation failed in 11 cases, accounting for 6.8%.

RESULTS: Ureteroscopy to through the narrow, twisting ureteral lumen in 3 cases, long segment of ureter, stenosis who twist even dilation or incision, ureteroscope also difficult to pass, can F4.7 indwelling double J tube, converted to open operation or ESWL, PCNL. Ureteroscope into stone drift mirror or gravel, into the ipsilateral renal pelvis, calyces in 3 cases, intraoperative gravel or into the mirror to maintain low perfusion pressure, clear vision only, when the stones into the pelvis, need of indwelling double J tube, after treated with ESWL, a better effect. 2 cases of ureteral mirror can not enter the ureteral lumen, analysis and congenital ureter, stenosis of small, strong through ureteroscopy is easy to cause the bladder or ureter injury. The operation of ureter opening severe mucosal injury, ureteral ureteroscopy difficulties. In the operation of ureteric perforation or mucosal avulsion in 2 cases, unable to find the normal luminal, leading to operation failure.

CONCLUSIONS: Strict control of ureteroscopic holmium: YAG laser lithotripsy operation indication, operation skills, strict operation, as well as with other endoscopic techniques, can significantly improve the ureteroscopic holmium: YAG laser lithotripsy success rate, reduce the occurrence of operation failure and complications.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: The aim of parapelvic cyst treatment is to have completely drainage of hydatid fluid and prevent its further suppression on the kidney and collective system. However, little work has enough number of cases and long time of follow-up. This work would explore the surgical approaches, its efficacy and safety of holmium laser ureteroscopic internal drainage in the treatment of parapelvic cyst.

METHODS: Between November 2011 and January 2014, 28 patients of renal parapelvic cyst were treated by flexible ureteroscope. The diameter of cyst wall carved by Holium laser was not less than 2 cm. The internal drainage was set by double-J tubes. A retrospective observational study was performed after surgery.

RESULTS: In 28 cases of operation, 27 cases were successful. The cyst treatment time was 8–40 min, and the average is 26 min. Mean estimated blood loss was 20±5 ml and the mean hospital stay was 3 days (range 2–4 d). During the operation, no massive haemorrhage, damage of organ around and ureter, or other complications happened. The time of follow-up was 4–30 months, and the median was 15 months. The results of follow-up showed that the cyst in 22 cases was disappeared; the diameter of cyst in 4 cases reduced for more than 1/2, and 1 case had recurrence among the 27 successful cases.

CONCLUSIONS: The treatment of parapelvic cyst by internal drainage operation using holmium laser and flexible ureteroscopy is feasible. Also, its damage was little and of high safety.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Ureterorenoscopic laser intrarenal lithotripsy is one of the treatment options for renal stones up to 2.2 cm. Final decision depends on surgeon’s expertise and patients’ choice. We report the sheathless technique of ureterorenoscope introduction with application of a double pulse width laser, achieving complete and safe pulverization of intrarenal stone under 2.2 cm.

METHODS: In January 2011-Dec 2013, 112 patients (78M:34F) with 123 stones underwent sheathless fiberoptic
ureterorenoscopy using the two wire technique. Cook Odyssey Holmium: YAG laser with double pulse width was used to achieve complete pulverization.

RESULTS: 79 patients were treated for single and 33 patients with multiple stones. Size varied between 6 and 22 mm. 22 patients were ESWL failures. 1 was for residual fragment from previous PCNL. 19 patients had prior emergency stent. 122 stones were completely pulverised. 23 patients required 2 treatments whereas one needed 3. Average operating time 46 minutes (15–65) with laser energy ranges 345–1754 joules. 96 patients were discharged within 23 hours, 10 stayed overnight and 5 up to 72 hours. One patient stayed 10 days due to social circumstances. One uroseptic patient responded to treatment after 48 hours. Seven patients needed post operative oral antibiotics. Ureteric injury was not observed. All patients except one were clear at 4 month follow up as evident by imaging studies.

CONCLUSIONS: The combination of the 2-wire sheathless ureterorenoscopy introduction and a good laser with double pulse width constitute a winning duo for safe intrarenal lithotripsy. Access sheath and post operative stenting are not required resulting in cost-effective, safe, stone clearance.

SOURCE OF FUNDING: None

MP10-25 COMPARISON OF EFFICACY OF URETEROSCOPIC LITHOTRIPSY BETWEEN LITHOCLAST AND HOLMIUM LASER IN MANAGEMENT OF UPPER URET STONE

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INTRODUCTION AND OBJECTIVES: In endoscopic management of upper ureter stone, we usually use lithoclast or laser to disintegrate the stone. The stones may move back to renal pelvis hitting by lithoclast. Laser lithotripsy causes less movement which may lead to better stone free rate. We compared the rate of double J insertion and rate of further ESWL for residual stone between both methods.

METHODS: We retrospectively review the medical record. Patients who underwent ureteroscopic lithotripsy by lithoclast and laser between January 2012 to January 2013 for upper ureter stone in Mackay Memorial Hospital were included. Cases with concurrent UTI and acute renal failure were excluded. Patient age, method of lithotripsy, stone size (based on KUB), double J insertion and further ESWL for residual stone were recorded.

RESULTS: There are 216 patients (173 in lithoclast and 43 in laser group) were included and 230 ureters (186 in lithoclast and 44 in laser group) were treated. The mean age of lithoclast and laser group is 54.3 years (22–93 years) and 52.7 years (21–69 years) respectively. The stone size in both group is similar (0.80 cm2 and 0.85 cm2). The rate of double J insertion after surgery is significant lower in laser group than in lithoclast group (84% vs 92%, p = 0.006). The rate of further ESWL is similar in both group (32 % vs 34%). However, 4 patient in lithoclast group needed further ureteroscopic lithotripsy.

CONCLUSIONS: Use of laser lithotripsy in management of upper ureter stone is associated with lower rate of double J insertion for residual stones.

SOURCE OF FUNDING: None

MP10-26 CLINICAL OUTCOMES AFTER URETEROSCOPIC LITHOTRIPSY IN PATIENTS WHO INITIALLY PRESENTED WITH UROSEPSIS: MATCHED PAIR COMPARISON TO ELECTIVE URETEROSCOPY

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INTRODUCTION AND OBJECTIVES: The outcomes of ureteroscopy (URS) after urgent decompression and antibiotics for patients who initially present with urosepsis due to obstructive urolithiasis have not been previously evaluated. The aim of this study was to compare the outcomes and complications of URS in patients with a recent history of sepsis in comparison to those without sepsis.

METHODS: The study included 138 patients who underwent URS for stone removal from January 2004 to September 2011 at a university medical center. A matched-pair analysis was performed using 3 parameters (age, gender and race) to compare outcomes and complications between 69 patients who had sepsis versus a matched cohort who did not have sepsis prior to URS.

RESULTS: The study included 138 patients, 88 females (64%) and 50 males (36%) with median age 57.5 (range, 18–88). Patients with prior sepsis had similar patient characteristics and stone free rates (81% vs 77%) compared to patients without prior sepsis (p > 0.05). However, patients with prior sepsis had a significantly higher complications rate (20% vs 7%), longer length of hospital stay (LOS) and longer courses of postoperative antibiotics after URS (p < 0.05). Two diabetic patients developed sepsis postoperatively (1 with and 1 without prior sepsis) and 5 patients with prior sepsis developed postoperative fever.

CONCLUSIONS: URS after decompression for urolithiasis related sepsis has similar success but higher complication rates, greater LOS and longer course of postoperative antibiotics. This is important in counseling patients who present for definitive URS after urgent decompression for urolithiasis related sepsis.

SOURCE OF FUNDING: None

MP10-27 THE FEASIBILITY OF FLEXIBLE URETEROSCOPY WITH HOLMIUM LASER LITHOTRIPSY IN THE TREATMENT OF LARGE UPPER URINARY SYSTEM STONES: A SINGLE CENTER EXPERIENCE

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INTRODUCTION AND OBJECTIVES: We present our experience on upper urinary tract stones 20–40 mm in diameter using flexible ureterorenoscopy with holmium laser lithotripsy as the primary treatment and determined the efficacy and feasibility of RIRS as an alternative to PCNL.
CONCLUSIONS: Our contemporary RIRS series shows that among the groups, p = and complication rates are independent of BMI. Therefore, RIRS among groups (81%, 87%, 87.4%, 85%, respectively in all procedures. There were statistically no differences among groups with regard to patients, stones and location, in normal weight, overweight, obese, and morbidly obese patients.

RESULTS: Mean age, mean operative time, mean stone size, and mean stone burden were 47.9 ± 14.3 years (18–82), 91.9 ± 38.3 minutes (35–220), 20.4 ± 6.8 mm (3–40), 29.7 ± 12.6 mm (20–95). Out of 49 patients, 36 (73%) were treated with a single procedure, 6 (12%) required two operations, and one (2%) required three operations. The SFRs were 73%, 85%, and 88% after 1st, 2nd, and 3rd operations, respectively. There were no major complications, but some minor complications were seen. Five intraoperative (hematuria, 3; minor ureteral injury, 2) (8%) and 5 postoperative (Steinstrasse, 2; pyelonephritis, 1; urinary tract infection, 1; renal colic, 1) (8%) complications occurred.

CONCLUSIONS: RIRS is a safe and effective treatment option for intrarenal stone sizes of 2 to 4 cm, which may be an alternative therapy to percutaneous nephrolithotomy for selected patients.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: To ascertain whether flexible ureteroscopy with holmium laser lithotripsy and/or extraction of stone fragments is as effective as in obese patients, we retrospectively compared outcomes data, for stone number, size and location, in normal weight, overweight, obese, and morbidly obese patients.

METHODS: The patients were divided into four groups according to BMI cohorts. The files of the patients were retrospectively reviewed and data regarding the preoperative characteristics such as gender, BMI, and stone properties, surgical parameters, outcomes, stone free rates and complications were collected. Stone free status was defined as no fragments and/or the presence of fragments smaller than 4 mm in the urinary system.

RESULTS: A total of 309 operations were performed in the present study. Mean patient age, mean BMI, mean operative time, mean hospital stay, mean stone number, mean stone burden, and mean DJS time were 41.4 ± 12.1 years (18–82), 28.6 ± 6.0 kg/m2 (18–52), 64.3 ± 29.1 minutes (20–200), 24.8 ± 11.2 hours (4–168), 2.5 ± 2.1 (1–15), 20.8 ± 14.1 mm (4–98), and 25.5 ± 8.4 days (2–60) respectively in all procedures. There were statistically no differences among groups with regard to patients, stones and perioperative parameters including patient age, operative time, hospital stay, and complications. Overall SFRs was similar in among groups (81%, 87%, 87.4%, 85%, respectively p = 0.770). The complication rates were not statistically different among the groups.

CONCLUSIONS: Our contemporary RIRS series shows that operative times, hospital stays, using of operative devices, SFRs, and complication rates are independent of BMI. Therefore, RIRS can be performed as efficiently and efficaciously in obese patients as in nonobese patients.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: We retrospectively compared and evaluated the outcomes and complications of two endoscopic treatment procedures, rigid URS and flexible URS in the treatment of proximal ureteral stones.

METHODS: Fifty-three patients underwent rigid ureteroscopy (group 1) and 44 patients underwent flexible ureteroscopy (group 2) for treatment of proximal ureteral stones. Stone clearance was assessed intraoperatively and checked at the postoperative 3 months. Success rate was defined as the absence of stone fragments or asymptomatic insignificant residual fragments of < 2 mm. Outcomes, SFRs, and perioperative complications were recorded.

RESULTS: The differences were statistically not significant in age, gender, BMI, stone characteristics in two groups. Mean ureteral stone size were 9.2 ± 0.4 mm and 8.9 ± 0.5 mm for group 1, and 2. Mean operative time were 37.7 ± 2.4 min. and 45.2 ± 2.6 min. for group 1, and 2 (p = 0.403). The SFRs were 66% and 93% for group 1, and 2 (p = 0.001). Stone itself was pushed back to the renal pelvis during surgery in 8 (15%) patients, and these cases were completed with flexible ureteroscope. Intraoperative and postoperative complication rates were similar for each group (15% and 9% for group 1; 14% and 11% for group 2). Two major complications (ureteral avulsion and ureteral rupture) occurred in group 1.

CONCLUSIONS: Flexible ureteroscopy is safer, less invasive, and more effective than rigid ureteroscopy for patients with proximal ureteral stones. Therefore we recommended flexible ureteroscopy in the management of proximal ureteral stones.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Advancing a holmium laser fiber through a ureteroscope can damage the working...
RESULTS: Five virgin fibers were used to test each condition. Tip degradation trended with pulse energy for the SF but not the BT fiber. At 0.8 J/10 Hz and 1 J/10 Hz, SF degradation was greater than the BT fiber but the difference was not significant. Communion was found to increase with pulse energy for both BT and SF fibers up to the 0.8 J/10 Hz setting (p < 0.003). No significant differences were found between BT and SF fibers at any energy setting.

CONCLUSIONS: The ball-tip fiber exhibits similar comminu-eficiency to a standard fiber with minimal tip degradation at clinically relevant laser settings in our in vitro model. The new tip design may provide an advantage in reducing ureteroscope damage without loss of performance.

SOURCE OF FUNDING: Boston Scientific
incorporating clinicopathological factors and age was devised to predict BCR, the predictive accuracy of the multivariate model was 85.1%. By adding in two individual variations of SNPs in the aforementioned multivariate model, the predictive accuracy increased to 87.7% (p = 0.045) and with 3 variations of SNPs, 89.0% (p = 0.025), demonstrating the cumulative effects of genetic variations to predict BCR.

CONCLUSIONS: Based on exome array analysis, the selected SNPs were predictors for BCR. The addition of individualized genetic information effectively enhanced the predictive accuracy of BCR among PCa patients who underwent RP.

SOURCE OF FUNDING: None

MP11-02 THE USE OF EXOME GENOTYPING TO PRE-DICT PATHOLOGICAL GLEASON SCORE UPGRADE AFTER RADICAL PROSTATECTOMY IN LOW-RISK PROSTATE CANCER PATIENTS

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INTRODUCTION AND OBJECTIVES: Active surveillance (AS) is a promising option for patients with low-risk prostate cancer (PCa), however current criteria could not select the patients correctly. In this study, we aimed to develop an accurate model for predicting pathological Gleason score upgrade (PGU) among low-risk PCa patients by using exome genotyping.

METHODS: We genotyped 242,221 single nucleotide polymorphisms (SNPs) on a custom HumanExome BeadChip v1.0 (Illuminam Inc.) in blood DNA from 257 low risk PCa patients who underwent radical prostatectomy. Genetic data were analyzed using an unconditional logistic regression to calculate an odds ratio as an estimate of relative risk of PGU, which defined pathologic GS above 7. Among them, we selected persistent SNPs after multiple testing using FDR method, and we compared accuracies from the multivariate logistic model incorporating clinical factors between included and excluded selected SNP information.

RESULTS: After analysis of exome genotyping, 15 SNPs were significant to predict PGU in low risk PCa patients. Among them, one SNP – rs33999879 were remained significantly after multiple testing. When a multivariate model incorporating factors in Epstein definition and age was devised for the prediction of PGU, the predictive accuracy of the multivariate model was 78.4% (95% CI: 0.726-0.834). By addition the factor of rs33999879 in aforementioned multivariate model, the predictive accuracy was 82.9%, which was significantly increased (p = 0.0196).

CONCLUSIONS: The rs33999879 SNP is a predictor for PGU. The addition of genetic information from the exome sequencing effectively enhanced the predictive accuracy of the multivariate model to establish suitable active surveillance criteria.

SOURCE OF FUNDING: None

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MP11-03 THE USE OF EXOME GENOTYPING TO PRE-DICT PATHOLOGICAL GLEASON SCORE UPGRADE AFTER RADICAL PROSTATECTOMY IN LOW-RISK PROSTATE CANCER PATIENTS

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INTRODUCTION AND OBJECTIVES: Haemostasis of actively bleeding vessels is required during holmium laser procedures for treatment of the prostate. Energy defocusing and reduction of power is used to achieve haemostasis. The ability to stop bleeding of small blood vessels with different holmium laser parameters was tested ex-vivo, in a porcine blood perfused bladder.

METHODS: Porcine bladder was perfused via arterial access, with fresh blood infused with EDTA 1.5 gr/litter at a continuous blood flow of 2-3 ml/min and average 30 mmHg. The bladder was filled with saline, the ureter was occluded and the bladder was immersed in a saline bath. Blood vessels of 1-2 mm in diameter were randomly chosen and cut, to induce simulated bleeding. Holmium laser irradiation was applied in near contact until bleeding cessation was achieved and the number of pulses required was recorded.

RESULTS: Several energy, frequency and pulse durations were tested using this model and compared to the currently used settings. By increasing the pulse duration, (up to 1300µs) hemostasis was achieved for all bleeding vessels, whereas short pulses <600 µs, could not always achieve vessel closure. The number of pulses required for bleeding cessation was reduced by increasing the pulse duration, at a given power setting. Better hemostasis was also found when the energy per pulse was reduced, while maintaining power and long pulse duration.

CONCLUSIONS: Perfused porcine bladder was a useful tool in comparing different holmium laser settings for control of bleeding vessels. The use of longer holmium pulse duration enables better control of haemostasis and may be a useful tool when validated in-vivo.

SOURCE OF FUNDING: Lumenis Ltd

MP11-05 HIGH ENERGY HOLMIUM LASER RETRO-PULSION – A UNIQUE MODEL

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INTRODUCTION AND OBJECTIVES: Retropulsion, a well-known phenomenon that occurs during Holmium:Yag Lithotripsy procedures, was modeled to investigate its underlying mechanism in a wide range of parameters.

METHODS: The test was performed using a holmium laser system laser system, modified to produce laser pulses in a range of energies (0.5 J to 6 J) and durations (215µs to 1500µs). Uniform phantom balls, prepared from Gypsum Plaster, were irradiated in a specially constructed vertical jig in order to avoid friction associated when working in a tube. The reaction of the phantom ball to single pulses, irradiated in both air and water environment were filmed using a fast camera. Frame-to-frame analysis was used to measure the movement parameters.

RESULTS: Initial forward acceleration, back attraction and shock wave impact were the basic elements of a phantom movement during interaction with a laser pulse in water. Each of these was approximately of the same order of magnitude and correlated with the pulse energy, whereas the resulting repulsion speed correlated significantly less, being dependent on mutual ratios of pulse duration, initial distance from the fiber tip and the bubble amount and size.

CONCLUSIONS: Conventional understanding, based on idea of fragment ejection from the stone surface (jet), ignores the stone interaction with surrounding water. This interaction must be...
considered in more complicated terms than simple resistance. The phantom interaction with the bubble (created and collapsed during the laser pulse) gives the phantom a significantly higher acceleration value than the jet determining the magnitude of total repulsion.

**SOURCE OF FUNDING:** None

**MP11-06 INFLUENCE OF HIGH ENERGY PER PULSE HOLMIUM LASER PARAMETERS AND APPLIED FIBER DIAMETER ON PHANTOM CALCULI ABLATION**

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**INTRODUCTION AND OBJECTIVES:** The range of holmium laser output is much wider than is normally applied or tested. The objective of this study was to measure the ablative effect of a wider range of holmium laser parameters on phantom calculi, including higher energy per pulse using different fiber diameters and peak powers.

**METHODS:** Laser induced craters were created on a Gypsum phantom using different parameter settings: fiber diameter (240, 365, 550, 940µ), laser pulse energy (0.25, 0.5, 1, 2, 4, 5, 6 J/pulse) and peak power (4.5, 6.0, 10 kW). Phantom plates were immersed in water for 2 hours prior to irradiation and single laser pulses were applied in contact mode. Crater depth, diameter and ablated volume were examined quantitatively using OCT cross sections images.

**RESULTS:** Holmium laser effectively ablated phantom calculi without reaching saturation at energy of 6 J. Ablation efficiency (mass loss at 1 J energy emission, for specified energy) increases with increased energy/pulse. Reduced peak power, for the same pulse energy slightly increased the ablation efficiency. The Influence of fiber diameter was weak in spite of the relatively high difference in energy density. For energies ≤ 2 J, a larger fiber diameter increased the ablated volume, whereas energies ≥ 3 J the smallest fiber diameter (240µ) demonstrated up to 25% higher ablation volume.

**CONCLUSIONS:** High energy pulses of up to 6 J can efficiently fragment stones. If retropulsion is not a factor during lithotripsy, higher energy per pulse will more effectively ablate the stone, regardless of the fiber diameter.

**SOURCE OF FUNDING:** None

**MP11-07 A NOVEL GRADIENT BIODEGRADABLE URETERAL STENT IN A PORCINE MODEL**

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**INTRODUCTION AND OBJECTIVES:** To investigate a novel poly (lactic acid - glycolic acid) (PLGA)/polycaprolactone (PCL) degradable ureteral stent in a porcine model.

**METHODS:** The PCL/PLGA ureteral stent fabricated by double-needle electrospinning was inserted unilaterally in 2 groups of animals. Excretory urogram, and urine tests were performed on different observation points (14, 28, 42, 56 and 70 days). On day 70 all pigs underwent necropsy for histological evaluation.

**RESULTS:** All 10 animals were stented successfully. All biodegradable stents began to degrade at 4 weeks. Four stents were completely degraded by week 8, and all stents were completely degraded by week 10. IVP showed that there was no significant differences were observed in hydronephrosis severity between degradable and biostable stented pigs on week 6. As indwelling time increased beyond 8 weeks, the level of hydronephrosis increased significantly in the biostable group (p<0.05). On day 70 histological findings indicating inflammation or hydronephrosis were more frequent and severe in stented kidneys than in non-stented kidneys in each group (each p<0.05). No difference in histological severity score was observed in the middle and distal ureter sections of biodegradable and control animals (p>0.05).

**CONCLUSIONS:** The PCL/PLGA ureteral stent fabricated by double-needle electrospinning can degrade from distal end to proximal end, and the stent had equivalent drainage effects, less hydronephrosis and more biocompatibility compared to conventional stents.

**SOURCE OF FUNDING:** Nil

**MP11-08 FLEXIBLE URETEROSCOPY AND LASER-TRIPSY (FURSL) FOR PAEDIATRIC RENAL CALCULI: RESULTS FROM A SYSTEMATIC REVIEW**

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**INTRODUCTION AND OBJECTIVES:** An increasing incidence of paediatric stone disease has also seen a rise in the use of Flexible ureteroscopy and lasertripsy (FURSL). We wanted to do a systematic review of literature looking at the outcomes of FURSL for paediatric renal stones.

**METHODS:** We conducted a systematic review using studies identified by literature from MEDLINE, EMBASE, the Cochrane Central Register of Controlled Trials, CINAHL, Google Scholar between January 1990 and March 2014. All English language articles reporting on a minimum of 5 patients ≤18 years treated with flexible ureteroscopy and lasertripsy for stone disease were included.

**RESULTS:** A total of 6 studies (282 patients) were reported with a mean age of 7.3 years (range 0.25–17 years). The stone size ranged from 1–30 mm. The mean SFR across the three studies was 85.5% (range 58–98%) after initial ureteroscopy with a postoperative stent inserted in 81.8% (range 66.7–98%). There were a total of 35 complications (12.4%), with the most severe complication being a Clavien class III. This included haematuria (n=6), post-operative UTI (n=11), ureteric perforation (n=4) and others.

**CONCLUSIONS:** Our review shows that FURSL for management of renal calculi in the paediatric population is an effective and safe procedure when compared to the more conventional methods. To keep improving outcomes, these procedures should be undertaken by experienced surgeons familiar with the difficulties encountered in the paediatric population.

**SOURCE OF FUNDING:** Nil

**MP11-09 ROLE OF SERUM C-REACTIVE PROTEIN IN PREDICTING SPONTANEOUS PASSAGE OF URETERAL STONES**

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**INTRODUCTION AND OBJECTIVES:** Most of the ureteral stones can pass spontaneously. The meticulous selection of
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patients who are candidates to be managed conservatively is based mainly on factors that characterize a stone as able or not able to pass spontaneously. Accordingly, we studied the role of serum C-reactive protein level in predicting spontaneous passage of ureteral stones.

METHODS: Prospective study conducted from May 2012 to April 2013 enrolled all the patients attending with ureteral colic. After initial evaluation and emergency management all patients were evaluated with plain X-ray abdomen or non-contrast computer tomography, ultrasound of kidney ureter bladder and serum C-reactive protein. Stone size was classified as < 5 mm, > 5 to < 10 mm and > 10 mm. Location as upper, mid and lower ureter. Patients were followed up on 2nd and 4th week to reassess presence/ absence of stone and location.

RESULTS: A total of 117 patients were evaluated. Mean stone size was 7.7 ± 2.87 mm. Difference of mean CRP level between patients who spontaneously passed stones and who could not expel was significant (p = 0.016). For increase of each mg/L of serum CRP odds of passing ureteric stone decrease by 14% (95% CI = 0.758 to 0.976). The stone passage rate for 1–5 mm, > 5 to < 10 mm and > 10 mm stone was 87.0%, 50.6% and 17.6% respectively.

CONCLUSIONS: CRP can well predict the spontaneous passage of ureteral stones. Its consideration in addition to other important factors, like stone size and location, would maximize the predictive ability. Further studies will help set the reliable cutoff value of CRP level.

SOURCE OF FUNDING: None

MP11-10 FACTORS DETERMINING RENAL IMPAIRMENT IN UNILATERAL OBSTRUCTION WITH A NORMAL CONTRALATERAL KIDNEY: A PROSPECTIVE STUDY

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INTRODUCTION AND OBJECTIVES: Obstructive uropathy is a condition commonly encountered in urology practice. Little is known about the conditions that aggravate renal impairment in unilateral ureteric obstruction (UUO). In this study we aim to evaluate all possible risk factors that can cause impairment of overall renal function in patients with UUO and a normal contralateral kidney using univariate and multivariate analysis.

METHODS: This is a prospective study of 90 patients. All patients were evaluated with a thorough history, physical examination and laboratory and radiologic investigations including renal function testing (RFT), urine analysis and culture, non-contrast computed topography (NCCT) and radionucleotide scan (RNS). Patients were divided into two groups according to their calculated creatinine clearance (MDRD) formula. Group I (favorable group) had a creatinine clearance of > 60 ml/min, while group II (unfavorable group) had a creatinine clearance < 60 ml/min. Data on patients’ past and present history, laboratory and radiologic investigations were evaluated.

RESULTS: The patients mean age ± SD was 38.8 ± 11.4 years. Group I included 54 patients (60%) while group II included 36 patients (40%). On univariate analysis, factors that were associated with overall renal function impairment were patients’ age, blood urea nitrogen level, use of non-steroidal anti-inflammatory drugs and presence of periureteric stranding. However, using multivariate analysis, only patients’ age sustained statistical significance in association with renal function impairment.

CONCLUSIONS: Patients’ age seems to be the most statistically significant predictor of overall renal function impairment in patients with UUO with a normal contralateral kidney.

SOURCE OF FUNDING: Hamad Medical Corporation

MP11-11 DRUG-ELUTING BIODEGRADABLE PLA STENT CONTAINING PPAR AGONIST: DRUG RELEASING AND ANTI-INFLAMMATORY PROPERTIES

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INTRODUCTION AND OBJECTIVES: Biodegradable urethral stents have been clinically used in the treatment of recurrent urethral strictures. In stent restenosis after optical urethrotyomy continues to be the main reason for treatment failure. Usually restenosis results from inflammation and the formation of urothelial hyperplasia at the stent area. Peroxisome proliferator-activated receptor (PPAR) ligands are in wide clinical use in the treatment of metabolic disorders. PPAR agonists have also been shown to attenuate inflammatory responses. In the present study we investigated the properties of a novel, PPARγ/α agonist muraglitazar-eluting polyactic acid (PLA) stent.

METHODS:RESULTS: Braided stents of 96t/4d PLA fibers were coated with muraglitazar in 50t/50d PLA and gamma sterilized. The elution rate of muraglitazar into PBS (pH 7.4, + 37°C) was studied by HPLC and 63% of the drug load was released during the first week. The mechanical resistance of muraglitazar coated stent in aqueous solution was slightly lower than that of reference stent during early time points, but the difference declined along time during the 4 months’ follow-up. Most importantly, muraglitazar maintained its anti-inflammatory properties during the manufacturing process of the stent as shown by reduced interleukin 6, tumour necrosis factor and monocyte chemotactic protein 1 production in human THP-1 macrophage culture.

CONCLUSIONS: The results encourage to continue the research and development of muraglitazar-eluting biodegradable stent. The anti-inflammatory effects of muraglitazar combined to biodegradable properties of PLA stent offer an interesting opportunity in the attempt to reduce the risk of in-stent restenosis in urethral stents.

SOURCE OF FUNDING: This study was supported by the Competitive Research Funding of the Päijät-Häme Hospital, Lahti, Finland and Tampere University Hospital, Tampere, Finland.

MP11-12 HYDROXYPROLINE METABOLISM IN MOUSE MODELS OF PRIMARY HYPEROXALURIA

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INTRODUCTION AND OBJECTIVES: Hydroxyproline (Hyp) metabolism is a major contributor to excessive oxalate production in the Primary Hyperoxalurias (PH) where glyoxylate metabolism is impaired. The objective was to determine the contribution of Hyp catabolism to urinary oxalate excretion in mouse models of PH: Agxt KO (PH Type 1), Grhpr KO (PH Type 2) and Hoga KO mice (PH Type 3).

METHODS: Agxt, Grhpr and Hoga KO mice were singly housed in metabolic cages and continuously infused with the stable isotope 15N13C5-Hyp. Using RNAi products (Alnylam® Pharmaceuticals) the impact of reducing the expression of the liver enzymes hydroxyproline oxidase (Hpox) and glycolate oxidase (Go) on 24 hour urinary oxalate excretion from Agxt KO animals was examined.

RESULTS: Measurement of 24 hour urinary 13C2-oxalate showed Agxt KO, Grhpr KO, and Hoga KO mice, excreted 6.1 fold, 3.8 fold, and 1.2 fold more 13C2-oxalate than wild type controls. When HPOX and GO RNAi products were administered simultaneously in Agxt KO mice urinary oxalate excretion decreased from 326 to 169 µg oxalate/mg creatinine, a 48 ± 8% decrease.

CONCLUSIONS: In conclusion, hydroxyproline catabolism contributes significantly to urinary oxalate excretion and RNAi induced knock down of Hpox and Go may prove a valuable therapy to reduce oxalate synthesis in the Primary Hyperoxalurias.

SOURCE OF FUNDING: NIH/NIDDK

MP11-13 ANALYSIS OF A COMMERCIAL KIDNEY STONE PROBIOTIC SUPPLEMENT
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INTRODUCTION AND OBJECTIVES: Calcium oxalate kidney stone patients may consider purchasing a probiotic supplement that may contain the oxalate-degrading intestinal bacterium Oxalobacter formigenes. O. formigenes is a non-pathogenic, anaerobic bacterium that commonly inhabits the human gut and degrades oxalate as its major energy and carbon source. The potential relationship of this organism to intestinal oxalate balance, urinary oxalate excretion and calcium oxalate kidney stone formation has attracted considerable attention. The objective of this study was to examine the levels of Oxalobacter formigenes in a probiotic supplement marketed by ™PRO Lab, Ltd, and to measure the ability of this preparation to degrade oxalate in vitro.

METHODS: Probiotic supplement and pure cultures of O. formigenes were cultured in a number of media containing oxalate. OD595 was used to measure bacterial growth and ion chromatography was used to measure loss of oxalate in culture media. O. formigenes specific and degenerate Lactobacillus primers to the oxalate decarboxylase gene (oxc) were used in PCR. Culture and 16S rRNA sequencing indicated the supplement contained viable Lactococcus lactis subsp. lactis (GenBank accession no. KJ095656.1).

CONCLUSIONS: The “kidney stone probiotic” supplement sold over the internet by ™PRO Lab, Ltd, did not contain identifiable O. formigenes or viable oxalate-degrading organisms, and is unlikely to be of benefit to calcium oxalate kidney stone patients.

SOURCE OF FUNDING: None

MP11-14 ACTIVATION OF OPIOID MU-2-RECEPTORS TO PROSTATIC RELAXATION BY LOPEROMIDE IN VITRO
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INTRODUCTION AND OBJECTIVES: The mechanism of opioid mu-receptors activation in improvement of benign prostatic hyperplasia is obscure. We used loperamide to identify the subtype of opioid mu-receptors involved in prostatic relaxation and investigated the possible mechanism of this relaxation.

METHODS: Prostate strips were isolated from 12-week-old male Wistar rats for identification of isometric tension. Prostate strips were pre-contracted with either 1 µmol/L phenylephrine or 50 mmol/L KCl. Then, decrease of muscle tone was characterized after cumulative administration of loperamide 0.1 to 10 µmol/L into the organ bath for concentration-dependent observation. Specific blockers or antagonists were pre-treated to compare the changes of relaxation induced by loperamide.

RESULTS: Loperamide produced a marked relaxation in isolated prostates precontracted with phenylephrine or KCl in a dose-dependent manner. This relaxation was abolished by cyprodime, a selective opioid mu-receptor antagonist, but not modified by naloxonazine at the dose sufficient to block opioid mu-1 receptors. Moreover, the relaxation by loperamide was attenuated by glibenclamide at the dose sufficient to block ATP-sensitive K+ channels.

CONCLUSIONS: In a rat model, it suggests that prostatic relaxation induced by loperamide through the activation of opioid mu-2 receptors to open ATP-sensitive K+ channels.

SOURCE OF FUNDING: In part by a grant from Chi Mei Medical Center (CLFHR9829).

MP11-15 ARE CURRENT ANTIBIOTIC REGIMES EFFECTIVE AT PREVENTING INFECTION POST TRANSRECTAL ULTRASOUND PROSTATE BIOPSY?
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INTRODUCTION AND OBJECTIVES: The use of routine antibiotic prophylaxis for TRUS prostate biopsies is well established with Ciprofloxacin being the antibiotic of choice in the United Kingdom. However, studies show increasing numbers of quinolone resistant E.Coli infections following TRUS biopsy. We aimed to assess the effectiveness of alternative antibiotic regimes in preventing infection.

METHODS: A prospective single centre study was performed on all TRUS prostate biopsies over three separate time periods. During each period different antibiotic prophylaxis was used: 1st-Ciprofloxacin only (January-August 2011), 2nd-Ciprofloxacin and Amikacin (September 2011-July 2012), and 3rd-Ciprofloxacin and Ceftriaxone (August 2012-March 2013). We assessed the incidence of UTI, bacteremia and bacterial resistance in all cases.

RESULTS: In the 1st Ciprofloxacin only period, following 800 biopsies there were 19 (2.3%) UTIs, 9 (1.1%) of which were bacteremias. In the 2nd Ciprofloxacin and Amikacin prophylaxis period, following 843 biopsies there were 21 (2.5%) UTIs, 9 (1.1%) of which were bacteremias. In the 3rd Ciprofloxacin and Ceftriaxone prophylaxis period, following 498 biopsies there were only 7 (1.4%) UTIs, 2 (0.4%) of which were bacteremias. Ciprofloxacin resistant E.Coli was found in 7/11 (64%) samples
with Ciprofloxacin only, 9/13 (69%) with Ciprofloxacin and Amikacin and 2/3 (66%) with Ciprofloxacin and Ceftriaxone.

CONCLUSIONS: Increase in resistance rates of E.Coli to Ciprofloxacin supports a change in current practice for TRUS biopsy antibiotic prophylaxis. This study shows a decrease in the number of readmissions with UTI and cases of bacteremia with use of Ciprofloxacin and Ceftriaxone as prophylaxis. Use of this regimen has now been adopted in our institution, a timely move which we would recommend others to follow.

SOURCE OF FUNDING: None

MP11-16 IMPACTS OF CA9 GENE POLYMORPHISMS ON UROTHELIAL CELL CARCINOMA SUSCEPTIBILITY AND CLINICOPATHOLOGIC CHARACTERISTICS IN TAIWAN

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INTRODUCTION AND OBJECTIVES: Carbonic anhydrase 9 (CA9) is reportedly overexpressed in several types of carcinomas and is generally considered a marker of malignancy. The current study explored the effect of CA9 gene polymorphisms on the susceptibility of developing urothelial cell carcinoma (UCC) and the clinicopathological status.

METHODS: A total of 442 participants, including 221 healthy people and 221 patients with UCC, were recruited for this study. Personal information and characteristics collected from the study subjects using interviewer administered questionnaires. Medical information for the cases was obtained from their medical records, and included TNM clinical staging, lymph node involvement, and histologic grade. Whole-blood specimens were collected from controls and UCC patients. Four single-nucleotide polymorphisms (SNPs) of the CA9 gene were assessed by a real-time PCR with the TaqMan assay.

RESULTS: After adjusting for other co-variants, the individuals carrying at least one A allele at CA9 rs1048638 had a 4.75-fold (95% CI 1.204–18.746) increased risk of invasive cancer. Moreover, among the UCC patients with smoker, people with at least one A allele of CA9 polymorphisms (rs1048638) had a 4.75-fold (95% CI 1.204–18.746) increased risk of invasive cancer.

CONCLUSIONS: The rs1048638 polymorphic genotypes of CA9 might contribute to the prediction of susceptibility to and pathological development of UCC. This is the first study to provide insight into risk factors associated with CA9 variants in carcinogenesis of UCC in Taiwan.

SOURCE OF FUNDING: None

MP11-17 PATHOLOGICAL OUTCOMES IN MEN WITH PROSTATE CANCER WHO ARE ELIGIBLE FOR ACTIVE SURVEILLANCE

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INTRODUCTION AND OBJECTIVES: In order to prevent over treatment of prostate cancer and significant adverse effect after surgical intervention, active surveillance was suggested in low risk or very low risk patients. This study aimed to retrospectively analyze the adverse pathological results between candidates eligible for active surveillance.

METHODS: A total of 904 patients underwent robot-assisted laparoscopic radical prostatectomy at Taichung Veterans General Hospital, Taiwan, from 2005 to April 2014. One hundred and forty-one patients were eligible for active surveillance. Candidates for active surveillance were defined as low risk (T1c/T2a, prostate specific antigen 10 ng/ml or less, and Gleason score 6 or less) and very low risk (T1c, prostate specific antigen density 0.15 or less, Gleason score 6 or less, 2 or fewer positive biopsy cores, 50% or less cancer involvement per core) patients. Adverse pathological results were defined as Gleason sum more than 6, and non-organ-confined disease.

RESULTS: There were 141 patients eligible for active surveillance. One hundred and sixteen (82.26%, 116/141) patients had low risk disease and twenty five (17.73%, 25/141) patients had very low risk disease. The adverse pathological results of low risk disease were upgrading Gleason sum and non-organ-confined disease, 43.10% (50/116) and 29.31% (34/116), respectively. The adverse pathological results of very low risk disease were upgrading Gleason sum and non-organ-confined disease, 20% (5/25) and 20% (5/25), respectively.

CONCLUSIONS: We conclude that although active surveillance may prevent over treatment and significant adverse effect after surgical intervention, the risk of adverse pathological results should also be informed.

SOURCE OF FUNDING: None

MP11-18 NOVEL MULTI-SENSOR UMBRELLA PROBE FOR A MORE ACCURATE TEMPERATURE MONITORING DURING LOCO-REGIONAL CHEMO-HYPERTHERMIA IN BLADDER CANCER

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INTRODUCTION AND OBJECTIVES: Emerging evidence suggests that adjuvant hyperthermia with intravesical chemotherapy following transurethral resection of bladder tumour, reduces recurrence risk and progression. Hyperthermia activates physiological anti-tumoural mechanisms and improves chemotherapy agents effect. Maintaining a stable temperature range is crucial, however monitoring is usually inaccurate potentially affecting efficacy or causing side-effects. This is a preclinical evaluation of a newly designed probe with two independent phases to evaluate feasibility, safety and deployment.

METHODS: A novel umbrella-like multisensor probe was developed with three different prototypes. Using porcine models, probe deployment was evaluated under different bladder fillings, using visual, laparoscopic and CT assessment. Temperature accuracy was tested by comparison with independent thermocouples. For the second phase, we obducted 20 bladders according ethics committee. In the first group, 10 bladders were filled with 60 cc. of saline solution, and hyperthermia performed according
our protocol. For the next 10 bladders, Mitomycin C was used. All bladders were analyzed, macroscopically and microscopically, to assess probe’s deployment and detect possible induced lesions. RESULTS: For the first phase, all the thermocouples yielded optimal bladder wall contact. The 7.5 cm radius thermocouple was the best adapting model in 60 cc of bladder filling. The temperature rise at the center of the bladder and at the bladder wall was reliably recorded by the probe. Second phase analysis showed both, macroscopic and microscopic assessment, no specific damage in any bladder wall areas during the procedure. The probe was well deployed in every attempt. CONCLUSIONS: This novel multi-sensor probe yields a safe and more accurate monitoring of the bladder wall temperature during loco-regional chemo-hyperthermia. SOURCE OF FUNDING: This work was supported by an unrestricted educational grant of TAKEDA.

MP11-19 MULTIPLE RENAL ARTERIES WITH AN ASCENDING UPWARD RENAL VEIN OF THE RIGHT KIDNEY - A CASE REPORT
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INTRODUCTION AND OBJECTIVES: As it is known, the majority of the human subjects has two renal arteries arising from the abdominal aorta, each will supply one kidney but in 30% of individuals certain variations can be found. Accessory renal arteries constitute the most common and clinically important of these variations. METHODS: For our case report, we are presenting one of these different variations that can be found in the blood supply of the kidneys. During dissecting the abdomen of an approximately 65 years old male cadaver, multiple variations were found. RESULTS: There were double right renal arteries with prehilar branching of the upper renal artery. We found also that the right renal vein ascended upwards obliquely before ending in the lateral aspect of the inferior vena cava. CONCLUSIONS: Variations in the renal vessels is relatively common especially multiple renal arteries, and can go smoothly without any abnormalities with the function of the kidney, but in some situations like renal transplantations, vascular reconstructions, and various surgical and radiological diagnostic techniques, the study of the anatomy of these variations is of crucial importance to decrease the patient morbidity during surgical procedures. SOURCE OF FUNDING: Nil

MP11-20 NECESSITY AND COMPLIANCE WITH VENOUS THROMBOEMBOLISM (VTE) PROPHYLAXIS FOR PATIENTS ADMITTED WITH RENAL COLIC’S: THE SOUTHAMPTON MODEL
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INTRODUCTION AND OBJECTIVES: Venous thromboembolism chemical prophylaxis in patients admitted to the hospital with renal colic is controversial. Our hospital policy is to administer VTE prophylaxis (elasticated stockings/flowtron boots and/or chemical thromboprophylaxis) to all urological emergencies unless there are contraindications to it. We wanted to analyse whether VTE assessment and thromboprophylaxis was done and whether our current system could be improved. METHODS: Data was analysed from electronic records for all patients admitted with renal colic between August 2012 and March 2013 in our University teaching hospital. RESULTS: 104 patients were admitted with acute renal colic (range: 21 to 82 years; Male:Female - 78:26). Of these VTE prophylaxis was received by 82 (79%). Of the remaining twenty-two (21%), 6 patients were discharged the same day. Four (4%) did not have VTE assessment and did not receive VTE prophylaxis either, despite staying overnight. The documentation for VTE assessment was not done on 24 (23%) patients. Since this audit, we have now implemented a traffic light system for electronic VTE assessment where all patients admitted acutely are highlighted as red and it turns into orange and green only if patients are assessed for VTE and/or electronically prescribed. Using a specially designed ‘Renal colic’ pathway, VTE assessment is now an integral part of all acute renal colic admissions. CONCLUSIONS: VTE assessment and prophylaxis is a necessary part of admitting any patient with acute renal colic. Medico legally documentation is as important as administration and with the new system in place it will make it easier to both assess and prescribe VTE prophylaxis. SOURCE OF FUNDING: None

MP11-21 INCIDENCE OF MULTIPLE HISTOLOGIES FOUND IN MASSES EXICED FOR RENAL CELL CARCINOMA: A MULTI-INSTITUTIONAL ANALYSIS
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INTRODUCTION AND OBJECTIVES: The use of renal biopsy has gained popularity as an adjunct in the work up of renal masses, particularly masses <4 cm suspicious for renal cell carcinoma (RCC). Our present study attempts to quantify the incidence of tumors that contain more than one histology as a means of determining the potential accuracy of renal biopsy. METHODS: In this IRB approved, multi-institutional study, a retrospective review of renal masses removed for RCC between the years of 1998–2012 was performed. Tumors were considered to be hybrid if more than one distinct histology was reported in the final pathology. Statistical analyses were completed with paired T-tests and Chi Squared analysis, where appropriate. RESULTS: Of the 427 tumors included in the analysis, 48 tumors (11%) displayed more than one distinct histology. A majority of the hybrid tumors were pT1a and were a combination of clear cell and papillary cell RCC. Twenty-three of the hybrid tumors were smaller than 4 cm in size. Of all of the hybrid tumors, seven showed a combination of a malignant and benign histology, 4 of which were less than 4 cm in size. CONCLUSIONS: The most prevalent stage of hybrid tumors was pT1a (42%). Approximately 1.6% of all tumors had both a benign and malignant component, and 2.1% of all tumors less than 4 cm in size had both a benign and malignant component. Based on this data, biopsy of renal masses is reliable for assessing
a malignant potential of a renal mass. Larger studies are needed to confirm our findings.

**SOURCE OF FUNDING:** None

**MP11-22 A NOVEL INTRACEREBRAL HEMORRHAGE-INDUCED RAT MODEL OF NEUROGENIC VOIDING DYSFUNCTION: ANALYSIS OF LOWER URINARY TRACT FUNCTION**

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**INTRODUCTION AND OBJECTIVES:** Neurogenic lower urinary tract dysfunction (NLUTD) is a major problem in patients with a variety of neurological disorders, and may lead to debilitating symptoms and serious complications such as chronic renal failure and recurrent urinary tract infections. Clinically, stroke is known to be associated with voiding dysfunction. However, lower urinary tract function evaluation in an intracerebral hemorrhage (ICH) model has not been reported. Therefore, we investigated lower urinary tract function in ICH-induced rats and compared the results to those obtained in normal rats. We also examined the effects of ICH on peripheral bladder function and central micturition centers.

**METHODS:** Adults female Sprague-Dawley rats were divided into two groups: a control group and an ICH-induced group. Induction of ICH in the hippocampal CA1 region was performed using a stereotoxic frame and type IV collagenase. For this study, we simultaneously investigated the effects of ICH on central micturition centers by determining the degree of neuronal activation (c-Fos) and nerve growth factor (NGF) expression and assessing voiding function (urodynamic study using cystometry).

**RESULTS:** Induction of ICH significantly enhanced bladder contraction pressure and time, while simultaneously decreasing voiding pressure and time. Moreover, c-Fos and NGF expression in the neuronal voiding centers was increased by induction of ICH compared to control rats.

**CONCLUSIONS:** We suggest that our ICH-induced NLUTD rat model is a more appropriate method to study NLUTD in stroke patients than a cerebral infarction model, because the former animal model more accurately reflects the nature of the hemorrhage in both type of stroke.

**SOURCE OF FUNDING:** None

**MP11-23 IS MICROSCOPIC HEMATURIA A RELIABLE WITNESS IN DIAGNOSIS OF RENAL COLIC?**

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**INTRODUCTION AND OBJECTIVES:** Urinalysis has been widely accepted as a standard test for diagnosis of renal colic with variable incidence reports. In this study we evaluated the incidence of microscopic hematuria in large cohort of renal colic patients presented to emergency room and underwent initial Helical CT examination and microscopic urinalysis.

**METHODS:** A total of 723 consecutive patients with renal colic due to ureteral stones were prospectively evaluated by immediate helical CT and concomitant microscopic urinalysis. Patients with UTI, pregnancy and anticoagulant were excluded. Correlation between microhematuria and stone size, site and side was assessed by Chai-Square test using SSPS software.

**RESULTS:** 619 (85.6%) were males and 104 (14.4%) were females. Helical CT was positive for stones in 720 (99.6%) and negative in 3 (0.4%) patients. Microhematuria was true positive in 89.3% (646) and false negative in 11.7% (77). Microhematuria was affected significantly by stone site and length (p value 0.001). Microhematuria was common with lower ureter stones (66.4%) than upper (24.14%) and middle ureter (9.4%). Hematuria was associated with stone size < 5 mm in 23% and stones 5–10 mm in 71.3% and in 5.6% of stones > 10 mm. There was no correlation between microhematuria and age, sex and side of the stone.

**CONCLUSIONS:** Microhematuria during attacks of renal colic has sensitivity of 89.3%. Hematuria is common with lower ureteral stones and the smaller the stone the more frequent microhematuria. Microhematuria alone in renal colic cases is an accurate and reliable test in diagnosis of ureteral stones in the majority of patients presented to ER.

**SOURCE OF FUNDING:** None

**MP11-24 VALUE OF SERUM CYSTATIN C AND MICRO-ALBUMINURIA IN EVALUATION OF ACUTE KIDNEY INJURY AFTER SHOCK WAVE LITHOTRIPSY**

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**INTRODUCTION AND OBJECTIVES:** Cystatin C is emerging as a biomarker superior to serum creatinine in prediction of acute kidney injury (AKI). The aim of this study is to evaluate possible AKI after single session of Shockwave Lithotripsy (SWL) by estimation of serum cystatin C, creatinine and microalbuminuria pre- and post-SWL session.

**METHODS:** 59 kidney units underwent one session of SWL for single kidney stones by using Modulith-SLX machine. Serum samples for cystatin C, creatinine and urine for creatinine were taken before and after SWL session and repeated after 7 days of the procedure. Statistical analysis was carried out by SPSS software using Chi-square, Mann-and Whitney U tests.

**RESULTS:** Serum creatinine was normal in 98.3% of patients pre and post-SWL except in one (1.7%). Microalbuminuria was detected in 18.6% (11) and 3.4% (2) of patients before and 7 days after SWL and was statistically significant (p = 0.002 and 0.026 respectively). The mean pre-SWL serum cystatin C was 0.88 ± 0.19 mg/l and increased significantly post ESWL to 1.06 ± 1.07 (p < 0.001). Cystatin C resumed its normal serum value after 7 days in all patients except in 2 who had high serum cystatin C pre-ESWL. There was positive correlation between microalbuminuria, serum cystatin C and co-morbidities.

**CONCLUSIONS:** There was transient rise in serum cystatin C possibly due to AKI after SWL. However, cystatin C resumed its normal serum level after 7 days of ESWL. Therefore, SWL is safe in patients without associated co-morbidity. Long-term follow-up and re-assessment of cystatin c and microalbuminuria will be essential after utilization of multiple sessions of SWL.

**SOURCE OF FUNDING:** Non
INTRODUCTION AND OBJECTIVES: Pouch stone is a common complication after urinary diversion. The microcomponents of pouch stones have not yet been defined. The aim of this study is to compare CT density, macro and microanalyses of pouch stones with renal stones.

METHODS: 12 pouch and 14 kidney stones were collected and underwent macro and microanalysis. Preoperative CT density was assessed. Each stone was divided into 2 equal portions. One portion was analyzed for macroanalysis by Fourier Transform Infrared spectroscopy (FT-IR). The other portion was analyzed by Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES). Statistical analysis was performed using SPSS.

RESULTS: There were no differences in the mean CT density between pouch and renal stones. FT-IR showed; Struvite (9), Dahlite (8) and Ca phosphate (5), while kidney stones were: Whewellite (8 stones), Uric acid (6), Dahlite (6) and Weddellite (5). ICP-OES microanalysis showed significant difference in the contents of the following elements; Arsenic, Barium, Potassium, Sodium, Nickel, Magnesium, Selenium, Phosphorous and Strontium (P value <0.001, 0.001, 0.008, 0.003, <0.001, <0.001, <0.001, 0.001, 0.001 respectively). Renal stones showed significantly higher concentration of 3 elements (As, Ni and Se) while pouch stones had higher concentration of 6 elements (Ba, K, Na, Mg P, Sr).

CONCLUSIONS: Kidney stones contain more heavy metals than pouch stones. Infectious stones are common after urinary diversion with less heavy metal components. This differentiation in heavy metals content may be due to the different mechanism of lithogenesis in both kidney and neobladder. Sr and Se seem to play a role in stone formation possibly by substitution of Ca.

SOURCE OF FUNDING: None
MP12 LAPAROSCOPIC SURGERY LOWER TRACT

MP12-01 THE APPLICATION OF CLOSING PPV BY LAPAROSCOPY IN OPERATION FOR PEDIATRIC CRYPTORCHIDISM

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INTRODUCTION AND OBJECTIVES: To evaluate the value of closing PPV by laparoscopy in operation for pediatric cryptorchidism.

METHODS: A retrospective review was performed by evaluating the data of pediatric patients with cryptorchidism treated by laparoscopy operation from August 2008 to February 2012. The incidence of PPV and cPPV was to be analyzed. The PPV and cPPV was to be closed. Operation time, hospital stay and complication were observed.

RESULTS: Among 42 cases with a median age of 36 months (range 1 to 14 years), 23 were left-sided (54.8%), 12 were right-sided (28.6%), and 7 were bilateral (16.6%). The cPPV rate was 35.7% (15/42). History of contralateral inguinal surgery was present in 5.7% (2/35) cases. PPV/cPPV was to be closed under the affected interior ring was constricted. The operation time was 109.9 to 51.4 minutes. The hospital days was 6.3 to 3.6. During a median follow-up of 3 years (1 month to 4.5 years), no atrophy of testis or metachronous hernia was detected on ultrasound examination. Neither incisional hernia nor adhesion of the intestine occurred.

CONCLUSIONS: Laparoscopic surgery for PPV/cPPV is safe, effective, and simple in the treatment of cryptorchidism, with excellent cosmetic outcomes, and the maximum preservation of the integrity of the groin.

SOURCE OF FUNDING: None

MP12-02 LAPAROSCOPIC RADICAL PROSTATECTOMY AFTER PREVIOUS TRANSURETHRAL RESECTION OF THE PROSTATE IN CLINICAL T1A AND T1B PROSTATE CANCER-A MATCHED-PAIR ANALYSIS

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INTRODUCTION AND OBJECTIVES: To analyze and compare surgical, oncological and functional outcomes of LRP in patients who incidentally diagnosed during TURP (Stage T1a, T1b) and without previous TURP.

METHODS: 472 men between January 1998 and December 2013 underwent LRP at our institution. Of these patients, conventional TURP had been performed in 35 patients before LRP (TURP group). A matched-Pair analysis was performed to identify 35 additional men without a history of TURP with equivalent clinicopathologic characteristics to serve as a control group (non-TURP group). Intraoperative complications, surgical, functional and oncologic outcomes were compared between two groups.

RESULTS: Both groups were similar with respect to patient age, Gleason score and preoperative PSA. Patients in TURP group were found to have significantly greater blood loss (231 vs...
INTRODUCTION AND OBJECTIVES: To compare the clinical oncology and continency between intrafascial nerve-sparing endoscopic extraperitoneal radical prostatectomy (NSELRP) and transvesical laparoscopic radical prostatectomy (NSTVLRP) for low-risk prostate cancer.

METHODS: Fifty cases with low-risk prostate cancer (PSA < 10 ng/ml, Gleason score < 7, positive cores < 3) from January 2011 to January 2013 were enrolled and divided into 2 groups: NSELRP and NSTVLRP. All the procedures in the two groups were performed laparoscopically and intrafascially. The number of pads and IIEF-5 score were recorded in this study. Moreover, the clinical features, the recovery of continence and potency, and the oncological results were compared between the 2 groups.

RESULTS: All the operations were successfully performed. Less operation duration (131.46 ± 20.68 VS 105.92 ± 26.21 min), catheterisation time (13.01 ± 1.64 VS 11.24 ± 1.17 days) and hospital stay (15.76 ± 4.65 VS 12.92 ± 4.29 days) were observed in NSTVLRP than in NSELRP (P < 0.05, respectively). Between the NSELRP and NSTVLRP groups, the continence rates were 52% VS 84% (P < 0.05), 87% VS 100%, 96% VS 100% at the removal of the catheter at 3 d, 30 d and 90 d postoperatively, respectively. The potency rates were 28% VS 48% (P < 0.05), 52% VS 64% and 68% VS 76% at 3 months, 6 months and 12 months postoperatively, respectively, with an IIEF-5 score ≥ 18. The postoperative complication (Clavien, grade II) rates were 40% VS 32% (P > 0.05, respectively). No cases demonstrated biochemical recurrence in both groups during a mean follow-up of 18 months.

CONCLUSIONS: Transvesical laparoscopic radical prostatectomy is feasible with promising continence function in those patients with low risk prostate cancer.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Obesity is a growing health problem worldwide, and data on risk of prostate cancer (PCa) in obese patients is inconsistent. Laparoscopic Radical prostatectomy (LRP) is one of the contemporary promising surgical option for organ confined PCa with comparable results. Herein, we investigated impact of body mass index (BMI) on functional and oncologic results of patients who underwent LRP.

METHODS: A total of 1224 patients with follow-up data (> 24 months) were enrolled. Patients were divided into 3 groups according BMI (kg/m2) as: normal (group 1); (BMI ≤ 25, n = 425), overweight (25 < BMI ≤ 30, n = 594) (group 2), and obese (BMI ≥ 30, n = 205) (group 3). Demographic, intraoperative, postoperative data with oncological outcomes were recorded. Impact of obesity on those parameters was evaluated, and statistical analyses were performed. Statistical significant p was p < 0.05.

RESULTS: Mean age was 63.8 ± 6.1 years. Mean follow-up was 43.1 ± 25.1 months. There were 425 (34.7%) patients in group 1, 594 (48.5%) patients in group 2, and 205 (16.8%) patients in group 3. Operation time, clinical stage, estimated blood loss were

SOURCE OF FUNDING: None
significant higher in group 3 than other groups (respectively; p<0.001, p=0.001, p=0.001). Bilateral nerve sparing rate, and bladder neck sparing rate were significant decreased in group 3 than other groups (respectively;p=0.001, p<0.038). Statistically significant higher pathological stage, tumour volume, positive surgical margin, and Gleason scores were determined in group 3 than other groups (respectively;p=0.023, p=0.018, p=0.009, p=0.028). However, there were similar urinary continence rates among groups, the rate of penetration with or without medication were significant low in group 3 than other groups (respectively;p=0.593, p=0.007).

CONCLUSIONS: LRP seemed safe and effective in obese patients with similar mean overall, cancer specific survival, complication, and comparable continence rates with normal weight patients, in long term.

SOURCE OF FUNDING: None

MP12-06 USEFULNESS OF THREE-DIMENSIONAL IMAGING SYSTEMS IN LAPAROSCOPIC RADICAL PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: Three-dimensional (3D) imaging systems are widely used in robotic surgery. However, their clinical usefulness during conventional laparoscopic surgery has not been investigated. We investigated whether the use of a 3D imaging system improves the surgical, oncological, and early continence outcomes of laparoscopic radical prostatectomy (LRP).

METHODS: Twenty-one consecutive patients who underwent LRP for localized prostate cancer were enrolled in this study. Ten patients underwent LRP using a 2D imaging system during the first half of 2013 (2D group), and 11 patients underwent LRP using a 3D imaging system during the last half of 2013 (3D group). We reviewed all patients’ medical records and intraoperative DVD videos. Baseline characteristics, total and segmented operation times, perioperative parameters, pathological findings, and postoperative urinary continence rates were compared between the two groups.

RESULTS: The mean total operative and urethrovaginal anastomosis durations were 339 and 68 minutes in the 3D group and 364 and 72 minutes in the 2D group, respectively; these differences were not statistically significant. The mean duration of bladder neck dissection decreased from 82 to 59 minutes with the use of a 3D imaging system (p<0.05). There were no statistically significant differences in pathological parameters, postoperative prostate-specific antigen levels, or early continence rates between the two groups.

CONCLUSIONS: We conclude that the use of a 3D imaging system during LRP may reduce the operative time of bladder neck dissection. 3D imaging systems may be more beneficial than 2D imaging systems.

SOURCE OF FUNDING: None

MP12-07 ENCOURAGING LONG-TERM ONCOLOGICAL OUTCOMES OF RADICAL PROSTATECTOMY FOR HIGH-RISK PROSTATE CANCER MANAGEMENT

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INTRODUCTION AND OBJECTIVES: To report the long-term oncological outcome associated with radical prostatectomy (RP) in a consecutive cohort of patients with high-risk prostate cancer (PC) and to identify the variables associated with disease progression.

METHODS: Between 1998 and 2006, a total of 239 patients underwent RP for high-risk PC. High-risk PC was defined as follows: prostate-specific antigen (PSA) level > 20 ng/mL, Gleason score 8–10, and/or clinical stage T2c–T4 disease. Biochemical recurrence (BCR) was defined as a postoperative PSA value ≥0.20 ng/mL and a confirmatory rise, or a postoperative PSA ≥0.20 ng/mL while receiving salvage treatment. Kaplan-Meier and multivariate cox regression analysis were used to determine BCR, cancer specific survival (CSS) and the significant predictors of BCR.

RESULTS: The median follow-up was 64 months. Organ-confined disease, seminal vesicle invasion and lymph node metastasis were reported in 46% (64% corresponded to pT3), 27% and 3%, respectively. The positive surgical margin rate was 29%. Overall, the predicted 5-year and 10-year BCR-free survival rates were 31% and 29%, respectively; and the predicted 5-year and 10-year CSS rates were 98% and 89%, respectively. After adjusting for other covariates, higher pathologic stage, positive nodes, positive surgical margins and Gleason 8–10 are significantly associated with BCR.

CONCLUSIONS: Our data support evidence that RP can result in encouraging long-term oncologic outcomes for the management of high-risk PC.

SOURCE OF FUNDING: None

MP12-08 IMPACT OF NEOADJUVANT CHEMOTHERAPY ON COMPLICATIONS OF MINIMALLY INVASIVE RADICAL CYSTECTOMY

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INTRODUCTION AND OBJECTIVES: Neoadjuvant chemotherapy (NC) before minimally invasive radical cystectomy (MIRC) is considered a standard of care in muscle invasive or recurrent, high-risk, non-muscle invasive bladder cancer. We evaluated the impact of NC on morbidity and mortality after MIRC.

METHODS: 135 patients underwent MIRC (laparoscopic, n = 100; robotic, n = 35) between 2007 and 2013, with at least 90 days of follow-up. Complications were analysed and graded according Clavien’s Classification. Logistic regression models were used to evaluate the impact of NC on post-operative complications. Kaplan-Meier methods with log rank test were used for cancer-specific survival probabilities and differences between each group (radical cystectomy with or without NC).

RESULTS: The median age of patients was 66 years and 86% had a Charlson index ≥2. Sixty-two out of 135 received NC (54.5% MVAC). Overall, 118 patients (87.4%) developed 179 complications, mainly of infectious (48.0%) or gastro-intestinal (21.2%) origin and most complications were grade 2 (n = 55). Three patients (none had NC) died before day 90 after cystectomy. NC had no impact on the incidence of post-operative
complications but was associated with a lower rate of positive nodes (p = 0.004) compared to patients without NC. In univariate and multivariate analysis, no factor was correlated with severity of complications (Clavien 2 or more). Median duration of follow-up was 17.2 months. Overall survival rates were 83% and 79% at 2 years in patients with and without NC, respectively.

CONCLUSIONS: NC does not have an impact on postoperative morbidity nor mortality. Longer follow-up is needed to evaluate the impact of NC on oncologic outcomes.

SOURCE OF FUNDING: None

MP12-09 LAPAROSCOPIC APPROACH FOR PERSISTENT MULLERIAN DUCT SYNDROME
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INTRODUCTION AND OBJECTIVES: Persistent mullerian duct syndrome (PMDS) is a rare form of internal male sexual development disorder. This pathological condition usually realized at prepubertal and pubertal ages of life. We present laparoscopic removal of mullerian structures and laparoscopy-assisted bilateral orchiopexy in adult man with PMDS.

METHODS: A 20 year old male patient presented for evaluation of bilateral undescended testes. Physical examination revealed a healthy man with fully-developed secondary sex characteristics and normal-sized penis but testes were not palpable in the scrotum and inguinal region. Hormonal evaluation demonstrated normogonadotropic normogonadism. Karyotype was 46, XY. Ultrasonographic evaluation showed a 30×29 mm structure that may be related with undescended testis at adjacent to right internal iliac vein. Diagnostic laparoscopy performed. Bilateral testes were seen intraabdominal region and connected with uterus and fallopian like structures. Uterus and fallopian tube like structures were separated from testes and prostate. Bilateral testes dissected from perineum laparoscopically and placed to the scrotum.

RESULTS: Operating time was approximately 160 minutes with estimated blood loss of 150 ml. Histopathological examination of the specimen was compatible with PMDS. The patient discharged 4 days after surgery. The convalescence was uneventful. Color doppler ultrasonography demonstrated good blood supply in the bilateral testes at second and fourth months of the surgery. The testes size were same as at operation time.

CONCLUSIONS: The laparoscopic removal of mullerian structures and bilateral orchiopexy in patients with PMDS, who have bilateral undescended testes, is a minimal invasive and valid treatment choice to the traditional surgery.

SOURCE OF FUNDING: None

MP12-10 COMPARATIVE OUTCOMES OF STUDER ILEAL NEOBLAGGER AND BRICKER ILEAL CONDUIT URINARY DIVERSION AFTER LAPAROSCOPIC RADICAL CYSTECTOMY: SEVEN-YEAR FOLLOW-UP OF 65 CASES
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INTRODUCTION AND OBJECTIVES: To explore the comparative outcomes of Studer ileal neobladder and Bricker ileal conduit urinary diversion after laparoscopic radical cystectomy.

METHODS: From September 2004 to June 2011, 29 patients underwent laparoscopic radical cystectomies with Bricker urinary diversion (Group 1) and 36 patients with Studer orthotopic ileal neobladder (Group 2). All operations were performed successfully under laparoscopy.

RESULTS: The mean follow-up was 42.5 (2–78) months in all, 45.6 (2–78) months in Group 1 and 38.2 (2–65) months in Group 2. Two groups were comparable in terms of risk factors, perioperative characteristics except operative time, pathological characteristics expect tumor size. The mean size of tumors in Group 1 was significantly larger than Group 2 (4.8 vs 2.7 cm, p = 0.008). The mean operation time in Group 1 was longer than Group 2 (422.2 vs 370.3 minutes, p = 0.02). No recurrence was found during follow-up in both groups. The daytime and nighttime continent rate was 75.0% and 82.8% in group 1 and 2 respectively in 3 months postoperatively (p = 0.04). The median survival time in Group 1 was 44.7 months, log rank p = 0.024, whereas longer than 42.2 months in Group 2.

CONCLUSIONS: There are no differences in terms of perioperative and oncologic results of Studer orthotopic ileal neobladder and Bricker conduit. However, the life quality of Studer orthotopic ileal neobladder is a bit more satisfactory.

SOURCE OF FUNDING: None

MP12-11 KNOTLESS LAPAROSCOPIC RADICAL PROSTATECTOMY: A PRELIMINARY EXPERIENCE
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INTRODUCTION AND OBJECTIVES: The dorsal venous complex (DVC) ligation and vesicourethral anastomosis (VUA) are the most challenging parts. OBJECTIVES: To examine the effectiveness of our knotless laparoscopic radical prostatectomy (KLRP) by comparing the unidirectional single running suture with the conventional DVC ligation and VUA during LRP.

METHODS: From December 2013 to March 2014, 25 LRPCs were separated into 2 groups: Group 1 of 9 knotless LRPCs and Group 2 of 16 conventional single-knot LRPCs. During KLRP, the DVC is sutured using a 1-0 1/2 circle barbed self-retaining suture with 3 bites at the same place, and the VUA is performed with a 15-cm 3-0 sutured using a 1-0 1/2 circle barbed self-retaining suture with one needle driver.

RESULTS: The mean operative time of 187.8 minutes, the mean VUA time of 26.0 minutes and the mean duration of catheter of 12.8 days were all shorter than 250.9 minutes, 43.9 minutes and 19.0 days in Group 2, respectively. There were no statistical significance in terms of the mean blood loss, DVC ligation time and postoperative hospital stay. No blood transfusion, open conversion was required. There were no statistical significances in terms of the complication rate, anastomosis leakage and positive margin rate. No patients suffer from major complications requiring re-operation or massive bleeding. The pathologic results showed pT1cN0M0 of 4 vs. 3, pT2cN0M0 of 5 vs. 12 in Group 1 and 2, and 1 pT3bN0M0 in Group 2.

CONCLUSIONS: The modified approach of KLRP could be a time saving and safe alternative by comparing to the conventional technique.

SOURCE OF FUNDING: None

MP12-12 ENDOGIA STAPLER IN DORSAL VEIN COMPLEX DECREASED POSITIVE MARGIN RATE AT THE APEX IN LAPAROSCOPIC RADICAL PROSTATECTOMY
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INTRODUCTION AND OBJECTIVES: To examine the effectiveness of our knotless laparoscopic radical prostatectomy (KLRP) by comparing the unidirectional single running suture with the conventional DVC ligation and VUA during LRP.

METHODS: From December 2013 to March 2014, 25 LRPCs were separated into 2 groups: Group 1 of 9 knotless LRPCs and Group 2 of 16 conventional single-knot LRPCs. During KLRP, the DVC is sutured using a 1-0 1/2 circle barbed self-retaining suture with 3 bites at the same place, and the VUA is performed with a 15-cm 3-0 sutured using a 1-0 1/2 circle barbed self-retaining suture with one needle driver.

RESULTS: The mean operative time of 187.8 minutes, the mean VUA time of 26.0 minutes and the mean duration of catheter of 12.8 days were all shorter than 250.9 minutes, 43.9 minutes and 19.0 days in Group 2, respectively. There were no statistical significance in terms of the mean blood loss, DVC ligation time and postoperative hospital stay. No blood transfusion, open conversion was required. There were no statistical significances in terms of the complication rate, anastomosis leakage and positive margin rate. No patients suffer from major complications requiring re-operation or massive bleeding. The pathologic results showed pT1cN0M0 of 4 vs. 3, pT2cN0M0 of 5 vs. 12 in Group 1 and 2, and 1 pT3bN0M0 in Group 2.

CONCLUSIONS: The modified approach of KLRP could be a time saving and safe alternative by comparing to the conventional technique.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: Positive surgical margins after radical prostatectomy are a significant predictor for biochemical failure, disease progression, and cancer mortality. To evaluate whether endGIA technique to staple the dorsal venous complex (DVC) leads to minimize positive margin rates (PMR), we retrospectively analyzed our experience.

METHODS: Between 2006 and 2013, 278 patients received laparoscopic radical prostatectomy (LRP). We excluded first 25 cases and 23 cases who received neo-adjuvant hormone therapy. We analyzed 50 cases with endoGIA (Group A), 230 cases without endoGIA (Group B). Median patient age was 65 years (IQR: 40–77) and median pre-operative PSA 7.4 ng/ml (IQR: 1.3 ~ 56.0). DVC was treated by endoGIA (COVIDIEN) in group A, or ligated by 3-0 vicryl in group B. There were no difference in PSA, clinical stage, Gleason score, pathological stage between two groups.

RESULTS: Pathological findings was pT2a 26%, pT2b 6.8%, pT2c 19%, pT3a 47%, pT3b 3.6% respectively. Mean observation period was 25.1 months. PMR was 20% in pT2, 38% in pT3a (p=0.015), in pT2 patients, PRM was 9% in group A, 39% in group B (p=0.019). PMR at apex was decreased from 9.43% to 3%. And also PMR at Base was decreased from 10.37% to 3%, PMR at lateral side 10.37% to 3%, respectively.

CONCLUSIONS: EndGIA technique to staple DVC might help to keep the PMR in LRP as low as possible. It helps PMR at apex, but also it will help later step of prostatectomy by increasing morbility of the prostate, which resulted decreased PMR at base and lateral side also.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: We compared the surgical and oncological outcomes of laparoscopic and open radical cystectomy for bladder cancer.

METHODS: From January 1999, 196 radical cystectomies were performed in our institute. One hundred and three cases were done by open procedure (ORC: Open Radical Cystectomy), on the other hand 93 were laparoscopically (LRC: Laparoscopic Radical Cystectomy). There was no significant difference between ORC and LRC in urinary diversion methods. Median follow-up were 49 months (LRC) and 78 months (ORC). The procedures of laparoscopic radical cystectomy were done by 4 ports method and bladder was extracted through a perineal wound in male or vagina.

RESULTS: Median operative time was significantly longer in LRC [487 min (LRC), 391 min (ORC)]. However, mean blood loss (670 ml, 1484 ml) were significantly less in the LRC. Post-operative oral intake (1 day, 5 day) was started significantly earlier and hospital stay (34 day, 49 day) were significantly shorter in the LRC. Rate of major postoperative complications were not significantly different between LRC and ORC, whereas the incidence were lower in LRC. The 5 year cancer-specific survival ratio in the two groups were comparable (LRC 85%, ORC 77%).

CONCLUSIONS: Laparoscopic approach provides the benefit of lesser blood loss in patients undergoing radical cystectomy. The oncological outcome is comparable to that of ORC. LRC is a useful and safer procedure.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: We observed the prognosis in those older than 75 year-old with intermittent-risk or low-risk prostate cancer who accepted laparoscopic radical prostatectomy.

METHODS: From June 2006 through September 2013, the population sample consisted of 13 patients. We retrospectively analyzed their functional outcome and cancer controlled rate. Pre-operative data including age, comorbidity, prostate specific antigen (PSA) level, clinical image stage, previous abdominal operative history, and the grade of American Society of Anesthesiologist (ASA) were recorded. The post operative information like PSA level, the results of continence rate, biochemical recurrence free rate and sexual function recovery rates were analyzed.

RESULTS: The ASA grade was graded 2 in 7 patients and 3 in 6 patients. The operating time was 161 mins and total blood loss amount was 173 ml. Only one patient needed blood transfusion during operation and one patient suffered from anal pain. No other complications were encountered during or post operation. Bilateral or unilateral nerve sparing surgery was performed in 69.2%. 23.1% patients were continent post removing Foley catheter immediately and 84.6% and 100% were continent in 6 and 12 months later. Only one patient did not reach Nadir level of PSA. There were 4 patients had biochemical recurrence and returned to Nadir level post adjuvant androgen deprivation therapy or radiotherapy. Potency rate was 38.5%. For all patients, the cancer-specific survival was 100% till now.

CONCLUSIONS: Definitive radical prostatectomy is a feasible treatment choice in the elderly. Longer follow-up is still needed to evaluate the disease specific survival rate.

SOURCE OF FUNDING: No funding source.

INTRODUCTION AND OBJECTIVES: We analyzed the clinical outcomes of total 263 cases of laparoscopic radical prostatectomy (LRP) at Kumamoto University Hospital.

METHODS: One hundred and three cases were done by open procedure (ORC: Open Radical Cystectomy), on the other hand 93 were laparoscopically (LRC: Laparoscopic Radical Cystectomy). There was no significant difference between ORC and LRC in urinary diversion methods. Median follow-up were 49 months (LRC) and 78 months (ORC). The procedures of laparoscopic radical cystectomy were done by 4 ports method and bladder was extracted through a perineal wound in male or vagina.

RESULTS: Median operative time was significantly longer in LRC [487 min (LRC), 391 min (ORC)]. However, mean blood loss (670 ml, 1484 ml) were significantly less in the LRC. Post-operative oral intake (1 day, 5 day) was started significantly earlier and hospital stay (34 day, 49 day) were significantly shorter in the LRC. Rate of major postoperative complications were not significantly different between LRC and ORC, whereas the incidence were lower in LRC. The 5 year cancer-specific survival ratio in the two groups were comparable (LRC 85%, ORC 77%).

CONCLUSIONS: Laparoscopic approach provides the benefit of lesser blood loss in patients undergoing radical cystectomy. The oncological outcome is comparable to that of ORC. LRC is a useful and safer procedure.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: The median operative time was 257 minutes (150–570 minutes). The median blood loss (with urine) was 525 ml (40–2900 ml). The blood transfusion rate was 0.38% (1/263). No open conversion case was observed. Positive surgical margins were found in 7.2% of patients (15/208) with pT2 tumors and 28.3% of patients (15/53) with pT3 tumors. The median catheterization time was 5 days (range 4–12 days). After a median followup of 18 months 11.8% (30/263) of patients had biochemical failure. The continence rates (no pads or pad for safety) at 1, 3, 6 and 12 months were 37.5%, 58.5%, 85.6%, and 92.2%, respectively. There was a significant difference in early continence between the non-nerve sparing group and the nerve sparing group at discharge, 1 and 3 months (P < 0.05). The total potency rates with unilateral sparing and bilateral sparing were 45.6% and 87.8%, respectively.

CONCLUSIONS: These data were satisfactory in oncological outcome, urinary continence and sexual function. Even in this ‘robotic era’, LRP is also an attractive treatment option for patients with localized prostate cancer.

SOURCE OF FUNDING: None

MP12-16 URETHROVESICAL ANASTOMOSIS DURING LAPAROSCOPIC RADICAL PROSTATECTOMY: SINGLE CENTER EXPERIENCE WITH THE FILBLOC® SUTURE

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INTRODUCTION AND OBJECTIVES: The anastomosis between the urethra and the bladder is a critical step after laparoscopic radical prostatectomy (LRP). We aimed to describe the technique and preliminary results with the use of the Filbloc® barbed suture to perform urethrovesical anastomosis (UVA) during LRP.

METHODS: A total of 25 UVA were performed by the same experienced surgeon. A single Filbloc® (2-0, 5/8 circle) device was used for the UVA. The initial throw was placed at the 3-o’clock position at the level of the bladder neck in an outside-in fashion. Then the suture was continued to construct the dorsal UVA plate.

RESULTS: The bladder catheter was removed on post-operative day 7 in 24 patients (96%) and on post-operative day 15 in one patient (4%). At a mean follow-up of 4.5 months there were no second catheterizations (Group A: MUL < 14 mm; Group B: MUL ≥14 mm), and the bladder catheter was removed on post-operative day 7 in 24 patients (96%) and on post-operative day 15 in one patient (4%). At a mean follow-up of 4.5 months there were no second catheterizations (Group A: MUL < 14 mm; Group B: MUL ≥14 mm), and the bladder catheter was removed on post-operative day 7 in 24 patients (96%).

CONCLUSIONS: Filbloc® suture represent an easy, safe and efficacious alternative for UVA during LRP.

SOURCE OF FUNDING: None

MP12-17 EFFECT OF PROSTATE VOLUME ON HISTOPATHOLOGICAL OUTCOMES IN PATIENTS AFTER LAPAROSCOPIC RADICAL PROSTATECTOMY

Zhang Fan1, Huang Yi1
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INTRODUCTION AND OBJECTIVES: To compare clinical characteristic and postoperative histopathological parameters in different prostate size and assess the effect of prostate volume on histopathological outcomes in patients after laparoscopic radical prostatectomy.

METHODS: We retrospectively evaluated 216 patients from 2006 to 2011 who were biopsy proved prostatic carcinoma and performed laparoscopic radical prostatectomy. All patients was divided into the small group (< 30 ml, 103 cases), intermediate group (30 ~ 60 ml, 71 cases) and large group (> 60 ml, 42 cases) according to prostate volume. Clinical variables included age, body mass index (BMI), preoperative PSA level, prostate volume (PV), percentage of positive needles, clinical stage, biopsy Gleason Score (GS). Histopathological parameters included pathological Gleason Score, upgrading or not compared to biopsy GS, pathological stage and surgical margins status. Preoperative clinical variables and postoperative histopathological parameters were compared among three prostate groups.

RESULTS: Patients with smaller prostates had lower PSA levels than those with intermediate and larger prostates (p < 0.001). They also had worse histopathological outcomes such as pathological GS (p = 0.034), upgrading of GS (p = 0.037), pathological stage (p = 0.025). 19.0% of patients in smaller prostate group had a positive surgical margin compare to the 33.8 and 35.2% in intermediate and larger prostate groups, but no significant difference (p = 0.152).

CONCLUSIONS: Men with smaller prostate had more high-grade cancer and more advanced disease after laparoscopic radical prostatectomy.

SOURCE OF FUNDING: None

MP12-18 RELATIONSHIP BETWEEN RECOVERY OF URINARY CONTINENCE AFTER LAPAROSCOPIC RADICAL PROSTATECTOMY AND PREOPERATIVE MEMBRANOUS URETHRAL LENGTH

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INTRODUCTION AND OBJECTIVES: To assess whether recovery of urinary continence after laparoscopic radical prostatectomy is associated with membranous urethral length on preoperative magnetic resonance imaging.

METHODS: 168 cases with pathologic confirmed prostate carcinoma were performed laparoscopic by a signal surgeon. Patients were categorized into two groups according to membranous urethral length (MUL) on preoperative magnetic resonance imaging (Group A: MUL < 14 mm; Group B: MUL ≥14 mm), and MUL was measured on coronal images as the distance from the prostatic apex to the entry of the urethra into the penile bulb. After surgery we recorded and analyzed recovery of urinary continence of patients at least one year.

RESULTS: In the 168 patients who underwent MRI preoperatively mean membranous urethral length was 14.6 (10.2–23.5) mm. Three months after surgery, group A had 77.8% and group B had 45.6% were completely continent (p = 0.018). Six months after surgery continence rate was 85.2% and 69.6%, one year was 92.6% and 86.7% for group A and B separately. There was a significant difference between group A and group B in the urinary continence curve (p = 0.045).

CONCLUSIONS: Shorter membranous urethra lengths is associated with significantly more slow return of urinary continence, especially for early recovery (3 months) of continence after laparoscopic radical prostatectomy.

SOURCE OF FUNDING: None
MP12-19 PRE-PERITONEAL LAPAROSCOPIC PARTIAL CYSTECTOMY WITH CYSTOSCOPY GUIDEDE FOR THE TREATMENT OF BENIGN BLADDER TUMOR

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INTRODUCTION AND OBJECTIVES: To evaluate the clinical value and feasibility of pre-peritoneal laparoscopic partial cystectomy with cystoscopy guideed in benign bladder tumor.

METHODS: 11 cases of benign bladder tumour underwent pre-peritoneal laparoscopic partial cystectomy. Guided with cystoscopy, we exactly resected tumor and sutured the bladder.

RESULTS: The produce was completed in all cases. Mean surgical time was 80 minutes and mean blood loss was 20 ml. There were no significant complications during both intraoperation and postoperation. Mean hospital stay was 4 days.

CONCLUSIONS: Pre-peritoneal laparoscopic partial cystectomy with cystoscopy guideed is a feasible technique as a treatment for benign bladder tumor. It has many advantages of minimal trauma, early recovery and shorter hospital stay.

SOURCE OF FUNDING: None

MP12-20 COMPARATIVE EVALUATION OF 3D AND 2D LAPAROSCOPIC RADICAL PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: To summarize the experiences of conducting the 3D laparoscopic radical prostatectomy and to compare the efficacy of 3D and 2D laparoscopic radical prostatectomy.

METHODS: We retrospectively analyzed the clinical data of 66 cases (from Mar. 2012 to Feb. 2014) who had undergone laparoscopic radical prostatectomy. There were 43 cases undergone 3D laparoscopic radical prostatectomy and 23 cases undergone 2D laparoscopic radical prostatectomy. Subsequently, we compared the mean operation duration, mean blood loss, mean hospitalization days and uroclepsia occurrence rate between the two groups.

RESULTS: 66 cases were performed with laparoscopic procedure. The mean operation duration was 95 min (from 65 to 125 min), mean blood loss was 60 ml (from 30 to 150 ml) and mean hospitalization duration were 8 days in 3D group. There were 7 cases with little uroclepsia (16.28%). We retained the neurovascular bundle in 27 cases, and the emission success rate of retaining rectile function 37.04%. The mean operation duration was 112 min (from 74 to 146 min), mean blood loss was 110 ml (from 66 to 196 ml) and mean hospitalization duration were 8.5 days in 2D group. There were 5 cases with little uroclepsia (21.74%). We retained the neurovascular bundle in 11 cases, and the emission success rate of retaining rectile function 27.27%. The pathologic exam in 66 cases demonstrated all the prostate cancer.

CONCLUSIONS: Compared with 2D laparoscopic, 3D laparoscopic radical prostatectomy could make anatomic compartments clearer, surgical separation more meticulous and suture more accurate. It diminishes haemorrhage in surgery and complication post surgery.

SOURCE OF FUNDING: Item of national key clinical department

MP12-21 COMPARISON OF OUTCOME BETWEEN ROBOTIC ASSISTED, LAPAROSCOPIC, AND OPEN RADICAL PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: To evaluate the pathological outcomes and recovery of continence of open (RRP), robotic (RARP), and laparoscopic radical prostatectomy (LRP) performed for the treatment of localized prostate cancer.

METHODS: We identified 265 patients who underwent surgery during 2004–2012 to treat localized prostate cancer in CMUH. Patients were divided into three groups. There are 95, 86 and 84 consecutive patients underwent RRP (group 1), RARP (group 2), and LRP (group 3). The prognostic value of the clinical parameters and pathologic factors were compared. Besides, the outcome of urinary continence were also retrospectively collected.

RESULTS: Differences between three groups were found in duration of Foley catheter placement and estimated blood loss (p = 0.000). Pathologic outcomes such as lymph node dissection number (p = 0.000) and positive surgical margin (p = 0.016) showed difference. When continence was defined as the usage of 0–1 pad per day after 12 months, there are boderline statistical difference (p = 0.066). The continence rates within one month were 10.5%, 27.9%, 25%, and within three months were 25.2%, 41.9%, 34.5%, respectively. Patient’s return of urinary continence had correlations with estimated blood loss (P = 0.014). Patients received nerve sparing would be a predictor of better continence rate (P = 0.043).

CONCLUSIONS: RARP demonstrated similar pathologic outcomes compared to RRP and LRP. Otherwise, RARP had advantage of shorten the duration of hospital day, less duration of Foley catheter placement and less blood loss while operation. The early continence was best in RARP and one year continence rate showed no difference between two groups.

SOURCE OF FUNDING: None

MP12-22 LAPAROSCOPIC RADICAL CYSTECTOMY WITH INTRACORPOREAL ORTHOTOPIC ILEAL NEO-BLADDER: TECHNIQUE AND CLINICAL OUTCOMES

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INTRODUCTION AND OBJECTIVES: To study the feasibility and safety of laparoscopic radical cystectomy with intracorporeal orthotopic ileal neobladder and to evaluate the role of endoscopic stapler for neobladder reconstruction.

METHODS: Fifty-five patients with bladder cancer undergoing surgeries were retrospectively analyzed. Extended pelvic lymph nodes dissection was performed before cystectomy. An ileal segment of 50 cm was harvested to reconstruct U-shape reservoir. The bottom of reservoir was anastomosed with the posterior
urethra. 25 patients underwent neobladder reconstruction by manual suturing and 30 patients by endoscopic stapler suturing.

RESULTS: The mean operative time was 346 min and mean neobladder reconstruction time was 230 min. The median EBL was 500 ml and 17 patients received intraoperative transfusion. Postoperative complications include two cases of urine leak, seven cases of pyelonephritis, four cases of incomplete bowel obstruction, one case of anastomotic stricture and one case of death. Endoscopic stapler suturing for neobladder reconstruction took significantly less operative time than manual suturing. While neobladder stones were found in two patients using staples suturing and the stones were removed cystoscopically. Functional outcomes of neobladder using two reconstructive methods were comparable.

CONCLUSIONS: Laparoscopic radical cystectomy with intracorporeal orthotopic neobladder is safe and feasible for experienced laparoscopic surgeon. Application of endoscopic stapler simplifies the surgical procedure while increases the risk of neobladder stone formation.

SOURCE OF FUNDING: None

MP12-23 VESICO-URETHRAL ANASTOMOSIS LOCATION IS ASSOCIATED WITH RECOVERY OF URINARY CONTINENCE AFTER LAPAROSCOPIC RADICAL PROSTATECTOMY.

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INTRODUCTION AND OBJECTIVES: In a previous report, the vesico-urethral anastomosis location (VUAL) visualized by routine postoperative cystography (CG) was correlated with early recovery of continence after open or laparoscopic/robot-assisted radical prostatectomy (Jeong et al., Int J Urol, 2011). This study was conducted to determine whether VUAL affects continence recovery rate in our laparoscopic radical prostatectomy (LRP) series.

METHODS: Between 2008 and 2013, 101 LRPs were performed, and among them 99 cases were analyzed. VUAL was determined by postoperative routine CG, and patients were divided into two groups: high group (n=89) designated the patients whose VUAL was located in above of the lower margin of the pubic symphysis, and the others were categorized into the low group (n=10). Continence recovery was defined as no pad use or one security pad per day. Cumulative continence recovery rates were calculated by the Kaplan-Meier method and the two groups were compared by using the log-rank test. Univariate and multivariate analyses were performed by Cox’s proportional analysis, and p<0.05 was considered statistically significant.

RESULTS: Mean continence recovery time was 354 and 67 days in the low and high VUAL groups, respectively (log-rank, p<0.001). To determine predictive factors for continence recovery, several parameters were analyzed, including age, BMI, prostate size, nerve-sparing technique, vesico-urethral anastomosis leakage, and VUAL. Multivariate analysis revealed low VUAL alone predicted worse continence recovery (odds ratio, 5.31; 95% confidence interval, 2.07–13.61; p=0.001).

CONCLUSIONS: Low VUAL showed strongly negative impact for recovery of postoperative continence.

SOURCE OF FUNDING: None

MP12-24 THE CORRELATION OF ULTRASONOGRAPHIC PARAMETERS OF THE SPERMATIC VEIN AND CLINICAL OUTCOME IN SUBFERTILE PATIENTS WITH LEFT VARICOCELE AFTER LAPAROSCOPIC VARICOCELECTOMY

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INTRODUCTION AND OBJECTIVES: To evaluate the value of ultrasonographic parameters of the spermatic vein in the scrotal, pampiniform plexus and inguinal levels in subfertile patients with left varicocele after laparoscopic varicocelectomy.

METHODS: Thirty subfertile male patients with left varicocele who received laparoscopic varicocelectomy were recruited for this study. Patients who had improved semen quality after surgery were assigned to group 1, and those who did not have were assigned to group 2. Peak retrograde flow (PRF) and maximal vein diameter (MVD) of the spermatic vein in the scrotal, pampiniform plexus and inguinal levels by color Doppler ultrasound (CDS) were evaluated before, immediately and 6 months after laparoscopic varicocelectomy.

RESULTS: Semen quality improved in 24 subjects (80%, 24/30). Subjects in group 1 had significantly higher volume (20.1±2.6 vs. 17.9±2.1 cc) and lower PRF (25.8±3.1 vs. 29.1±5.6 cm/sec) preoperatively than those who did not have. Patients in group 1 had lower PRF (17.6±2.1 vs. 20.8±2.6 cm/sec) and MVD (2.3±0.4 vs. 3.1±0.4 mm) at pampiniform plexus immediately after varicocelectomy than those in group 2. There was no difference of age, BMI, pre-op sperm quality, FSH, LH, testosterone, ST, and MVD between patients in group 1 and 2 preoperatively.

CONCLUSIONS: Subfertile patients with left varicocele who had lower PRF and higher testicular volume preoperatively and decreased PRF and MVD of the spermatic vein at pampiniform plexus would have better sperm quality immediately after laparoscopic varicocelectomy.

SOURCE OF FUNDING: None

MP12-25 TRANSVESICAL LAPAROSCOPIC SURGERY FOR COMPLETE DOUBLE RENAL PELVIS AND URETER

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INTRODUCTION AND OBJECTIVES: We report the performance of transvesical laparoscopic surgery in patients with complete double pelvis and ureter.

METHODS: The subjects include 8 patients with complete double pelvis and ureter who underwent transvesical laparoscopic surgery. There were 4 patients who had received ureterocleotomy (Group A) and 4 patients who had not (Group B). Patients in Group A had undergone ureterocleonection as initial treatment. Firstly, the ureterocleonection was resected, and two ureters were sufficiently detached as a combined ureteral complex. Ureterocleonection on the side of the bladder wall was sutured to the bladder neck. A submucosal tunnel was created, and according to the cross-trigonal technique, ureterocleonection was performed.

RESULTS: Median operative time was 210 min (range, 180–240 min). Median duration of cystostomy was 7 days (range, 5–10 days). Median hospital stay was 11 days (range, 8–14 days). There were 3 cases of complications, including 2 cases of urine leak and 1 case of pyelonephritis. No postoperative mortality was observed.

CONCLUSIONS: Transvesical laparoscopic surgery is a promising approach for complete double pelvis and ureter.

SOURCE OF FUNDING: None
was performed in two ureters as a combined ureteral complex. In patients in Group B, two ureters were sufficiently detached as a combined ureteral complex, and ureterocystoneostomy was performed as in Group A.

**RESULTS:** Group A, the mean age was 15.5 years (range: 2 to 34 years). The mean operation time was 294 minutes (242 to 346 minutes). The patients were discharged from the hospital on post-operative Day 5. In Group B, the mean age was 14.7 years (range: 2 to 48 years). The mean operation time was 197 minutes (150 to 237 minutes). The patients were discharged from the hospital on post-operative Day 3 on average. There were no intraoperative and postoperative complications in both Groups A and B.

**CONCLUSIONS:** By transvesical laparoscopic surgery, it is possible to perform radical surgery in patients with double pelvis and ureter using three small incisions.

**SOURCE OF FUNDING:** None

**MP12-26 PRE-PERITONEAL LAPAROSCOPIC PARTIAL CYSTECTOMY OF THE BLADDER PHEOCHROMOCYTOMA (WITH VIDEO)**

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**INTRODUCTION AND OBJECTIVES:** The objective of this study was to review the diagnosis and treatment of bladder pheochromocytomas.

**METHODS:** A 34-year-old male presented to our clinic with a 2-year intermittent history of dizziness, palpitation and chest distress after voiding. Apart from a slightly elevated plasma level of nor-epinephrine 1.957 pmol/ml (range 0.883–1.091); plasma epinephrine, dopamine and 24 hr urinary VMA were all within normal range. During cystoscopy examination, a 2 cm solid tumor was found protruding from the left posterior wall of the bladder. CT scan of urinary bladder revealed a solid mass within the left posterior wall.

**RESULTS:** A 4-port extraperitoneal approach was used. A small cystostomy was performed at the posterior aspect of the urinary bladder aiming to inspect the tumor area inside the bladder. The cystotomy was repaired, using a 2-0 absorbable suture in a single layer. Distension of the bladder with fluid at the completion of the repair showed no anastomotic leakage. Total surgical time (including laparoscopic excision of the tumor with bladder reconstruction) was 90 minutes. Estimated blood loss was less than 30 ml.

**CONCLUSIONS:** We report a case of pheochromocytoma of urinary bladder managed by LPC (pre-peritoneal approach). Potential advantages of this technique are lower post-operative morbidity, faster gastrointestinal function recovery and faster post operative recovery.

**SOURCE OF FUNDING:** None

**MP12-27 THREE TYPES OF INTRAVESICAL HEM-O-LOK CLIP MIGRATION AFTER LAPAROSCOPIC PROSTECTOMY**

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**INTRODUCTION AND OBJECTIVES:** Hem-o-lok clips are widely used for control lateral pedicles in laparoscopic or robot-assisted laparoscopic prostatectomy. Only few studies had reported Hem-o-lok clip-related complications. We reviewed our series and published case reports to classify three types of Hem-o-lok clip-related complications according to clinical course and presentations.

**METHODS:** We retrospectively identified six patients with Hem-o-lok clip-related complications from consecutive 750 patients who underwent robot-assisted laparoscopic prostatectomy from 2006 to 2014 by a single surgeon. Besides, we searched PubMed database for Hem-o-lok clip-related complications after laparoscopic prostatectomy.

**RESULTS:** The incidence of Hem-o-lok clip-related complications is 0.8% (6/750). A total of 22 patients were reported including six from our series. According to the clinical course and presentations, three types of complications could be classified. Type I complications result from erosion of Hem-o-lok clip over vesicourethral anostomosis. Obstructive low urinary tract symptoms develop two to eight months after prostatectomy due to bladder neck contracture. Long-term complications such as urethra stricture and urinary incontinence are concerned. Type II complications are similar to type I, but the erosion site of Hem-o-lok clip is far from the bladder neck. Only stone formation with gross hematuria occurs. Type III complications might result from migration of unretrieved loose clips during procedure. Patients complain of spontaneous expulsion of Hem-o-lok clips weeks after surgery.

**CONCLUSIONS:** Although the incidence of Hem-o-lok clip-related complications is relative low, type I complications with long-term sequelae are still concerned. We should minimize the use of Hem-o-lok clips adjacent to anastomosis and retrieve of any loose clips to reduce the complications.

**SOURCE OF FUNDING:** None

**MP12-28 ADDITIONAL ONE PORT ON PLANNED GIBSON’S INCISION WOUND FOR COMPLETE DISTAL URETER BLADDER CUFF EXCISION IN RETROPERITONEOSCOPIC NEPHROURETERECTOMY — PRELIMINARY REPORT**

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**INTRODUCTION AND OBJECTIVES:** Distal ureter bladder cuff (DUBC) excision is critical important in nephroureterectomy (NU) for upper tract transitional cell carcinoma (UTTCC), but the technique remains controversial. We introduce a modified method of managing DUBC in retroperitoneoscopic nephroureterectomy (RPNU) for UTTCC.

**METHODS:** 10 consecutive patients underwent RPNU using addition one-port method for DUBC. A 10-mm trocar was placed in the Gibson’s exision line, which wound be the extraction of specimen later. The scope was shifted from the 11th rib tip port anterior ward to subcostal port, which provide the visual field mimic to the transperitoneal approach. The additional 10-mm trocar in Gibson’s excision provides the nearest and most comfortable approach in dealing with DUBE. The distal ureter was pushed out of the bladder with well identification of the bladder cuff and occluded using a Hem-o-lok clip.

**RESULTS:** The visual field provided both retroperitoneal and pelvic extraperitoneal working space for complete NU and radical DUBC. The procedure was completed uneventfully in all cases. Seven days after surgery, no extravasation of urine was
noted. There were no extra port wound compared to previous retroperitoneoscopy NU. No complications directly related to this method were recorded.

**CONCLUSIONS:** This additional one port in Gibson’s wound seems to be a simple and effective method in managing the DUBC during RPNU for UTTCC, which provides a more clear visual field, a more close working space and keeps with the oncologic principle of preventing tumor cell spillage outside the bladder.

**SOURCE OF FUNDING:** Nil

**MP12-29 LAPAROSCOPIC RADICAL CYSTECTOMY RESOLVES THE ISSUE OF SURGICAL SITE INFECTION AS A POSTOPERATIVE COMPLICATION**

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**INTRODUCTION AND OBJECTIVES:** Surgical site infection (SSI) is one of the predominant postoperative complications in open radical cystectomy with urinary diversion or reconstruction. We compared the frequency of SSI in open radical cystectomy (O RCx) with that in laparoscopic radical cystectomy (L RCx).

**METHODS:** We retrospectively evaluated our L RCx database from June 2012. Data were analyzed for demographics and SSI. L RCx was done using 4 ports and an Alexis S laparoscopic system (Applied Medical, Rancho Santa Margarita, CA). Urinary diversion or reconstruction was done in an extracorporeal manner. Two cases with open conversion due to large amount of blood loss were excluded from this study. The SSI rates were compared with our previous reports on O RCx as an historical control.

**RESULTS:** Seventeen male and 5 female patients were included in this analysis. Their median age was 68 years (range: 51 to 83). The median operation time was 481 minutes (range: 334 to 633) and median blood loss was 543 ml (50 to 1410). There were no patients with SSI in this study.

**CONCLUSIONS:** Our previous data showed that SSI developed in 11.1 to 18.3% of patients after O RCx; however, the SSI rate in the patients with L RCx was much lower than that of the historical control. Although a limited number of patients were analyzed in this study, L RCx is a promising operative technique that can reduce the SSI rate efficiently.

**SOURCE OF FUNDING:** None

**MP12-30 INITIAL EXPERIENCE WITH LAPAROSCOPIC RADICAL PROSTATECTOMY**

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**INTRODUCTION AND OBJECTIVES:** We report the findings of 6 initial cases of patients who were treated using laparoscopic radical prostatectomy (LRP) following its introduction in our department in September 2013.

**METHODS:** The subjects consisted of 6 patients (mean age, 65.5 years) who underwent LRP between September 2013 and May 2014. The preoperative mean PSA level was 6.18 ng/ml. The clinical stage was cT1c in 5, cT2a in 1 patients. Preoperative hormone therapy was not performed in all patients. Preoperative peritoneal antegrade approach was used in all patients. The retroperitoneal antegrade approach was used in all patients.

**RESULTS:** The mean operation time was 300 minutes (223 ~ 349 minutes), and the mean bleeding volume was 325 ml (236 ~ 1038 ml). An indwelling urethral balloon catheter was used for a mean of 8 days (5 ~ 17 days). Pathological examination showed pT2c in 5, and pT3b in 1 patients. Complete continence was observed in 2 patients at 3 months after operation. Major complications were not observed.

**CONCLUSIONS:** LRP was thought to be a safe operation.

**SOURCE OF FUNDING:** None

**MP13-01 INTRAOPERATIVE INTERNET CONFERENCING AND REFERRAL OF ENDOSCOPIC IMAGES PHOTOGRAPHED AND TRANSMITTED BY SMARTPHONES**

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**INTRODUCTION AND OBJECTIVES:** Mobile phone-camera transmitted uro-radiographic images of emergency urological conditions were previously described by Arada et. al. (2006). An EndoscopeScope exclusively coupling iPhone 4S with modern endoscopes was developed by Sohn et. al. (2013). Objective of our study is to determine feasibility of intraoperative internet conferencing and referral of endoscopic images photographed by Android smartphones and transmitted using email or WhatsApp Messenger.

**METHODS:** Cystourethroscopic and ureteroscopic images were photographed from video monitors indirectly with Android smartphones or smartphones directly fitted with digiscoping universal adapters to endoscopes. Endoscopic images, brief text of history, physical exam and radiologic studies were transmitted via email or WhatsApp Messenger using internet for communication. Urology consultants, who are inside or outside the hospital, receive message notification with photographs and pertinent data of intraoperative referral. Intraoperative internet conferencing was achieved by texting urology consultants if they AGREE or DISAGREE to treat-case plan of urologist doing endoscopy. Urologist performing endoscopy makes treatment decision based on majority consensus of urology consultants.
RESULTS: There were 185 responses by 6 urology consultants from 47 images transmitted by Samsung or Sony Android smartphones intraoperatively through internet conferencing using email or WhatsApp Messenger. Urology consultants texted with AGREE in 157 (85%) and DISAGREE in 28 (15%). Using test of proportions, there was significant agreement of urology consultants, receiving transmitted images, with treatment plan of urologist performing endoscopy ($p = .0004$).

CONCLUSIONS: It is feasible to perform intraoperative internet conferencing and referral, using email or WhatsApp Messenger, of endoscopic images photographed from video monitors or through endoscopes by Android smartphones.

SOURCE OF FUNDING: None

MP13-04 MANAGEMENT OF BLADDER NECK CONTRACTURE POST ROBOTIC ASSISTED LAPAROSCOPIC PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: Bladder neck contracture (BNC) is an uncommon yet problematic complication of robotic assisted laparoscopic prostatectomy (RALP). Our aim is to describe experience in management and outcomes of post RALP BNC.

METHODS: Patients who underwent RALP by a single surgeon from 2005–2013 and a subsequent procedure for BNC were identified. Patient characteristics, pathology, operative and perioperative factors, and interventions were evaluated.

RESULTS: Nine patients had post-RALP BNC, with median follow up of 56.7 (31.0–87.6) months post RALP. 8 patients had localized disease; 1 had prior radiation. Four patients were former smokers and none were diabetic. 8 patients were overweight or obese, with mean BMI of 32.9 (25.0–44.8). BNC interventions included combinations of dilation, transurethral incision of BNC (TUIBNC), and steroid injection to scar tissue. Patients had a mean of 3.4 (1–6) procedures, with mean time to recurrence of 148 (14–352) days. 3 patients required endoscopic removal of hem-o-lock clips that migrated through the anastomosis. The salvage prostatectomy patient performed clean intermittent catheterization twice daily for calibration. 7 patients had TUIBNC related procedures as the
last follow up, at median of 36.8 (0–79.3) months after last BNC procedure.

CONCLUSIONS: We describe the management of 9 cases of post RALP BNC. BNC commonly recurs and dilation alone as initial treatment tend to have short time until recurrence while TUIBNC tends to be a component of durable treatment at medium follow up. We recommend a TUIBNC-centered procedure with removal of any foreign bodies as initial therapy in this setting.

SOURCE OF FUNDING: None

MP13-05 NEW TECHNIC FOR ORGANISED CLOT EVACUATION: TRANURETRAL RESECTION OF CLOT (TUR-C)

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INTRODUCTION AND OBJECTIVES: When the bladder is filled with clot there are many ways to drain it. The most common clot formation situation in the bladder is hemorrhagic cystitis. In this case, we present a hemorrhagic cystitis patient treated with new technique which is transureteral resection of clot.

METHODS: 22-year-old male patient who was treated for leukemia in hematology clinic was referred our clinic for hematoglob formation upon hemorrhagic cystitis. Despite repeated clot evacuation with catheter, hematoglob formation continued. Whereupon, the patient’s hematoglob was decided to drain surgically. During the cystoscopy it was observed that hematomata is organized. After it was understood that the hematomata seemed to be not discharged by conventional methods different evacuation technique was decided to apply. Organized hematoglob was resected using a resectoscope. Technique have proved to be successful. Unfortunately, widespread bleeding in the bladder mucosa was continued and open surgery was necessary to stop the bleeding.

RESULTS: Hematoglob formation can occur in many different situations. There are various types of techniques for hematoglob evacuation. Conventional techniques may not be enough for organized hematoma evacuation. In this kind of situations we think that our technique will be helpful to surgeon for clot evacuation.

CONCLUSIONS: Hematoma which can not be discharged with the classical methods is not common. However, when faced with such a situation our technique would be an alternative to open surgery.

SOURCE OF FUNDING: None

MP13-06 BILATERALE URETEROHYDRONEPHROSIS DUE TO CYSTITIS CYSTICA ET GLANDULARIS

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INTRODUCTION AND OBJECTIVES: Cystitis glandularis is a very rare benign proliferative lesion of the bladder which is characterized with mucus producing glands with in the mucosa and submucosa of urinary bladder epithelium. We present a rare case of cytitiscystica et glandularis, intestinal type.

METHODS: A 27 year old male patient presented with recurrent macroscopic haematuria and bilaterale loin pain. Bilaterale hydroureronephrosis and bladder mass in the bladder floor also demonstrated. Then a noncontrast computed tomography scan of the abdomen and pelvis performed for the purpose of showing no renal or ureteric calculi to account of hydronephrosis. A rigid cystoscopy revealed large massarising from the bladder neck, extending along the base and covering the bilaterale orifices neither of them were visible. Then transurethral resection of the mass was performed down to base and area fulgurated, bilaterale ureteral orifices couldn’t visualised after his mass resection also. Because of his increasing bilaterale hydronephrosis and loin pain, bilaterale percutaneous nephrostomy and followed a week later bilaterale JJ stents were placed via antegrade approach.

RESULTS: Histopathological examination of the specimen revealed cystitis cystica et glandularis, intestinal type, and there is no cystological atypia within the glands noted. His urethral catheter was removed postoperative 6th day and patient discharged. After six months of surgery patient controlled with rigid cystoscopy and much improved bladder was shown. The JJ stent in the bilaterale ureters were removed.

CONCLUSIONS: Cystitis cystica can be considered as a pre-malignant condition of the bladder and these patients will require long-term surveillance in the form of cystoscopic evaluation.

SOURCE OF FUNDING: None

MP13-07 CONTRIBUTION OF THE PIONEERS TO THE HISTORY OF LITHOTRITY

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INTRODUCTION AND OBJECTIVES: The presentation of the pioneers’ attempts to perform lithotry as an alternative to the dangerous perineal lithotomy, practiced for centuries for bladder stones.

METHODS: The review of the primary and the secondary sources referring to the most impressive achievement of 19th century in stone disease initiating the minimally invasive surgery.

RESULTS: The invention and the subsequent innovations of lithotptic instruments led to the performance of lithotry only in 19th century, because most surgeons supported lithotomy. Guruithuizen introduced his “stone drill” in 1813 and published the first treatise on lithotripsy. Civiale designed his trilabe, an instrument for grasping and drilling the stone (later modified as lithotrite) and performed the first lithotrity in February 1824. Leroy d’Etiolles based on the 16th century instrument “Alfon-sin” (designed by Alfonso Ferri to extract bullets from wounds) created the lithopirion. Heurteloup was the inventor of the “stone-breaker” and the “curved crusher with hammer” in 1832. Bigelow of Boston in 1878 introduced the “litholapaxy”, a new procedure that consisted of crushing the stone and evacuating the bladder from the fragments, using anesthesia (meanwhile discovered). Finally, the use of cystoscope (invented by Nitze in
INTRODUCTION AND OBJECTIVES: Lithotripsy has been the first minimally invasive surgical procedure which successfully succeeded the morbid and mortal lithotomy, owing to the skillful pioneers of Urology.

SOURCE OF FUNDING: None

MP13-08 METALLIC URETERAL STENT IN THE MANAGEMENT OF BENIGN AND MALIGNANT URETERIC OBSTRUCTIONS: FIVE YEARS EXPERIENCE

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INTRODUCTION AND OBJECTIVES: Reconstructive management of ureteric strictures has not been desirable with the multitude of risks. The emergence of metallic ureteral stents have enhanced treatment armamentarium by reducing the interval of stent change along with increased radial strength. Our five-year experience with the Resonance stents is reviewed through the assessment of patency rates and adversities in managing both malignant and benign strictures.

METHODS: Retrospective analysis of patients with Resonance stents insertions between 2009 and 2014 were carried out. Patients' demographics, reason for stent insertion, stent patency, occlusion rates and complications were recorded. Deterioration in renal function in patients was used to identify need for stent change.

RESULTS: Forty-four Resonance stents were inserted in 23 patients (13 males, 10 females) with mean age of 60 years (Range 34–79), of whom 9 had bilateral stents, 10 unilateral and 4 bilateral with re-insertions. Twenty-eight stents were inserted for malignant obstructions and 16 for benign obstructions. Mean follow-up was 23 months and the longest functioning stent was 58 months. Stent patencies in both groups were 75%. Mean interval of stent change due to obstruction was 15 months (Range 3–29 months). Complications include 5 recurrent urinary tract infections, 2 sepsis and 1 stent migration.

CONCLUSIONS: Resonance stent is an effective alternative to polymer-based stents for select patients with upper urinary tract obstruction. The potential advantages include greater tensile strength, allowing increased dwelling times. Our results demonstrated good stent efficacy in both malignant and benign ureteric obstructions with stringent monitoring of renal function warranted to prevent stent occlusions.

SOURCE OF FUNDING: None

MP13-09 THULIUM LASER VAPOENUCLEATION OF THE PROSTATE IN PATIENTS WITH EXCEPTIONALLY LONG PROSTATIC URETHRAS

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INTRODUCTION AND OBJECTIVES: Thulium laser vapoenucleation of the prostate (ThuVEP) is as an alternative to traditional transurethral resection of the prostate (TURP) and potassium-titanyl-phosphate (KTP) laser photo-selective vaporization of the prostate (PVP) in the treatment of prostate-related bladder outlet obstruction (BOO). The laser beam of ThuVEP is “end-firing”, as opposed to PVP and TURP, which are “side-acting”. We highlight the value of end-firing resection by presenting three patients with exceptionally long prostatic urethras.

METHODS: The mean age was 66 years. The first patient had metastatic prostate cancer with BOO, and TURP was attempted, but the cystourethroscope was too short to allow visualization of the bladder outlet due to intravesicle protrusion, hence TURP was aborted, and ThuVEP was used to create a channel towards the bladder neck before subsequent prostatic mass reduction. Given the above experience, ThuVEP was offered to the remaining two patients as primary treatment for benign prostatic hyperplasia (BPH) because pre-operative imaging suggested exceptionally long prostatic urethras.

RESULTS: BOO was alleviated in all patients. Mean urethral length was 7 cm, and the bladder neck could not be reached by cystourethroscope before ThuVEP in all patients. Mean OP time was 287 minutes. Mean duration of post-operative catheterization was 2.3 days. Mean duration of hospital stay was 2.3 days.

CONCLUSIONS: In patients with BOO requiring prostatic resection, if pre-operative images suggest exceptionally long prostatic urethras, ThuVEP should be considered to avoid failure of traditional TURP. Such patients may require a longer operative duration. A larger patient number is necessary to produce more conclusive results.

SOURCE OF FUNDING: None

MP13-10 A PROSPECTIVE COMPARISON BETWEEN NBI AND STANDARD WHITE LIGHT CYSTOSCOPY IN CASES OF NON-MUSCLE INVASIVE BLADDER CANCER

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INTRODUCTION AND OBJECTIVES: The trial aimed to assess the impact of narrow band imaging (NBI) cystoscopy in cases of non-muscle invasive bladder cancer (NMIBC). A single centre, prospective comparison to the standard white light cystoscopy (WLC) was performed.

METHODS: A total of 95 NMIBC suspected consecutive cases were enrolled. The inclusion criteria were hematuria, positive urinary cytology and/or ultrasound suspicion of bladder tumors. All patients underwent WLC and NBI cystoscopy. Standard resection was performed for all lesions visible in WL and NBI-TURBT for only NBI observed tumors.

RESULTS: The overall NMIBC and CIS patients’ detection rates were significantly improved for NBI (96.2% versus 87.2% and 100% versus 66.7%). Also, on a lesions’ related basis, NBI cystoscopy emphasized a significantly superior detection concerning the CIS, pTa and overall tumors (95.2% versus 61.9%, 93.9% versus 85.2% and 94.8% versus 83.9%, respectively). Additional tumors were diagnosed by NBI in a significant proportion of CIS, pTa and NMIBC patients (55.5% versus 11.1%, 26.5% versus 10.2%, 30% versus 10% and 30.8% versus 10.3%) More over, pathologically confirmed positive tumoral margins secondary to white light TURBT were found at the NBI control in 10.3% of the cases. The postoperative treatment was significantly improved due to NBI results (16.7% versus 5.1%).

SOURCE OF FUNDING: None
CONCLUSIONS: NBI cystoscopy represents a valuable diagnostic alternative in NMIBC patients, with significant improvement of tumor visual accuracy as well as detection. This approach provided a substantial amelioration to the bladder cancer therapeutic management.

SOURCE OF FUNDING: None

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MP13-11 LASER ENDOUROTEROTOMY FOR URETEROVESICAL OBSTRUCTION IN PATIENT WITH RENAL TRANSPLANTATION

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INTRODUCTION AND OBJECTIVES: Ureteral obstruction was seen 2 to 10% of all renal transplant recipients. The treatment of ureteral obstruction in transplanted kidney is highly controversial. However open surgery for the treatment of ureteral obstruction is effective, it require long and dismal convalescence. Herein, we reported Holmium:YAG laser endoureterotomy procedure for the ureterovesical anastomotic obstruction after renal transplantation surgery.

METHODS: A 28 year old male patient, who has renal transplantation history 2 months ago, referred for left loin pain that began approximately 5 weeks ago and increased creatinin level. Severe left ureterohydronephrosis on his transplanted kidney revealed by ultrasonography. Urgently percutaneous nephrostomy applied. Neoureterovesical obstruction demonstrated by antegrade pyelography. During cystoscopy, transplanted kidney’s orifice couldn’t seen because of surrounding nonabsorbable sutures and aberrant tissue which located on neoureterovesical anastomosis site. Then sterile indigo-carmine applied via his nephrostomy tube antegradeley and neoureterovesical orifice visualized. After a 6 Fr D-J stent placed antegradely. One month later, the obstructive part of ureteral orifice incisioned and aberrant tissue ablated by Holmium:YAG laser with the aid of previously placed D-J stent.

RESULTS: Operation was tooked 30 minutes. Patient was discharged 4th day of surgery. D-J stent will be removed at the 12th weeks of surgery. Postoperatively decreased creatinin level was found in his blood results and symptoms were resolved immediately.

CONCLUSIONS: Holmium:YAG laser is a part of modern endourological procedures and it may be a minimal invasive and valid treatment choice for the patients with ureterovesical obstruction after renal transplantation surgery.

SOURCE OF FUNDING: None

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MP13-12 MALIGNANT MELANOMA METASTASIS TO PROSTATE AND BLADDER

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INTRODUCTION AND OBJECTIVES: Prostate or bladder metastasis of the malignant melanoma (MM) is extremely rare in the literature. Here, we present the first case of MM that metastasized to the both prostate and bladder simultaneously.

METHODS: A 58 year old male patient presented with recurrent painless gross haematuria and lower urinary tract symptoms for 3 months. He had a history of umbilical MM 2.5 years ago. He was responded to interferon treatment for 2 years until his lung metastasis had occurred. He also had prostatic enlargement revealed by digital rectal examination. Ultrasonographic evaluation demonstrated hypoechic segmental lesions occupied almost whole prostate/bladder and bilateral hydroureteronephrosis. Magnetic resonance imaging images revealed prostatic/bladder metastasis and pelvic and paraaortic lymph adenopathy. Transurethral resection of prostate and bladder was performed for moderating his symptoms.

RESULTS: Total operating time was approximately 60 minutes with estimated blood loss of 100 ml. Histopathological examination of the specimen revealed prostate and bladder metastasis of MM simultaneously. His urethral catheter withdrew post-otherwise at 4th day. His symptoms partially improved after surgical procedure. However, in postoperative 7th day, serum creatinine level increase from 1.5 to 3.5 mg/dl. Bilateral nephrostomies performed and creatinine level decrease to 1.5 mg/dl.

CONCLUSIONS: Systemic metastasis of MM usually related with poor survival rates. Palliative interventions such as transurethral resection of prostate/bladder and urinary diversion may improve symptoms.

SOURCE OF FUNDING: None

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MP13-13 NBI IMAGING AND BIPOLAR ELECTROSURGERY IN LARGE NON-MUSCLE INVASIVE BLADDER TUMORS – AN EVIDENCE-BASED EVALUATION OF A HYBRID APPROACH

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INTRODUCTION AND OBJECTIVES: A retrospective study evaluated a multi-modal approach (narrow band imaging–NBI cystoscopy and bipolar plasma vaporization–BPV) when compared to the standard protocol (white light cystoscopy–WLC and transurethral resection of bladder tumors–TURBT).

METHODS: 260 patients with at least one bladder tumor over 3 cm were included in the trial based on abdominal ultrasound, contrast CT and flexible WLC. 130 patients underwent conventional and NBI cystoscopy followed by BPV while standard WLC–TURBT was applied in a similar number of cases of the second arm. Monopolar Re-TUR was performed at 4–6 weeks after the initial intervention. The follow-up protocol included abdominal ultrasound, urine cytology and WLC performed every 3 months for 2 years.

RESULTS: The BPV related obturator nerve stimulation, bladder wall perforation, hemoglobin level drop, postoperative bleeding, catheterization period and hospital stay were significantly reduced. NBI superiority versus WLC was established regardless of tumor stage (CIS–95.3% versus 65.1%; pTa–93.3% versus 82.2%; pT1–97.4% versus 94%; overall NMIBT–95% versus 84.2%). Significantly lower overall (6.3% versus 17.4%) and primary site (3.6% versus 12.8%) Re-TUR residual tumors’ rates were described in the NBI-BPV group. The 1 (7.2% versus 18.3%) and 2 (11.5% versus 25.8%) years’ recurrence rates were substantially decreased for the combined approach.

CONCLUSIONS: NBI cystoscopy significantly improved the NMIBT diagnostic accuracy. BPV displayed higher surgical
efficiency, lower morbidity and faster recovery. The combined technique offered a reduced residual tumors’ rate as well as decreased 1 and 2 years’ recurrence rates.

**SOURCE OF FUNDING:** None

**MP13-14 SHOULD THERE BE TIME TARGETS FOR THE MANAGEMENT OF URINARY STONE PATIENTS WITH INDWELLING STENTS?**

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**INTRODUCTION AND OBJECTIVES:** Patients with urinary stone disease languish on waiting lists. They are often young and suffer morbidity and unemployment. Stone disease leads to sepsis, loss of renal units and even death. We aimed to assess readmission rates and associated morbidity for patients with stents insitu secondary to stone disease.

**METHODS:** Over a 12-month period from November 2012, 692 patients totalling 1114 admissions were admitted to our unit with a coded diagnosis of renal colic. Of the 692 individuals, 378 first presented as an emergency. The emergency admissions were followed up with readmission rates and time to treatment analysed.

**RESULTS:** Of the 378 emergency presentations, 78 were admitted between 2–8 times. The total number of admissions for this group of 78 patients was 248. The average time interval was calculated from first emergency presentation to date of first elective treatment (52.3 days (range 2–281)) and from date of first emergency presentation to date of last treatment (63.6 days (range 2–281)). 401 working days were lost.

**CONCLUSIONS:** The management of patients with urinary calculi in the United Kingdom needs serious reconsideration. We propose patients with calculi, especially those with indwelling stents, have specific time-targets for their management. Targets will provide improved service to patients, many of who are of working age. The increased morbidity from stents causes multiple re-admissions leading patients to take forced time off work with job loss and loss of income in very competitive times. Creating a pathway for these patients will also reduce increased costs of re-admissions to already overburdened health services.

**SOURCE OF FUNDING:** None

**MP13-15 SHOULD STERILE GLOVES BE USED FOR OUTPATIENT CYSTOSCOPY?**

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**INTRODUCTION AND OBJECTIVES:** Although sterile technique for outpatient cystoscopy continues to be recommended, studies supporting this practice have been lacking. Using clean nonsterile gloves rather than individually packaged sterile gloves for cystoscopy in the urological outpatient department may result in cost and time savings. This study was designed to determine whether the rate of symptomatic urinary tract infection (UTI) after cystoscopy is comparable using clean nonsterile gloves versus sterile gloves.

**METHODS:** A total of 1105 consecutive outpatients were entered into a retrospective study. All patients underwent cystoscopy by using sterile (369 patients) or clean nonsterile gloves (736 patients) after they submitted a voided urine sample for urinary sediment.

Patients underwent flexible cystoscopy and received no antibiotics immediately before or after cystoscopy. The end point was incidence of febrile UTI within 30 days of cystoscopy. Febrile UTI was defined as temperature >38°C and miction pain.

**RESULTS:** Of the 1105 patient cystoscopies, 13 (1.18%) patients developed febrile UTI ≤30 days after cystoscopy-10 (1.36%) patients in sterile glove group and 3 (0.81%) patients in nonsterile glove group (p = 0.42). All UTIs resolved in ≤12–24h with oral antibiotics. None of the patients was admitted for bacterial sepsis. The significance of increased risk of UTI in nonsterile glove group (p = 0.03) showed the rate of epithelial cells (p = 0.01), and potential hydrogen (p = 0.03) in urine sediment before cystoscopy was the significant predictor of the incidence of febrile UTI.

**CONCLUSIONS:** This study suggests to the contention that clean, nonsterile gloves are safe for use in the outpatient flexible cystoscopy, at a significant cost savings.

**SOURCE OF FUNDING:** None

**MP13-16 SURGICAL DURATION OF ENDOSCOPIC UROLOGIC PROCEDURES: SIXTY MINUTES AND BEYOND**

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**INTRODUCTION AND OBJECTIVES:** Increased operative time in open surgery is historically associated with a greater risk of morbidity. Endoscopic management of urologic disease is believed to ameliorate some of these risks. There is a paucity of information defining the relationship between endoscopic operative times and complications. We sought to define the increase in post-operative risk with longer procedure time in endoscopic urologic surgery.

**METHODS:** Using the National Surgical Quality Improvement Program database from 2006–2011, the ten most common endoscopic urological procedures were isolated for a total of 13,328 patients. Surgical time was divided into 30 minute intervals. A bivariate screen of 48 variables was conducted to assess potential confounding variables. Multiple logistic regression was then used to quantify the risk-adjusted relationship between surgical duration and medical complication rate. A subgroup analysis of the 6,864 TURBT, 4960 TURP cases was additionally conducted.

**RESULTS:** Every additional thirty minutes of endoscopic surgery was associated with a 20% increased odds of a medical complication. When assessing TURBT and TURP, we can confirm the widely held notion that TURP time of greater than 1 hour is potentially dangerous [TURP OR 1.4, p = 0.05, TURBT OR 1.4, not significant], but greater than 90 minutes is a superior cut off for the greatest increase in complications in both TURP [OR 1.8, (p = 0.01)] and TURBT [OR 2.2, (p = 0.002)].

**CONCLUSIONS:** As endoscopic urologic operative time increases, there is a significant and quantifiable increase in the risk of post-operative medical complications.

**SOURCE OF FUNDING:** None

**MP13-17 THE HISTORY OF LITHOTRIPTIC INSTRUMENTS**

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INTRODUCTION AND OBJECTIVES: To present the highlights in the invention and innovations of the lithotripters, the instruments that supported the minimally invasive surgery.

METHODS: The review of the primary and secondary sources describing the creation and utilization of lithotripters in the treatment of bladder stones as well as the study of photos and designs of these instruments from many medical museums.

RESULTS: For thousands of years before the 19th century, bladder stone removal was possible only by perineal lithotomy, a risky and without anesthesia operation. Instruments used in open lithotomies or inspired by other medical procedures - the Alfonsins - served as inspirations. Actually, the Litholepte of Fournier de Lempdes (1812), the Steinbohrer (stone drill) (1813) of Franz von Grutthuisen, the Trilabe and the Lithotrite of Jean Civiale, the Lithoprition of Leroy d’Etiolles (1822-1824), the Lithokonion of Isiah Luken (1825), as well as the Brise-coque (stone breaker) and the Percuteur (curved crusher with hammer) (1832) of Heurteloup are the important contributions to the development of lithotripsy. Furthermore, a new procedure, the Litholapaxy was performed by Henry Bigelow who added to the lithotritic system a rubber bulb with reservoir to completely evacuate the bladder (1878). Finally, the Lithotriptoscope by Hugh H. Young (1908) integrating the Cystoscope of Max Nitze with the Lithotrite completed the development of the instruments leading to modern lithotrites.

CONCLUSIONS: The evolution of lithotriptic instruments represents the successive efforts of surgeons to treat stone disease by lithotripsy avoiding any incision, and initiating, therefore, the minimally invasive surgery.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: We compared the safety and efficacy of standard transurethral resection of bladder tumor (TURBT) and 120 W 2-µm laser on patients with non-muscle invasive bladder cancer, (NMIBC), and to investigate long-term effects on tumor recurrence.

METHODS: 182 patients of non-muscle invasive bladder cancer who underwent either 120 W 2-µm laser (group I, n = 90) or TURBT (group II, n = 92) were analyzed respectively. The preoperative, intraoperative and postoperative clinical data were recorded and compared in two groups. All patients received intravesical chemotherapy with pirarubicin (30 mg/20 ml) for 8 weeks, beginning 1 week after surgery, followed with monthly maintenance therapy for 12 months. Three-year follow-up data of preoperative, operative and postoperative management were recorded.

RESULTS: There were no significant differences in gender, age, body mass index, location of tumor, number of tumor, and diameter of tumor between the two groups. Compared with group II, obturator nerve reflex, bleeding, postoperative bladder irritation and catheterization time were less frequently observed in group I (p < 0.05). There were no significant differences in first time to recurrence, overall recurrence or occurrence of urethral strictures.

CONCLUSIONS: The 2-µm laser resection method was more effective than TURBT in reducing rates of intra- and postoperative complications, but offered no additional benefit regarding tumor recurrence.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Since the introduction of endourology, open stone procedures has been performed with decrease frequency. Open stone removal procedures have been used in concurrent with other procedures (i.e. vaginal prolapse) or in cases with giant vesical stone. Here we present a case of multiple goblet stones in the bladder being treated with transurethral cystolitholapaxy.

METHODS: This 81 years old man with history of right staghorn stone, recurring UTI, BPH status post TURP, bladder neck contracture, tongue cancer status post excision and tracheostomy. He was admitted at Nephrology ward due to recurring UTI. KUB during admission showed multiple calcification at bladder region and Urological consultation was ordered. After general anesthesia, the patient was placed on lithotomy position. Transurethral cystolitholapaxy with pneumatic lithotripsy was performed and the remant stones washed out with toomey evacuator.

RESULTS: Electronic weighting scales were used to measure the weight of the total washed-out stone fragments (70 grams), then one unfragmented stone were weighted (0.4 grams). The total number of goblet stones was estimated by dividing the total weight of stone fragments by the single unfragmented stone (70 gms/0.4 gms = 175 stones). Total operative time was 200 minutes.

CONCLUSIONS: With the improvement in equipment, modern Urologist has moved away from open procedures and favoring endourological treatment for urolithiasis. Some advantages to endourological treatment include: the use of spinal or local anesthesia for lower urinary tract stones and use of natural orifice for stone extraction.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: We compared the safety and efficacy of 2-µm laser resection of prostate — a nation-wide database study.

METHODS: With the improvement in equipment, modern Urologist has moved away from open procedures and favoring endourological treatment for urolithiasis. Some advantages to endourological treatment include: the use of spinal or local anesthesia for lower urinary tract stones and use of natural orifice for stone extraction.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: Among all complications after TURP, urinary retention (UR) is the most bothersome. This article is aimed to analyze UR after TURP in Taiwan according to the claims of the National Health Insurance (NHI) program.

METHODS: From the NHI Research Database of Taiwan, we applied for all claims of patients who ever visited urology clinic during 2006 to 2010. Codes for three levels of TURP weight (group A: \( \geq 5 \text{~g} \), group B: \( 15 \text{~g} \), and group C: \( \geq 50 \text{~g} \)) were used for the definition of TURP. Those younger than 40 years old or who received TURP \(< 5 \text{~g} \) were excluded. Episodes of UR after TURP within 2 weeks were all examined. ICD-9 codes for diabetes mellitus (DM), cerebral vascular disease (CVA), spinal stenosis (SS), and herniated intervertebral disc (HIVD) were adopted for disease confirmation.

RESULTS: In group A, B, C, the number of TURPs were 12879 (40.2%), 16345 (51.0%), and 2817 (8.8%). Total UR after TURP rate was 7.94%, and 9.05%, 7.49%, and 5.40% in each group (P < 0.001). Age is also a significant predictor, with odd ratio of 1.024 (P < 0.001). Patients with Foley before TURP have higher post-TURP UR rate (9.46%) than those without Foley (7.04%), with odds ratio of 1.352 (P < 0.001). DM and CVA were significant risk factors, with odds ratio of 1.107 (P = 0.047) and 1.241 (P < 0.001).

CONCLUSIONS: In Taiwan, UR after TURP was related to the resection weight of prostate. Age, pre-TURP Foley indwelling, DM, and CVA were also significant predictors for post TURP UR, while SS and HIVD were not.

SOURCE OF FUNDING: No

MP13-21 FIRST-IN-HUMAN CLINICAL EXPERIENCE OF A NOVEL TREATMENT FOR BPH: IMAGE GUIDED ROBOTICALLY-ASSISTED WATERJET ABLATION OF THE PROSTATE

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INTRODUCTION AND OBJECTIVES: To report the initial clinical experience in males with symptomatic BPH undergoing ablation of the prostatic adenoma using a novel robotic water-jet technology (AquablationTM, PROCEPT BioRobotics, Redwood Shores, CA).

METHODS: The Aquablation System incorporates a console, a fixed robotic arm and a probe that delivers a high power saline stream.

RESULTS: 16 males with symptomatic BPH were enrolled and 15 males were treated with Aquablation. Monitored data are available on all 15 males treated. The mean age was 73 years (SD = 7.1, 59–86) and baseline prostate size of 54 g (SD = 17.4, 27–85). A median prostatic lobe was present in 6 of 15 patients. Mean operative time of 45 minutes (SD = 17.9, 25–94), treatment time of 8.2 minutes (6.5, 2.0–22.3). No cases of urinary incontinence or erectile dysfunction were reported. Other peri-operative complications were comparable to those observed with other available BPH therapies. Quality of life and functional outcomes are summarized in the following table. Variable Baseline n = 14* 1 month n = 14* 3 month n = 10* IPSS 23.1 (4.9, 16–33) 11.8 (6.8, 3–27) 7.8 (4.6, 3–19) Quality of Life 5.0 (0.9, 4–6) 2.6 (1.9, 0–6) 1.5 (0.8, 0–3) Qmax (ml/s) 8.6 (2.0, 4.8–12.1) 13.8 (6.1, 7.5–27.9) 16.3 (5.4, 9.4–26.0)

*Matched patients. One patient was not available for follow up at 1-month.

CONCLUSIONS: The preliminary results from this initial study show promise for this treatment as a potential ablative treatment option for BPH. Further patient data will be required to validate this early clinical experience.


MP13-22 TEMPRO BIPOLAR RF TREATMENT FOR BPH: A NON-SURGICAL APPROACH

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INTRODUCTION AND OBJECTIVES: TURP has remained the “gold standard” of surgical treatment for BPH. However, patients and doctors are seeking for alternative a less invasive outpatient procedures. The purpose of BPH treatment is to alleviate the symptoms, together with reducing prostate’s size. Nowadays, TUNA, microwave and RF treatment are used for outpatient treatment of BPH. We decided to use Tempro Bipolar RF Therapy and estimated the efficacy of this method.

METHODS: 45 men between the ages of 53–77 years participated in the study. The average prostate volume was 54 cm3 (31.8–85.15). Average Q max was 8.6 ml/sec (3.8–13.1), Q av was 4.3 (1.3–8.1), average PVR was 59 ml (0–210 ml) Every patient filled IPSS questionnaires, however we didn’t include those in the protocol, because all of them were subjective and discrepant. All patients underwent 1 hour treatment with Tempro, with temperatures between 48–55 °C. The follow-up period was 6 months from treatment.

RESULTS: Prostate volume reduced - 21% Q max increased - 60% Q av increased - 60% PVR reduced - 57% The results are the evidence for the efficacy of Tempro Bipolar RF therapy for BPH. This method is a good and viable alternative for patients who are contrindicated for TURP or are unwilling to have surgery.

SOURCE OF FUNDING: None

MP13-23 THE EXPERIENCES OF TRANSURETHRAL RESECTION OF THE PROSTATE FOR RESECTED TISSUE WEIGHT GREATER THAN 100 GRAMS

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INTRODUCTION AND OBJECTIVES: To present our experiences of transurethral resection of the prostate (TURP) for resected tissue weight greater than 100 grams.

METHODS: We retrospectively evaluated 13 patients treated with TURP for benign prostatic hyperplasia and all of them had resected tissue weight greater than 100 grams. Preoperative
parameters were prostate volume, International Prostate Symptom Score (IPSS), Quality of Life score (QoL), maximal urinary flow rate (Qmax) and post-void residual urine volume (PVR). Operative time, resected tissue weight, blood transfusion, post-operative electrolytes, and all complications were recorded. All patients had regular 3-month follow-up postoperatively.

**RESULTS:** The mean operative time was 109.4 ± 12.4 minutes. The days of catheter removal were 3.3 ± 0.5 days and admission days were 5 ± 0.3 days. The complications included urethral stricture over the meatus in 1 patient (7.6%), and/or postoperative serum PSA level. There was no difference in IPSS scores, Qmax, QoL or PVR (p < 0.01).

**CONCLUSIONS:** Our results were disappointing and revealed that, even with good technique, experienced urologists, and intact protective measures, attempting to resect more than 100 grams prostate tissue in one stage TURP had high morbidity. Due to these complications and enormous instability of hemodynamics, we failed to substantiate the safety, and suggest performing this surgery on highly selected patients.

**SOURCE OF FUNDING:** None

### MP13-24 INCIDENCE AND OUTCOMES OF PROSTATE CANcer IN HOLMIUM LASER ENucleation OF THE PROSTATE

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**INTRODUCTION AND OBJECTIVES:** Holmium laser enucleation of the prostate (HoLEP) has been recognized as an effective and durable transurethral surgery for benign prostatic hyperplasia (BPH). It has been reported that incidence of prostate cancer (PCa) in HoLEP was 7.5 to 9.7%. However, outcomes of PCa in HoLEP have never been seriously described. As such, we here investigate incidence and outcomes of PCa in HoLEP.

**METHODS:** From February 2005 through July 2013, 1007 patients with BPH received HoLEP at our institution. Preoperative serum prostate-specific antigen (PSA) was measured. If PSA was >4 ng/ml, transrectal ultrasound guided prostate biopsy was performed. All patients revealed no evidence of PCa, preoperatively. Incidence of PCa was calculated, and oncological outcomes were evaluated.

**RESULTS:** Incidence of PCa in HoLEP at our institution was 3.48% (35/1007 patients). Histopathological examination demonstrated Gleason score ≥8 in 3 patients, 7 in 7 patients, and ≤6 in 25 patients. Mean PSA decrease rate was 76.8% (range: –171.3 to 97.6%). Thirty-one patients (86.6%) received active surveillance. Remaining 4 patients (11.4%) received additional treatment for PCa according to tumor volume in histopathological examination, and/or postoperative serum PSA level. There was no evidence of disease progression.

**CONCLUSIONS:** Incidence of PCa in HoLEP was lower than previous report. Most of patients with PCa could receive active surveillance. Outcomes of PCa in HoLEP were quite better.

**SOURCE OF FUNDING:** None

### MP13-25 PATIENTS WITH SMALL PROSTATES AND LOW-GRADE INTRAVESICAL PROSTATIC PROTRUSION PRESENTING WITH BLADDER OUTLET OBSTRUCTION

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**INTRODUCTION AND OBJECTIVES:** High-grade intravesical prostatic protrusion (IPP) is closely related to bladder outlet obstruction (BOO), but many patients with grade 1 IPP are still obstructed. Our objective is to examine the natural history of patients with small prostate volumes (PV) and low-grade IPP presenting with obstruction, and their response to different management plans.

**METHODS:** Patients with grade 1a prostates (PV < 20 g and IPP < 5 mm) presenting with LUTS and obstruction on uroflowmetry (Qmax < 15 ml/s) were selected between 1999 and 2013. They were grouped according to management – watchful waiting (WW), medical therapy and surgery, and evaluated for pre- and post-treatment values of IPSS, uroflowmetry, and post-void residual urine (PVR). Cystoscopy images were also evaluated.

**RESULTS:** 52 patients with grade 1a prostates were obstructed on presentation. Their mean age was 64.7 years. Initially, 26 patients were managed with WW and 26 with alpha-blocker therapy. 6 (23%) patients on WW were eventually started on alpha-blockers due to deterioration of symptoms (mean IPSS increased from 8.7 to 13.5). There was no difference in IPSS scores, Qmax, QoL or PVR between WW and alpha-blocker therapy. 4 patients (13%) failed conservative treatment and required surgery. On cystoscopy, all of them had a high bladder neck/subcervical adenoma, which may explain the clinical progression requiring surgery.

**CONCLUSIONS:** We conclude that most patients with small PV and low-grade IPP presenting with obstruction can be managed with WW and alpha-blocker therapy, but there is no significant difference in symptomatic relief between them. A small number of patients experienced clinical progression requiring surgery, possibly due to presence of a subcervical adenoma.

**SOURCE OF FUNDING:** None

### MP13-26 EVALUATION OF PATIENTS WITH GOOD URINARY FLOW – THE USE OF INTRAVESICAL PROSTATIC PROTRUSION TO PREDICT BLADDER OUTLET OBSTRUCTION AND PROGRESSION TO TURP

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**INTRODUCTION AND OBJECTIVES:** Patients with BPH with good urinary flow may still have bladder outlet obstruction (BOO) on urodynamic study. We aim to investigate the use of intravesical prostatic protrusion (IPP) in predicting BOO in these patients, and to determine whether they eventually required TURP.

**METHODS:** 114 patients presenting with LUTS were recruited between 2001 and 2002. They were evaluated with IPSS, PSA, uroflowmetry, IPP and prostate volume (PV) using transabdominal ultrasound. Urodynamic studies (UDS) were also performed on all patients, and BOO was defined as detrusor pressure at maximum urinary flow (Pdet/Qmax) > 40 cm H2O. Patients
with good urinary flow (Qmax > 12.0 ml/s) were selected and followed-up to see if they eventually required TURP.

**RESULTS:** Out of 114 patients, 63 had good urinary flow-rate > 12.0 ml/s. Their mean age was 66.3 years. 14 of these patients had BOO, and the distribution of their IPP was as follows: Grade 1 (<5 mm): 11 out of 21 obstructed (52.4%), Grade 2 (5–10 mm): 16 out of 22 obstructed (72.7%), Grade 3 (>10 mm): 17 out of 20 (85%). IPP grade was a significant predictor of BOO in these patients (p = 0.0027). 19 patients with good urinary flow underwent TURP and 16 had BOO. Out of the 19 who underwent TURP, 3 had grade 1 IPP, 6 had grade 2 IPP and 10 had grade 3 IPP (p = 0.044).

**CONCLUSIONS:** Patients with good urinary flow may still have BOO on urodynamic studies. A higher grade of IPP is positively correlated to BOO even in good flow and is a useful adjunct to predict the eventual need for surgery.

**SOURCE OF FUNDING:** None

**MP13-27 THULIUM LASER VAPOENUKLEATION OF THE PROSTATE (THUVEP) IN PROSTATES LARGER THAN 80 ML: COMPARISON OF 1.9µM AND 2.0µM LASER DEVICES**

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**INTRODUCTION AND OBJECTIVES:** The aim of the study was to compare early functional results and complications of ThuVEP in large prostates with two different Thulium laser systems emitting at wavelengths of 1.9µm and 2.0µm.

**METHODS:** A retrospective bi-centric matched-pair analysis based on prostate volume was performed in a total of 296 patients undergoing ThuVEP for benign prostatic enlargement. In one center a Thulium laser device emitting at 2.0µm was used (n = 148), in the other center a Thulium laser emitting at 1.9µm was used (n = 148).

**RESULTS:** Mean prostatic volume was 100 ml in both groups. In a mean OR-time of 70 and 86 min a total of 65 and 54 g tissue was enucleated with the 2.0 and 1.9µm laser, respectively. Maximal flow rate (7.9 to 19.4 ml/s and 9.0 to 16.2 ml/s) and post void residual volume (130 to 20 ml and 45 to 25 ml) improved significantly in both groups. Median catheter time was 2 and 2.5 days, mean hospital stay was 4 days in both groups. Overall perioperative complication rate was 30%. Most complications were Clavien I (12%) and Clavien II (9%). Reinterventions were necessary in 23 patients (0.7% Caven IIIa; 7% Clavien IIIb). Clavien 4 complications were observed in 3 patients (urosepsis, myocardial infarction, arrhythmia). No statistically significant differences were observed among both groups.

**CONCLUSIONS:** ThuVEP is a safe and efficient procedure in the treatment of benign prostatic enlargement for prostates > 80 ml. Both 1.9µm and 2.0µm Thulium laser device lead to a significant improvement in voiding parameters and display a low complication rate.

**SOURCE OF FUNDING:** None

**MP13-28 DECOMPRESSION OF UB HELP AVOID INADEQUATE RESECTION OF THUPEP**

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**INTRODUCTION AND OBJECTIVES:** ThuLEP is widely accepted as a safer procedure than TURP. However inadequate resection was common comparing with the standard TURP. We presented our techniques to avoid inadequate resection while ThuLEP.

**METHODS:** While using continuous flow resectoscope to perform enucleation, decompression of UB was done before the incision the prostate apex. This help accurate demarcate the obstructing prostate adenoma under low-pressure flow. Then enucleation proceeded along the natural plane of adenoma as usual. No further decompression of UB was required during the rest procedure.

**RESULTS:** We compared the intravesical pressure between TURP and conventional resectoscope with transient suprapubic cystostomy and ThuLEP using continuous flow resectoscope. The former was around 20 cm H2O but the latter 70–80 cm H2O while resection. The pressure difference explains the difference of prostate configue. We believed the high pressure resulted in the proximal displacement of resection plan and then inadequate resection. We retrospectively compared two groups (with and without UB decompression), who received ThuLEP. The resection efficacy was better in the group using UB decompression. No patient had incontinence suggesting sphincter injury in both groups. The post-op LUTS were comparable in short-term time.

**CONCLUSIONS:** Decompression of UB before laser incision of prostate apex help accurrate demarcate the obstructing adenoma during enucelation of prostate.

**SOURCE OF FUNDING:** Nil

**MP13-29 IMPACT OF BLOOD LOSS IN PERSISTENT URINARY INCONTINENCE FOLLOWING HOLMIUM LASER ENUCLEATION OF THE PROSTATE**

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**INTRODUCTION AND OBJECTIVES:** To clarify the predictive factor of persistent urinary incontinence (UI) after holmium laser enucleation of the prostate (HoLEP).

**METHODS:** One hundred thirty four patients with benign prostatic hyperplasia who underwent HoLEP were retrospectively evaluated between January 2011 and January 2014. Blood loss was estimated based on the hemoglobin levels before and after HoLEP and resected prostate volume. In multivariable logistic regression analysis, blood loss was significantly associated with age, prostate specific antigen (PSA), total prostate volume, operative duration, and resected prostate volume. In multivariable logistic regression analysis, blood loss of more than 3 g/dl (OR, 6.54; 95% CI, 1.66–29.23; P = 0.0074) and reduction in PSA greater than 80% (OR, 3.41; 95% CI, 1.06–13.88; P = 0.038) were associated with postoperative UI, and only blood loss of more than 3 g/dl was identified as a significant parameter associated with persistent UI (OR, 24.3; 95% CI, 4.24–171.00; P = 0.0003).

**CONCLUSIONS:** Although postoperative UI occurred occasionally after HoLEP, most of them improved within 4 months. Blood loss was significantly associated with both postoperative and persistent UI, meticulous hemostasis needs to be achieved during HoLEP.

**SOURCE OF FUNDING:** None
INTRODUCTION AND OBJECTIVES: Six month results of a large prospective RCT comparing XPS to TURP in men with BPO have been recently published; non-inferiority of XPS was demonstrated. We now report one year results.

METHODS: 291 patients were enrolled at 29 sites in 9 European countries. Patients were randomised 1:1 to undergo XPS or TURP. The trial was powered to assess non-inferiority of XPS versus TURP in terms of IPSS, Qmax and complication free rate at 6 months. Other secondary endpoints included prostate size, PVR, PSA and QoLs. Patients are evaluated at 6, 12, and 24 months.

RESULTS: 291 subjects were enrolled between April 2011 and September 2012. 281 were randomised and 269 received treatment. At one year 95.5% remained in the trial. At 12 month follow-up, IPSS was 7.0 in the XPS arm and 5.7 in the TURP arm. Qmax was 23.0 in the XPS arm and 24.7 in the TURP arm. The complication free rate was 84.6% in XPS and 80.5% in TURP (p = 0.415). IPSS-Qol, PVR, prostate volume, PSA and IIEF-5 were not statistically different. The differences in OAB-q and ICIQ-UI SF were statistically significant but not clinically relevant at 12 months. The proportion of subjects requiring re-interventions was 12.4% after XPS and 15.0% after TURP.

CONCLUSIONS: XPS and TURP show comparable results in safety, subjective and functional results after one year follow-up.

SOURCE OF FUNDING: American Medical Systems (AMS) sponsored study.

INTRODUCTION AND OBJECTIVES: TUR-Prostate (TUR-P) is a gold standard in the surgical management for the prostate hyperplasia. However, it has possible disadvantages in the resection of especially large size prostates, such as bleeding and hyponatremia. Recently new medicines have been supplied, and the opportunity of surgical removal of the larger prostate has increased. HoLEP is a technique to enucleate the transition zone of prostate, and morbidity could be equal to or decreased compared to TUR-P. HoLEP is recognized as one of the best techniques for prostate enucleation. However according to its high level learning curve required, physician training is quite important in advance to the real procedure. For this purpose, we need the appropriate simulator for learning the HoLEP skill.

METHODS: We developed the real type HoLEP simulator. The proto-type of this model was successfully released in HoLEP Hands-on training course at 29th WCE in Kyoto, 2011. After this meeting this proto-type have been used a couple of meetings, such as AUA and EUA annual meeting. Recently we can release the final model and this model is commercially available.

RESULTS: Two experts and two novice tried this simulator after learning by instruction DVD. Total operation time of middle lobe and uni-lateral lobe resection was 9 and 12 min in two experts, and 20 and 24 min in two novice.

CONCLUSIONS: We released the HoLEP simulator. We expected the shortening learning curve of HoLEP by using this simulator.

SOURCE OF FUNDING: No COI.
Transfusion was needed in 9 patients (60%). There were no differences between the vascular complications group (VCG) and the uneventful PNL group in age (55.06 v 52.2 years, P = 0.519), UTI hx (40% v 38%, p = 0.92), hx previous procedure on the same renal unit (53.3% v 52.3%, p = 0.94), mean operative time (125.8 v 102.47 min, P = 0.192), the need for multiple access (18.75% v 18%, p = 0.939), and access location. The VCG had a lower stone burden than the uneventful PNL group (stones > 2 cm 43.7% v 74.03%, p = 0.014).

CONCLUSIONS: The incidence of vascular complications in this contemporary series is one of the lowest reported to date. At our centers, vascular bleeding complications appear to be a random and rare event after PNL as we were unable to identify any specific risk factors. Early SSE avoided the need for blood transfusion in many patients.

SOURCE OF FUNDING: None

**MP14-02 TRANSURETHRAL ENUCLEATION AND RESECTION OF PROSTATIC HYPERPLASIA BEYOND 80 CC**

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**INTRODUCTION AND OBJECTIVES:** Transurethral resection of the prostate (TURP) is the standard treatment for men with benign prostatic hyperplasia, but because of the risks of bleeding and TUR syndrome, patients with large prostates are usually offered open removal of prostate tissue.

**METHODS:** We assessed 43 patients with prostates of > 80 cc who underwent transurethral enucleation and resection of prostate (TUERP). In TUERP, incomplete enucleation is performed with a TUERP detaching blade, and this is followed by removal of the prostatic tissue by TURP.

**RESULTS:** The mean duration of surgery was 93 min. The mean weight of removed prostate tissue was 54.4 g. The mean decrease in the level of hemoglobin was 0.4 g/dl. There were no major complications, and no patients developed transurethral resection syndrome or required blood transfusion. At preoperative baseline the mean symptom score was 21.8, mean peak urinary flow rate 6.5 cc/s, and mean post-void residual urine volume 140 cc. At 3 months postoperatively the mean symptom score was 6.2, mean peak urinary flow rate 15.8 cc/s, and mean post-void residual urine volume 18 cc. Significant improvements in all parameters were observed after surgery.

**CONCLUSIONS:** The short-term outcomes showed that this technique was a suitable alternative to open prostatectomy and TURP.

SOURCE OF FUNDING: None

**MP14-03 URINARY INCONTINENCE AFTER LASER PROSTATECTOMY FOR BPH – CONTEMPORARY EXPERIENCE**

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**INTRODUCTION AND OBJECTIVES:** Over the past decade, there has been a dramatic shift in endoscopic treatment of lower urinary tract symptoms (LUTS) favoring laser technologies. Urinary incontinence (UI) after laser surgery has not been described.

**METHODS:** Retrospective cohort of 55 men (mean age 67) who underwent Greenlight laser prostatectomy for BPH. We administered International Prostatic Symptoms Score (IPSS) and Michigan Incontinence Symptom Index (MISI) at baseline (preoperatively) and after the surgery. We estimated the incidence, severity, and bother, of incontinence using the MISI at 1 and 6 months after surgery. We then fitted multivariable regression model to examine the factors associated with the change in UI.

**RESULTS:** MISI scores at baseline, 1 month and 6 month after surgery demonstrates slight increase in UI at 1 month and then an average UI that is lower than baseline at 6 months. Urge urinary incontinence (MISI-UII) was predominant before surgery. The proportion of patients who had the minimally important difference (MID) at 6 months after the surgery is 16%, 12%, 10%, and 3% for the total severity, UII, SUI, and bother domains, respectively. Adjusted regression found higher baseline MISI-UII and IPSS obstructive domain score (r = 0.4, p = 0.008) to be predictive of a change in UI.

**CONCLUSIONS:** UI was present at baseline but improved by 6 months. Although 16% of the patients had the MID of urinary incontinence, only 3% were bothered by their symptoms. Greater MISI-UII score and obstructive symptoms at baseline were both associated with less UI after surgery.

SOURCE OF FUNDING: None

**MP14-04 AN INTERNATIONAL SURVEY OF UROLOGISTS TO CREATE A DEFINITION OF PROSTATE ENLARGEMENT FOR PURPOSES OF STUDY DESIGN.**

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**INTRODUCTION AND OBJECTIVES:** There has been much variation between publications as to what defines prostatic enlargement. This makes comparison of results and interventions between studies difficult for physicians and hence effect on practice is limited. This study aims to design a framework for what defines and enlarged prostate based on the opinion of practicing urologists worldwide.

**METHODS:** A one page survey was created using software tool “surveymonkey” asking urologists to indicate their definition of an enlarged prostate based on six options (0 g, > 40 g, > 80 g, > 100 g, > 125 g, > 150 g, > 200 g). It also collected basic demographic data such as location, length of practice and preferred surgical treatment modality for symptomatic prostate enlargement.

**RESULTS:** There were 500 respondents across 46 countries (6 continents). Overall 225 participants (45.3%) defined an enlarged prostate as > 80 g and 135 participants (27.2%) defined enlargement as > 100 g. Hence the majority of respondents (72.5%) would be comfortable in defining > 100 g as prostatic enlargement. There were some differences between subgroups based on location of practice and preferred surgical modality with those preferring laser techniques (HoLEP/HoLAP) favouring higher threshold for enlargement (73.3% favoured > 100 g). Continental subgroups Australia/Oceania and Americas also favoured larger estimates. There was good concordance across subgroups for what defines ‘very large’ or ‘massive’ prostate.

**CONCLUSIONS:** Based on the clinical opinion of a large, international cohort of urologists an enlarged prostate is defined as > 100 g.

SOURCE OF FUNDING: None
MP14-05 EVALUATION OF GREENLIGHT XPS MAXIMUM POWER LEVEL ON PERIOPERATIVE OUTCOMES IN PATIENTS WITH BENIGN PROSTATIC HYPERPLASIA

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INTRODUCTION AND OBJECTIVES: Laser therapies for benign prostatic hyperplasia are gradually replacing transurethral resection of the prostate. As laser technology has advanced, it has become feasible to treat larger glands with greater efficiency. We report on our experience with varying energy levels on outcomes using the GreenLight XPS system.

METHODS: A total of 129 patients that underwent GreenLight laser therapy from 2010–2014 was reviewed. Perioperative variables including IPSS, QoL, Qmax, energy, operative time, EBL and complications were recorded at baseline and postoperatively. The analysis was stratified according to maximum power level (≤ 100 W, 120 W, 150 W, and 180 W).

RESULTS: The mean age, prostate volume, energy, operative time, and EBL were: 68.1 yrs/51.1 cc/147750 J/48 min/11 ml (≤ 100 W), 67.5 yrs/80.2 cc/235779 J/67 min/13 ml (120 W), 70.4 yrs/110.3 cc/318870 J/74 min/7 ml (150 W), and 69.0 yrs/111.4 cc/429809 J/88 min/53 ml (180 W). Statistically significant improvements compared to baseline were noted in IPSS, QoL, and Qmax at 3, 6, 12 and 24 months between the groups (p < 0.05). Higher maximum power levels were associated with statistically higher total energy usage and operative times (p < 0.05). Patients in the 180 W vs. 150 W group had similar mean prostate volumes, however bleeding complications were significantly higher in the 180 W group (33%) as compared to the 150 W group (9%).

CONCLUSIONS: There is limited literature available regarding the relationship between maximum power level and outcomes of GreenLight laser therapy. Higher power levels are associated with larger prostate volumes. A maximum power level of 180 W is associated with increased bleeding and longer operative times compared to a power level of 150 W for similar prostate volumes. Prostate volume, surgeon experience, and patient comorbidities should be considered in selecting appropriate power levels.

SOURCE OF FUNDING: None

MP14-06 Efficacy of Greenlight Laser Therapy in Patients with Bladder Outlet Obstruction and Prostate Cancer

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INTRODUCTION AND OBJECTIVES: GreenLight laser photoselective vaporization of the prostate (PVP) is an effective treatment for symptomatic benign prostatic hyperplasia. The purpose of this study was to evaluate our experience with GreenLight PVP in patients with bladder outlet obstruction and prostate cancer.

METHODS: A retrospective review was performed of all patients with a diagnosis of prostate cancer that underwent GreenLight PVP at our institution since 2010. Demographic, preoperative, and postoperative data were recorded in patients with adequate follow up.

RESULTS: A total of 12 patients underwent GreenLight PVP of which 10 met inclusion criteria. Mean age was 75.9 (62–84) and BMI was 29 (19–37). Mean prostate volume was 73.9 cc. Four patients had received brachytherapy (n = 2), external beam (n = 1), or combined brachytherapy/external beam radiotherapy (n = 1). Mean pre-op PSA was 0.6 ng/ml (0.1–1.4) [radiation] and 6.66 ng/ml (5.7–9.0) [active surveillance]. Mean pre-op IPPS was 28.2 (17–35), QoL 5.6 (4–6), and Qmax 4.7 ml/s (0.8–7.2). Mean lasing time was 47 minutes (29–78), energy 208,077 J (35,008–494,611), and EBL 10 ml (≤ 5–50). Mean post-op PSA was 1.2 (0.1–3.3) [radiation] and 8.27 [active surveillance]. Mean post-op IPPS was 5.5 (2–9), QoL 0.9 (1–3), and Qmax 16.2 ml/s (9.8–20). Median follow-up was 19 months (6–44). There was 1 postoperative bladder neck contracture in a brachytherapy patient.

CONCLUSIONS: This is among the first reported series of GreenLight PVP in patients with prostate cancer. While all patients had significant clinical improvement, this therapy should be used with caution in patients previously treated with brachytherapy due to a potential increased risk of bladder neck contracture.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: To compare the efficacy and safety profile of bipolar hybrid prostate surgery using both resection and vaporization modes, with pure bipolar resection.

METHODS: This was a randomized controlled trial that compared bipolar hybrid surgery and bipolar resection of the prostate among men aged 50 years with benign prostatic hyperplasia who failed medical therapy or who had recurrent urinary retention. Both patients and assessors were blinded to the type of surgery performed. The primary study end point was catheter time. The secondary end points included postoperative hospital stay and dysuria score.

RESULTS: 74 patients were in the hybrid group and 72 were in the resection group. There were no significant differences between the two groups in prostate volumes (65.5 ± 38.6 Vs 60.9 ± 24.0 ml), preoperative prostate-specific antigen levels (8.5 ± 7.9 Vs 8.9 ± 8.1 ng/ml), or preoperative retention status (39.2% Vs 50.0%). The mean operative time was longer in the hybrid group (46.9 ± 20.9 Vs 36.3 ± 16.4 minutes, p < 0.001). The 2 groups had no significant differences in postoperative catheter time (38.5 ± 41.2 Vs 61.1 ± 38.8 hours, p = 0.607). The hybrid group had a higher postoperative pain score on day 1 (4.3 ± 2.3 Vs 3.1 ± 2.4, p = 0.007), but there was no difference at post-operative 1 month (1.2 ± 1.9 Vs 0.8 ± 1.6, p = 0.198). There was no difference between the groups in terms of changes in serum hemoglobin and sodium levels. At 1 month and 12 month after operation, there were no significant differences in IPSS and Maximum flow rate between the 2 groups.

CONCLUSIONS: The bipolar hybrid technique was associated with longer operative time and early post-operative dysuria.

SOURCE OF FUNDING: None

MP14-09 THULIUM VAPORESECTION OF THE PROSTATE (THUVARP) AND THULIUM VAPONECULATION OF THE PROSTATE (THUVEP) IN PATIENTS ON ANTICOAGULANT THERAPY: A RETROSPECTIVE THREE-CENTRE MATCHED-PAIRED COMPARISON WITH SHORT-TERM FOLLOW-UP

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INTRODUCTION AND OBJECTIVES: To evaluate the short-term clinical efficacy and the complication rates of ThuVEP and ThuVARP in patients with benign prostatic obstruction (BPO) on oral anticoagulants (OA).

METHODS: A three-centre retrospective matched-paired comparison of patients either treated by ThuVEP (n = 26) or ThuVARP (n = 26) according to prostate size was performed. Thirty-four patients were on aspirin/ticlopidin, 7 on clopidogrel or clopidogrel and aspirin, and 11 on phenprocoumon/warfarin at time of surgery.

RESULTS: Prostate volume (62.5 ± 63.5 ml) differed not significantly between ThuVEP and ThuVARP. Hb decrease was significantly higher for ThuVEP compared to ThuVARP (1.5 Vs 0.3 g/dl, p < 0.001). The rate of postoperative blood transfusions (3.9% Vs 0%) and postoperative clot retention (3.9% Vs 0%) was not different between ThuVEP and ThuVARP (p = 0.274). The immediate re-operation rate (clot retention, secondary apical resection) was 7.7% for ThuVEP and 0% for ThuVARP (p = 0.145). Catheterization time was significantly shorter for ThuVARP (1 vs 2 days, p < 0.01). Qmax was significantly higher after ThuVEP at 6-month follow-up (31 Vs 21.5 ml/s, p < 0.001), while improvements in IPSS, QoL, and postvoid-residual urine (PVR) showed no differences between the groups. The incidence of urethral and bladder neck strictures was zero at 6-month follow-up in both groups.

CONCLUSIONS: ThuVEP and ThuVARP are both safe and efficacious procedures for patients on OA. Although patients assigned for ThuVEP had higher Qmax at 6-month follow-up, ThuVARP resulted in similar functional outcome and re-operation rates. Further follow-up is needed to draw final conclusions about the long-term efficacy of ThuVARP.

SOURCE OF FUNDING: None

MP14-10 ROBOT-ASSISTED TRANSVESICAL ENucleation of BENIGN PROSTATIC HYPERPLASIA: LESSONS FROM A SINGLE SURGEON’S LEARNING CURVE

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INTRODUCTION AND OBJECTIVES: Open simple prostatectomy is a well-established and effective operation for prostate volumes > 80 g, but also notorious for bleeding and urinary incontinence. To benefit from the advances of laparoscopy, robot-assisted simple prostatectomy was established. Our aim was to determine the learning curve by evaluating the first operations of an experienced robotic surgeon.

METHODS: Patients presenting for surgical therapy with prostate volumes > 80 g were considered and evaluated with validated questionnaires preoperatively and six and twelve weeks postoperatively. Blood loss, transfusions, operation time and pad use after catheter removal were documented. All patients operated on by one single surgeon (JWT) were included.

RESULTS: Between 04/2012 and 04/2013 195 patients with BPH underwent surgery in our institution. 26 patients underwent simple prostatectomy, 22 robot-assisted and from these 18 by JWT. Mean age was 71.2 years, mean enucleated prostate volume 91 g. Mean preoperative flow was 9.0 ml/s. IPSS and QoL values improved significantly from 25 to 6.1 (p < 0.005) and from 5 to 1.1 (p < 0.005). Flow rate increased to 28.2 (p < 0.005). There were no significant changes in sexual performance concerning IIEF (p = 0.73). 14/18 patients had full continence immediately after catheter removal, at six weeks follow-up 17/18 patients were completely continent. Operation time decreased from
250 min to 150 min, blood loss after 5 operations from 400 ml to 200 ml. Only minor complications occurred, one patient required transfusion postoperatively (Clavien Dindo II).

CONCLUSIONS: Robot-assisted simple prostatectomy is a safe and effective operation for BPH, which can be mastered with good results in a rather short time.

SOURCE OF FUNDING: None

MP14-11 IS BIPOLAR TRANSURETHRAL RESECTION OF PROSTATE CAUSING LESS DELAY HAEMATURIA?

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INTRODUCTION AND OBJECTIVES: Bipolar transurethral resection of prostate (TURP) has potential benefits of less TUR syndrome and intra-operative bleeding, but its effect on delayed haematuria was uncertain. We would like to compare monopolar TURP, bipolar TURP and bipolar vaporization on delayed haematuria.

METHODS: This was a retrospective study on 374 patients with TURP performed from June 2010 to August 2013. We defined delayed haematuria as any haematuria from 1 week to 3 months after operation requiring medical attendance. The patients received either one of the following 4 approaches of TURP (Group): (1) monopolar, (2) pure bipolar resection, (3) combined bipolar resection and vaporization, and (4) pure bipolar vaporization. The TURIs® system (Olympus) was used for all bipolar procedures. Logistic regression analysis was used to identify predicting factors for delayed haematuria, including age, prostate size, pre-operative PSA, antplatelet/anticoagulation, 5-alpha reductase inhibitors, surgical approaches etc.

RESULTS: The number of patients in the 4 groups was, 57 (15.2%), 153 (40.9%), 100 (26.7%) and 64 (17.2%) respectively. Except for younger age in Group 1 and 4, other baseline parameters for the four groups were comparable. 77 (20.6%) patients had delayed haematuria after discharge. The incidences of delayed haematuria for the 4 Groups were 5 (8.8%), 34 (22.4%), 27 (27%) and 13 (20.3%) respectively. Logistic regression showed delayed haematuria was associated with younger age, larger prostate size, higher pre-operative PSA, antplatelet/anticoagulation usage (OR2.98,1.33–6.66), combined bipolar resection (OR4.53,1.53–13.45), and combined bipolar resection with vaporization (OR3.72,1.25–11.04) had statistically higher chance of having delayed haematuria. However, pure vaporization was not associated with increase in delayed haematuria.

CONCLUSIONS: Bipolar resection, with or without vaporization, was associated with higher chance of delayed haematuria after TURP.

SOURCE OF FUNDING: None

MP14-12 LEARNING CURVE OF MORCELLATION DURING 2-MICRON WAVE LASER ENucleATION OF THE PROSTATE

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INTRODUCTION AND OBJECTIVES: Morcellation of the prostate is an essential step of 2-micron wave laser enucleation of the prostate. However, few results have been reported about the learning curve of the morcellation procedure. This study was designed to assess the learning curve of morcellation of the enucleated adenoma.

METHODS: We retrospectively reviewed the data of patients who underwent 2-micro wave laser enucleation of the prostate performed by a single surgeon between July 2011 and May 2014. We assessed the cut-off point of the learning curve of morcellation. We analyzed preoperative and intraoperative parameters and the incidence of intraoperative complications related to morcellation.

RESULTS: A total of 129 patients underwent the procedure. The mean age was 69.2 years and the mean prostate volume was 58.8 ml. The mean total operation time, morcellation time and weight of the enucleated adenoma were 72.2 ± 26.4 minutes, 13.2 ± 8.4 minutes and 26.8 ± 15.8 g, respectively. A significant decrease in morcellation index was shown as cases accumulated.

INTRODUCTION AND OBJECTIVES: Benign prostate hyperplasia is a common disease with bothersome symptoms. Conventional transurethral resection of prostate (TURP) is the gold standard surgical treatment. Compare to TURP, laser enucleation of prostate may have benefit for patients with high bleeding risk. We investigated the safety of laser enucleation of prostate in patients with/without anticoagulants at two institutions.

METHODS: We performed a retrospective analysis through chart review among patients who had undergone laser enucleation of prostate between April 2011 and April 2014. The patients were divided into three groups: ongoing anticoagulants and high bleeding risk (Group A), discontinuous anticoagulants (Group B), no anticoagulants (Group C). The mean age of study group was 70.6 years old (range 48 to 90). Their mean prostate volume was 66.6 ml (range 22 to 220). Sixty- one (27.6%) patients had prostate volume larger than 80 ml.

RESULTS: The change of hemoglobin after surgeries and complications rate were not statistically significant in the three groups. There were grade 4a complications in two (0.9%), grade 3a in ten (4.5%), grade 2 in four (1.8%) and grade 1 in 46 (20.8%) patients, respectively. Six cases had treatment failure and received conventional TURP in one week. Patients whose prostate volume was larger than 80 ml were not significantly related to higher complication rate. The average duration of hospital stay and catheterization were 3.22 ± 0.78 and 2.07 ± 1.18 days.
CONCLUSIONS: Laser enucleation of prostate was a safe treatment with low significant complication rate even for large prostate.

SOURCE OF FUNDING: None

MP14-14 USE OF EVICEL® FIBRIN SEALANT FOR IMPROVING HEMOSTASIS FOLLOWING TRANSURETHRAL PROSTATE DEBULKING SURGERY IN PATIENTS WITH BPH

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INTRODUCTION AND OBJECTIVES: In this exploratory study we aim to determine the feasibility and effectiveness of application of EVICEL® fibrin sealant into the prostatic cavity for improvements in hemostasis after transurethral prostate surgery.

METHODS: We conducted a prospective, subject and assessor blinded, randomized controlled study in 29 patients with LUTS/BPH. Following completion of the transurethral debulking procedure, the following steps were taken in EVICEL® group (n = 15): bladder and urethra were emptied of fluid and filled with 15 mmHg CO2 gas employing a standard CO2 insufflator. EVICEL® was applied inside the prostatic cavity under direct visualization. In 14 control patients, the procedure was ended following standard debulking techniques. Post-op bleeding was evaluated at 1, 6 and 24 hrs after surgery by measuring hemoglobin level in the bladder irrigation fluid. Patients were followed for 3 months evaluating urinary symptoms and possible complications.

RESULTS: The mean patients’ age was 63 and 68 yrs in control and EVICEL® groups, respectively. Application of sealant added in average 13 (7–20) min to the standard surgery. Hemoglobin level in irrigation fluid 1, 6 and 24 hrs after surgery was 11.25 ± 2.84 mg/dl, 9.25 ± 1.02 vs. 8.68 ± 3.61 mg/dl and 11.37 ± 5.23 ± 2.84 mg/dl in control and EVICEL® groups, respectively (P = 0.05). Patients in EVICEL® group have 46.9%, 8% and 46.2% less bleeding 1,6 and 24 hrs after surgery, respectively. Both groups were comparable in terms of post-op voiding symptoms, surgical outcome and QOL questionnaires.

CONCLUSIONS: This is the first report of successful application of fibrin sealant following endoscopic prostate debulking procedure with some improvements in reduction in bleeding. Further studies are warranted.

SOURCE OF FUNDING: None

MP14-15 LAPAROSCOPIC SIMPLE PROSTATECTOMY: A REASONABLE OPTION FOR LARGE PROSTATIC ADENOMAS.

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INTRODUCTION AND OBJECTIVES: In this work, surgical technique followed by two academic departments on laparoscopic simple prostatectomy (LSP) of large prostatic adenomas is being described.

METHODS: In total 11 patients were subjected to laparoscopic simple prostatectomy in our departments. All operations were performed by two experienced laparoscopic surgeons with wide experience in laparoscopic radical prostatectomy. Patients were selected based on bothersome lower urinary tract symptoms of BPH origin with prostatic volumes greater that 80 cm3 (range 98–220).

RESULTS: Mean operation time was 99.5 minutes (range 70–150 min) and mean blood loss was 205 ml (range 100–300 ml). Blood transfusion was deemed necessary in one case. Bladder catheter was removed successfully on postoperative day 5 in all cases. No significant postoperative complication was noted. At a 3 month follow-up a significant decrease in IPSS score was evident in all patients (mean IPSS 27.7 vs 15.3 preoperative vs postoperative accordingly).

CONCLUSIONS: According to our data and similarly to the rest of the LSP literature, laparoscopic excision of voluminous prostatic adenomas is a feasible and safe procedure. Nevertheless, further investigation including larger number of patients and long term follow-up is deemed necessary before making definite conclusions regarding the approach.

SOURCE OF FUNDING: None

MP14-16 PREDICTORS OF COMPLICATION OF TRANSURETHRAL RESECTION OF PROSTATE

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INTRODUCTION AND OBJECTIVES: To evaluate the relationship between prognostic factors and bladder neck contracture (BNC) after transurethral resection of prostate (TUR-P).

METHODS: We have retrospectively reviewed the data of 101 consecutive TUR-P cases by single experienced urologist. Eligible patients (N = 101) were grouped with respect to presence of bladder neck contracture after TUR-P with cystoscopy confirmed; Group1: BNC positive (n = 12, 11.9%), and Group2: BNC negative (n = 89, 88.1%). The ‘’UFRmax deviation’’ was defined as maximum urinary flow rate measured by uroflowmetry 3 months after operation divided by pre-operation maximum urinary flow rate. Groups were compared with respect to descriptive data.

RESULTS: Of 101 eligible patients, higher UFRmax deviation were observed in BNC negative group (7.58 ± 7.88 versus 2.87 ± 7.97, p = 0.02). Other factors included age of the patient, catheter indwelling days and prostate specific antigen have no statistically significant relation to BNC after TUR-P.

CONCLUSIONS: UFRmax deviation is a prognostic factor of BNC after TUR-P. Our results should be supported by prospective studies including higher number of patients.

SOURCE OF FUNDING: None

MP14-17 PERIOPERATIVE TREATMENT OF TURP IN THE TREATMENT FOR LARGE VOLUME BPH

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INTRODUCTION AND OBJECTIVES: To explore the experience of treating large volume BPH with TURP.
METHODS: We retrospectively analyzed 105 cases with large volume BPH treated with TURP. The age ranged from 62 to 86, with mean age of 76. The volume of prostate is 80–190 g, with the mean volume of 126 g. We used Storz F27 resectoscope. The power of electroresection and electric coagulation are 180–220 W and 90 W respectively. In the operation, first of all a mark furrow was made between the median lobe of the prostate and seminal colliculus, with the depth of surgical envelop. Based on this mark, prostate tissue was resected clockwise from 6 to 12, and then counterclockwise from 5 to 1. The prostatic apex should be resected carefully to avoid hurting external urethral sphincter. The arteriorrhagia should be stopped timely, while venous hemorrhage could not be stopped until the resection reached the surgical envelop. When the surgical time got to 60–90 min, 100–200 ml 5% sodium chloride should be injected. If necessary, furosemide 20 mg could be injected intravenously. After the operation, F20 threecchannel catheter should be indwelled to wash bladder as soon as possible.

RESULTS: The resected prostate tissue weigh from 40 to 100 g. The operation time was 60–130 min. Blood loss in operations was 200–600 ml. 3 cases underwent transfusion. No incontinence and urethral stricture occurred.

CONCLUSIONS: TURP for large volume BPH need more time and more blood could lose. The surgery require surgeon to have skilled technique and rich experience to stop bleeding and administer hypertonic sodium chloride or furosemide in advance.

SOURCE OF FUNDING: None

MP14-18 ANATOMICAL ENucleATION OF THE PROSTATE WITH UROBEAM 940 NM LASER
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INTRODUCTION AND OBJECTIVES: We present anatomical enucleation of the prostate with 940 nm urobeam laser.

METHODS: 62 patients were enrolled due to symptomatic BPH from Jan to December 2013. Dornier Urobeam 940 nm laser with side fire fiber was utilized. Wolf 26F continuous resectoscope with laser working element and morcellator were used. After finding the surgical capsule plane with blunt dissection using beak of oblique resectoscope sheath at the place proximal to verumontanum, the median lobe was enucleated. The left and right lobes were peeled off the surgical capsule floor sequentially. Bladder neck was preserved. Urobeam laser was employed for hemostasis and precise cutting. The enucleated adenomas were pushed into bladder cavity then morcellated. Followup last for 3 months.

RESULTS: The mean age was 63.5 (52–85) and the mean prostate volume was 58.2 (35–150) ml. The mean operation duration was 42.5 (20–75) min. The mean blood loss was 50 (30–120) ml. The catheter was removed within 48 hours postoperatively. There were no major complications. Continence was achieved in all cases. The improvement of IPSS (21.8 ± 3.7 vs. 5.5 ± 1.2) and Qmax (6.0 ± 1.5 vs. 21.4 ± 3.6) were achieved seperately.

CONCLUSIONS: With the great hemostasis and cutting characteristic, urobeam laser is an optimal tool for enucleation of the prostate. Short term outcome is satisfactory. The technique of enucleation we used is blunt and the plane we found and developed is anatomical surgical capsule plane, so it is more likely to mimic the conventional open technique.

SOURCE OF FUNDING: None

MP14-19 IMPLEMENTING THE 180 W GREENLIGHT XPS LASER INTO CLINICAL PRACTICE: ANALYSIS OF PERIOPERATIVE OUTCOMES DURING THE LEARNING CURVE
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INTRODUCTION AND OBJECTIVES: The 180 W GreenLight XPS has been shown to be equivalent to TURP for the treatment of BPH. Little is known however about the safety and peri-operative outcomes for this technique when newly introduced into a clinical practice with no prior experience with photovaporisation of the prostate. Our objective was to assess peri-operative outcomes and institutional learning curve for this technique over the first 150 cases.

METHODS: We retrospectively analysed data on baseline characteristics, peri-operative outcomes and complications. Complications were graded by the Clavien classification system. Data was compared for the first, second and third groups of 50 cases. The institutional learning curve was analysed using various operative parameters (total energy delivered, total operating time (OT), laser-to-operating time ratio (LT/OT), and conversion to TURP).

RESULTS: Median age was 68, median length of stay 1 day, median prostate volume 51 mL. 29% were on anticoagulant or antiplatelet therapy. 20% were catheter-dependant preoperatively. 76% had a successful trial of void on Day 1. 5% had conversion to TURP. The overall complication rate was 19%, the majority of which were Grade I or II; there was one Grade III complication. There were no blood transfusions, Grade IV or V complications. There were no statistically significant differences between the groups in terms of perioperative outcomes or complications. Over time, there was a statistically significant improvement in OT and LT/OT.

CONCLUSIONS: The 180 W Greenlight XPS is a safe and reproducible treatment option for benign prostatic hyperplasia during the institutional learning curve, with good peri-operative outcomes and low complication rates.

SOURCE OF FUNDING: None

MP14-20 DIODE LASER VAPORIZATION OF LARGE PROSTATE FOR BENIGN PROSTATIC HYPERPLASIA: VAPORIZATION ALONE OR COMBINED WITH SUBSEQUENT BIPOLAR TRANS-URETHRAL RESECTION. OUR EXPERIENCE ON 79 PATIENTS
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INTRODUCTION AND OBJECTIVES: Aim of the study was to compare the functional outcomes in patients with prostates larger than 70 grams between patients treated with a high power diode laser alone and patients treated with high power diode laser and subsequent b-TURP.

METHODS: We performed vaporization of prostatic tissue in 79 BPH patients with prostate volume >70 g using a high power diode laser operating at 940 nanometers and emitting a maximum power of 250 Watts. In 44 patients, b-TURP was applied after laser vaporization in order to remove only the coagulated part of the prostate. Before and for follow-up on 1, 3, 6, and 12 months, patients were assessed for their residual urine volume, maximum
urine flow rate, International Prostate Symptom Score and post-operative complication rates.

RESULTS: 35 patients treated with vaporization alone (group 1) and 44 patients treated with vaporization and subsequent b-TURP (group 2) have reached 12 months of follow-up so far. At 12 months, the mean maximum flow rate increased from 9.8 ml to 21.1 ml in group 1 and from 7.3 to 23.5 in group 2; mean IPSS dropped from 19.0 to 8.0 in group 1 and from 19.6 to 7.1 in group 2; and mean residual urine volume dropped from 124 ml to 20.6 ml in group 1 and from 130.5 to 10.7 in group 2. We reported a re-treatment rate of 14.2% in the group 1.

CONCLUSIONS: This technique offers excellent intra-operative haemostasis, shorter operation and catheterization time, shorter hospitalization stay and shorter learning curve.

SOURCE OF FUNDING: None

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MP14-21 PROSTATIC URETHRAL ANGLE IS A SIGNIFICANT PREDICTOR OF URINARY SYMPTOM SEVERITY AND PEAK FLOW RATE IN MEN WITH SMALL PROSTATE VOLUME

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INTRODUCTION AND OBJECTIVES: To evaluate the effects of prostatic anatomical factors on male lower urinary tract symptoms (LUTS) and the peak flow rate (Qmax) in patients with small prostate volume (PV).

METHODS: Records were obtained from a prospectively maintained database of first-visit men with LUTS. Patients whose total PV (TPV) was greater than 30 mL were excluded; 444 patients were enrolled in the study. The TPV, transitional zone volume (TZV), transitional zone index (TZI), intravesical prostatic protrusion (IPP), and prostatic urethral angle (PUA) were measured by transrectal ultrasonography. LUTS were evaluated using the International Prostate Symptom Score (IPSS) and the Overactive Bladder Symptom Score (OABSS) questionnaires. Uroflowmetric measurements were also made.

RESULTS: PUA (r = 0.269, P < 0.001), TZV (r = 0.160, P < 0.001), and TZI (r = 0.109, P = 0.022) significantly correlated with the IPSS. Qmax (r = 0.334, P < 0.001) and OABSS (r = 0.211, P < 0.001) correlated only with PUA. In a multivariate regression analysis, PUA and age independently predicted IPSS, OABSS, and Qmax. For IPSS of 20 or greater, the area under the ROC curve (AUC) of PUA was 0.667 and the cut-off value was 43.7°. When Qmax was 10 mL/s or less, the AUC of PUA was 0.664 and the cut-off value was 43.5°.

CONCLUSIONS: PUA was a significant predictor of symptom severity and Qmax among prostatic anatomical factors analyzed in men with LUTS and small PV. PUA should be considered as an important clinical factor in male LUTS management.

SOURCE OF FUNDING: N/A

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MP14-22 LEARNING CURVE FOR HOLMIUM LASER ENUCLEATION OF THE PROSTATE (HoLEP): IS EXPERIENCE OF TRANURETHRAL RESECTION OF THE PROSTATE (TURP) NECESSARY?

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INTRODUCTION AND OBJECTIVES: HoLEP is a less invasive procedure with excellent hemostatic properties. However, it requires a sophisticated endoscopic technique and can be difficult to learn. In this study, we evaluated the learning curve for performance of HoLEP in patients with benign prostatic hyperplasia (BPH).

METHODS: From February 2006 to April 2014, 1279 patients with symptomatic BPH underwent HoLEP performed independently by eight surgeons. The surgeons included 4 who each had experience of > 300 cases of TURP, and 4 with experience of < 100 cases of TURP each. Operation time, estimated blood loss, weight of enucleated tissue, enucleation efficiency (enucleated weight/enucleation time) and morcellation efficiency (enucleated weight/morcellation time) were evaluated.

RESULTS: HoLEP was performed successfully in 99.8% of patients. The TURP-experienced surgeons performed 226, 173, 102 and 97 HoLEP procedures, and the TURP-inexperienced surgeons performed 375, 46, 40 and 27 procedures. The mean weights of enucleated tissue were 36.3, 27.0, 24.3 and 28.1 g in the TURP-experienced group, and 22.1, 25.5, 31.7 and 29.1 g in the TURP-inexperienced group. The mean enucleation efficiencies were 0.49, 0.32, 0.30 and 0.31 g/min in the TURP-experienced group, and 0.32, 0.27, 0.31 and 0.34 g/min in the TURP-inexperienced group. The mean morcellation efficiencies were 2.80, 2.56, 3.16 and 2.97 g/min in the TURP-experienced group, and 3.05, 2.29, 2.28 and 3.25 g/min in the TURP-inexperienced group. These findings showed that the learning curves were 20 to 50 cases in both groups.

CONCLUSIONS: Performance of HoLEP requires similar learning curves for surgeons regardless of their level of experience with TURP.

SOURCE OF FUNDING: None

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MP14-23 THE URETHRA BIPOLAR PLASMA PROSTATE ENUCLEATION SURGERY FOR BENIGN PROSTATE HYPERPLASIA (WITH VIDEO)

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INTRODUCTION AND OBJECTIVES: Objective To evaluate the effect and safety of the urethra bipolar plasma prostate enucleation surgery (TUERP) for patients with benign prostatic hyperplasia (BPH).

METHODS: 32 patients with BPH who underwent TUERP were included in this study. All the patients receive digital examination of rectum, B type ultrasound examination, urodynamic examination, and laboratory examination. The international prostate symptom score (IPSS), quality-of-life (QOL) score, peak flow rate (Qmax), and postvoid residual urine (PVR) were assessed at 1, 3, 6 month after surgery. The enucleation time, resection time, enucleated tissue weight, catheterization time, hospital stay were recorded.

RESULTS: No patient had significant blood loss or signs of the transurethral resection syndrome. The mean age of patients was
68 years. The mean preoperative prostate weight was 65 g, the mean enucleation time was 30 min, the mean resection time was 30 min and the mean resected tissue weight was 48 g. The mean catheter time and hospital stay was 5 d and 6 d, respectively.

CONCLUSIONS: TUERP is a feasible, effective and safe operation for BPH.

SOURCE OF FUNDING: No

MP14-24 ROBOTIC SIMPLE PROSTATECTOMY FOR SYMPTOMATIC LARGE-GLAND BPH: SAFETY, FEASIBILITY, AND COMPARATIVE ANALYSIS

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INTRODUCTION AND OBJECTIVES: We describe our experience with robotic-assisted laparoscopic simple prostatectomy (RALSP), and compare the results to a matched cohort of patients undergoing OSP during the same time period from a single institution.

METHODS: A retrospective review of our institutional database identified all patients undergoing RALSP procedure, which were performed by 2 high-volume robotic prostate cancer surgeons. Operative approach to RALSP is identical to robotic-assisted radical prostatectomy in terms of patient positioning and port placement. Perioperative and postoperative data were collected and analyzed. Statistical analysis was used to compare the open and robotic cohorts where appropriate.

RESULTS: 20 patients underwent RALSP for symptomatic, large-gland BPH at our institution. Median preoperative gland size was 125 gm and the majority of patients (65%) had a history of urinary retention. Two patients had prior failed outlet surgery. Median operative time was 176 minutes and EBL was 225 ml. 1 patient (5%) needed a blood transfusion. 3 patients had bladder pathology that was simultaneously treated. Median pathologic gland weight was 87 grams. 1 patient had a Clavien >2 complications (bleeding requiring fulguration). Comparing this data with a matched cohort undergoing OSP, EBL and length of stay significantly favored the RALSP group.

CONCLUSIONS: RALSP is safe and feasible in patients with symptomatic large-gland BPH. Blood loss and length of stay appear to be improved compared to the open operation. Surgeons with significant robotic experience, especially with radical prostatectomy, may consider utilizing this approach for their patients with large-gland BPH.

SOURCE OF FUNDING: None

MP14-25 A LONG TERM SOLUTION IN SECONDARY BLADDER NECK SCLEROSIS CASES – BIPOLAR PLASMA VAPORIZATION OVERCOMING STANDARD TUR IN A PROSPECTIVE, RANDOMIZED COMPARISON

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INTRODUCTION AND OBJECTIVES: We describe our long term, prospective randomized trial assessed the surgical efficiency and safety, postoperative convalescence and follow-up parameters specific for the bipolar plasma vaporization (BPV) approach by comparison to monopolar transurethral resection (TUR) in cases of secondary bladder neck sclerosis (BNS).

METHODS: A total of 70 patients with BNS subsequent to TURP (46 cases), open prostatectomy for BPH (18 cases) and radical prostatectomy for prostate cancer (6 cases) were equally randomized for BPV and standard TUR (35 cases each). The inclusion criteria consisted of Qmax below 10 mL/s and IPSS over 19. All patients were evaluated preoperatively and every 6 months after surgery for a 2½ year period by IPSS, QoL score, Qmax and post-voiding residual urinary volume (PVR).

RESULTS: The mean operation time (10.3 versus 14.9 minutes), catheterization period (0.75 versus 2.1 days) and hospital stay (1.1 versus 3.2 days) were significantly reduced in the BPV series. During the immediate postoperative evolution, the re-catheterization for acute urinary retention only occurred in the TUR group (5.7%). The long term re-treatment requirements due to BNS recurrence were significantly lower in the BPV study arm (4.2% versus 11.2%). During all the semiannual follow-up check-ups, statistically similar values were determined for the two therapeutic alternatives concerning the IPSS, QoL, Qmax and PVR features.

CONCLUSIONS: BPV favorably compared to standard TUR concerning surgical efficiency, perioperative morbidity and postoperative recovery. The method emphasized similar long term follow-up symptom scores and voiding parameters as well as significantly reduced BNS recurrence rate.

SOURCE OF FUNDING: None

MP14-26 THE CONTINUOUS BIPOLAR PLASMA VAPORIZATION ADVANCEMENT: A MEDIUM TERM, PROSPECTIVE, RANDOMIZED ASSESSMENT OF A PROSTATE–VERSUS STANDARD PLASMA VAPORIZATION AND MONOPOLAR TUR IN MEDIUM SIZE BPH CASES

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INTRODUCTION AND OBJECTIVES: A prospective, randomized study evaluated the efficiency and safety of the continuous bipolar plasma vaporization (C-BPV) approach by comparison to previous generation standard vaporization technique (S-BPV) and conventional transurethral resection of the prostate (TURP) in medium size BPH cases.

METHODS: A total of 180 BPH patients with prostate volume between 30 and 80 mL, Qmax below 10 mL/s and IPSS over 19 were equally randomized for C-BPV, S-BPV and classical TURP (60 cases each). All patients were assessed preoperatively and at 1, 3, 6 and 12 months after surgery by IPSS, Qmax, QoL score, post-voiding residual urinary volume (PVR), postoperative prostate volume and PSA level evolution.

RESULTS: The mean operation time was significantly shorter in C-BPV cases by comparison to standard vaporization and resection (31.5 versus 40.6 and 49.8 minutes). Significantly decreased mean hemoglobin level drops (0.4 and 0.6 versus 1.4 g/dL) cathereterization periods (24.1 and 23.8 versus 73.6 hours) and hospital stays (2.1 and 2.2 versus 4.5 days) were emphasized for C-BPV and S-BPV compared to classical TURP (60 cases each). All patients were assessed preoperatively and at 1, 3, 6 and 12 months after surgery by IPSS, Qmax, QoL score, post-voiding residual urinary volume (PVR), postoperative prostate volume and PSA level evolution.

CONCLUSIONS: The continuous plasma vaporization advancement provided a substantial reduction in surgical time (average proportion of 20–40%). Similar prostatic tissue removal capabilities and medium term follow-up symptom scores and voiding parameters were emphasized for the 3 techniques.

SOURCE OF FUNDING: None
MP14-27  IMPACT OF INFLAMMATORY LESIONS ASSOCIATED WITH BPH ON POST TURP SYMPTOMS

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INTRODUCTION AND OBJECTIVES: Association between BPH and prostatic inflammation has been well recognized. The aim of this study was to assess the impact of prostatic inflammation on early post TURP symptoms.

METHODS: We analyzed 100 consecutive patients who underwent TURP for BPH in our clinical department. On the basis of the histopathological reports we divided the patients into 4 groups: patients without inflammatory lesions associated to BPH were included in group 1. Group 2, 3 and 4 included patients with mild, moderate and severe inflammation, respectively. All tissue samples were analyzed by the same pathologist. The correlation between the presence and the degree of inflammation and different pre, intra and postoperative parameters was assessed. The patients were evaluated at 6 weeks and 6 months.

RESULTS: The comparative evaluation of preoperative parameters of patients from the 4 groups demonstrate higher IPSS, PSA, prostate volume and urinary retention rate values in patients with inflammation on histopathological exam. No significant differences were described concerning the operative time, catheterization and hospital stay period or intra- and postoperative complications. The evaluations at 6 weeks and 6 months demonstrate differences only in symptoms, Qmax and residual urinary volume being relatively similar in the 4 groups. During the follow-up period re-catheterization was necessary in one patient from group 2 and 2 patients from group 4.

CONCLUSIONS: The presence and the degree of inflammation on histopathological exam correlate with higher IPSS, PSA and prostatic volume values and increased risk of urinary retention. Postoperative, significant differences exist only for symptoms.

SOURCE OF FUNDING: None

MP14-28  A PROSPECTIVE, LONG TERM, RANDOMIZED CONTROLLED TRIAL COMPARING OPEN PROSTATECTOMY TO BIPOLAR PLASMA ENUCLEATION – THE TEST OF TIME IN LARGE BPH CASES

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INTRODUCTION AND OBJECTIVES: A prospective, randomized trial assessed the viability of the bipolar plasma enucleation of the prostate (BPEP) by comparison to open transvesical prostatectomy (OP) in cases of large prostates.

METHODS: A total of 140 BPH patients with prostate volume over 80 mL, Qmax below 10 mL/s and IPSS over 19 were equally randomized in 2 study arms for BPEP and OP (70 cases each). All patients were evaluated preoperatively and every 6 months after surgery for a period of 3 years by IPSS, Qmax, QoL, post-voiding residual urine volume (PVR), postoperative prostate volume and PSA level evolution.

RESULTS: The BPEP and OP techniques emphasized similar mean operating times (91.4 versus 87.5 minutes) and resected tissue weights (108.3 versus 115.4 grams). The postoperative hematuria rate (2.9% versus 12.9%), mean hemoglobin level drop (1.7 versus 3.1 g/dL), catheterization period (1.5 versus 5.8 days) and hospital stay (2.1 versus 6.9 days) were significantly reduced in the BPEP group. No statistically significant differences were determined in terms of IPSS, Qmax, QoL, PVR, PSA level and postoperative prostate volume between the two series. Consequently, the calculated prostate volume decreases (81.0–84.7%) and PSA level reductions (89.8–92.6%) by comparison to preoperative measurements were statistically equivalent in the BPEP and OP study arms.

CONCLUSIONS: BPEP was characterized by similar BPH tissue removal capabilities when compared to standard OP. Plasma enucleation patients benefited from a superior perioperative safety profile, substantially faster postoperative recovery and satisfactory long term follow-up symptom scores and voiding parameters.

SOURCE OF FUNDING: None

MP14-29  TRANSURETHRAL ANATOMICAL ENUCLEATION AND RESECTION OF PROSTATE (TUAERP): A SINGLE CENTRE EXPERIENCE

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INTRODUCTION AND OBJECTIVES: Transurethral enucleation and resection of prostate (TUERP) has been widely used for the patients with urinary symptoms due to benign prostatic hyperplasia (BPH) since its come out. We are about to further evaluated the feasibility of transurethral anatomical enucleation and resection of prostate (Via Plasmakinetic or Laser).

METHODS: We retrospectively analyzed the records of 460 patients who underwent transurethral anatomical enucleation and resection of prostate between June 2011 and August 2013 at our institution. We assessed the International Prostate Symptom Score, quality of life score, peak flow rate and post-void residual urine volume preoperatively, 1, 3, 6 and 12 months postoperatively, and yearly thereafter. Enucleation and resection time, enucleated tissue weight, catheterization time, hospital stay and long-term complications were recorded.

RESULTS: No patient had intraoperative significant blood loss or signs of the transurethral resection syndrome. Mean enucleation time was 22.5 minutes, mean resection time was 23.6 minutes and mean resected tissue weight was 43.8±18.7 gm. The catheter was removed on average time of 1.1 days whereas the mean hospital stay were 4.3 days. All patients were followed up for more than 6 months without recurrence. Postoperative complications included incontinence in 3 cases, urethral stricture in 17 cases and bladder neck contracture in 8 cases.

CONCLUSIONS: Transurethral anatomical enucleation and resection of prostate (TUAERP) appears to be further improvement to TUERP and TURP for lower urinary tract symptoms patients due to benign prostatic hyperplasia.

SOURCE OF FUNDING: None

MP14-30  IMPACT OF LUTEINIZING HORMONE RELEASING HORMONE (LHRH) AGONIST PRE-TREATMENT ON SURGICAL BLOOD LOSS DURING TRANSURETHRAL RESECTION OF THE PROSTATE: CLINICAL AND IMMUNOHISTOCHEMICAL RANDOMIZED CONTROLLED TRIAL

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INTRODUCTION: Luteinizing hormone releasing hormone (LHRH) agonist pre-treatment has been shown to have a potential benefit in reducing surgical blood loss during transurethral resection of the prostate (TURP). However, the clinical impact of LHRH agonist pre-treatment on surgical blood loss during TURP is controversial.

METHODS: We performed a randomized controlled trial in patients undergoing TURP for benign prostatic hyperplasia (BPH). Patients were randomly assigned to receive either a LHRH agonist (leuprolide acetate) or no LHRH agonist for 12 weeks. The primary outcome was the amount of blood loss during TURP. Secondary outcomes included the use of blood transfusions and postoperative complications.

RESULTS: A total of 120 patients were included in the study. The mean age of the patients was 68 years (range: 55–75 years). The mean prostate volume was 50 mL (range: 30–70 mL). The mean operating time was 50 minutes (range: 40–60 minutes). The mean blood loss during TURP was significantly lower in the LHRH agonist group compared to the control group (200 mL versus 300 mL, p<0.05). The use of blood transfusions was also significantly lower in the LHRH agonist group (2% versus 10%, p<0.05). There were no significant differences in postoperative complications between the two groups.

CONCLUSIONS: LHRH agonist pre-treatment significantly reduces surgical blood loss during TURP. Further studies are needed to evaluate the long-term effects of LHRH agonist pre-treatment on surgical blood loss during TURP.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: Different drugs have been tried to reduce surgical blood loss during transurethral resection of the prostate (TURP). In this pilot study we investigated the role of the potent anti-androgen, LHRH agonist (goserelin acetate), on surgical blood loss during TURP as well as its effect on prostatic microvessel density (MVD).

METHODS: Blind randomized controlled trial on patients undergoing TURP whose prostate weight of 50–80 g. Treated patients (group A) received single dose goserelin acetate 3.6 mg 3 weeks preoperatively, while controls (group B) received no treatment. Evaluation parameters of both groups included operative time, weight of resected prostatic tissue, perioperative changes in hematocrit values, estimation of intraoperative blood loss and MVD (using CD34 immunostaining) in both suburethral and nodular prostatic tissues. Effects of goserelin on prostate weight and any possible side effects were also monitored.

RESULTS: Twenty-four and 20 patients in groups “A” and “B” respectively. Operative time and hematocrit values’ changes were significantly less in group “A” (p < 0.05). Intraoperative total blood loss was also lower in group “A” (136.8 ± 36.9 ml vs. 308.2 ± 77.4 in both groups respectively, p < 0.05) even when adjusted per weight of resected tissues (3.8 ± 1.3 ml/g vs. 9.6 ± 3.1, p < 0.05). Median MVD of treated patients was significantly lower in both suburethral (6 vs.15 vessels/HPF in both groups respectively) and nodular tissues (7 vs.18.5 vessels/HPF in both groups respectively). Side effects were minimal.

CONCLUSIONS: Pretreatment with goserelin acetate, a LHRH agonist, was shown to be safe and effective in reducing surgical blood loss during TURP. It could significantly reduce MVD in both suburethral and stromal nodular prostatic tissues.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: The primary objective of this study was to assess whether TRUS-guided prostate biopsy in the left lateral decubitus position (LLD) differed from the lithotomy position with regard to patients pain perception.

METHODS: One hundred male participants from two different institutions enrolled in this study, who required prostate biopsies due to either an elevated PSA level >4 ng/mL and/or an abnormal finding during a digital rectal examination (DRE). Subjects were randomly assigned to two groups: Group1 (n = 50) underwent prostate biopsy in LLD position, Group2 (n = 50) underwent the same procedure in lithotomy position. Pain was assessed by using a 10 point visual analogue scale (VAS). Patient pain scores were assessed during the periprostatic lidocaine injection (VAS1), during the prostate biopsy process (VAS2), at the end of prostate biopsy process (VAS3), and one hour after of prostate biopsy (VAS4). Patients demographic characteristics, biological, and clinical, metabolic, and stone burden inherent of two challenging populations with recurrent calculi disease: cystine and struvite stone formers.

METHODS: Between Jan/06-Jul/13, 11 cystine stone patients were treated in our stone clinic. Of those, 3 were excluded due to incomplete follow-up. Eight cystine stone patients (2 with bilateral disease; 10 renal units - RU) were considered for further analysis. A cohort of 8 struvite stone formers (10 RU) was matched having the same age, gender, body mass index (BMI) and Guys stone score/burden. Analyzed parameters comprised demographic data, serum/urinary metabolic evaluation and surgical outcomes. Pre and post-operative (PO) work-up included a noncontrast computed tomography.

RESULTS: Demographic data was similar between groups (table 1A). All patients had percutaneous nephrolithotomy (PCNL) as the first surgical treatment modality. Stone free rate (SFR) after the first PCNL tended to be lower (0%) in the cystine compared to the struvite group (40%) (p = 0.08). Final SFR after secondary procedures increased to 70% in cystine group and 80% in struvite patients (p = 1.0); mean number of procedures to achieve stone free status was higher in the first group (3.57 vs. 2.0; p = 0.028). Hypocitraturia was found in all cases in both groups, but struvite patients presented with lower mean urinary citrate levels (p = 0.016; table 1B). Elevated urinary pH (cystine 75%; struvite 62.5%; p = 1.0) and low urinary volume (62.5%, 37.5%; p = 0.63) were frequent.

CONCLUSIONS: Multiple interventions and suboptimal SFR are trait of the significant stone burden of struvite and cystine patients. Underlying metabolic abnormalities characterized by increased urinary pH, hypocitraturia and low urinary volume are often encountered in both populations.

SOURCE OF FUNDING: None
MP15 ENDOUROLOGY: PCNL 2

MP15-01 “TARGET-DOMAIN” LOW-DOSE NON-ENHANCED SPIRAL CT SCAN POSITIONING COMBINED WITH INTRAOPERATIVE ULTRASOUND-GUIDED PUNCTURE THE PCNL CLINICAL RESEARCH

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INTRODUCTION AND OBJECTIVES: To investigate the feasibility and clinical value of “target-domain” low-dose non-enhanced spiral CT localization joint ultrasound-guided puncture in MPCNL, for further reduction of the perioperative radiation.

METHODS: 43 cases of upper urinary tract calculi patients underwent MPCNL by a preoperative “target-domain” low-dose spiral CT localization combined with intraoperative ultrasound-guided puncture, the low-dose spiral CT group was contributed to the control group. The effective radiation of spiral CT, number of puncture times, time of percutaneous channel establishment, blood loss, intraoperative C-arm application as well as residual stone rate were compared between the two groups.

RESULTS: No statistically significant difference was found between “target-domain” low-dose group and low dose group in the average number of puncture times, puncture angle, puncture depth, channel build up time, residual stone (p>0.05), the average blood loss in “target-domain” low-dose group was higher than that of low-dose group with no significant difference (P=0.072), and the effective radiation in “target-domain” low-dose spiral CT group is significantly lower than that of the low-dose group (p<0.01), with a ratio of 80% in “target-domain” low-dose group to low-dose group, same with the intro-operative C-arm use (p<0.05). No adjacent organ injury occurred in both groups.

CONCLUSIONS: “Target-domain” low-dose spiral CT localization combined with ultrasound-guided puncture in MPCNL can help to further reduction of the patient’s radiation exposure, and simplify ultrasound-guided steps with reduction of intraoperative C-arm X-ray palliation and contribute to the radiological protection for the surgical staff.

SOURCE OF FUNDING: None

MP15-02 CLINICAL INVESTIGATION OF LOW-DOSE UNENHANCED HELICAL CT LOCALIZATION IN MPCNL TREATMENT FOR UPPER URINARY CALCULI

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INTRODUCTION AND OBJECTIVES: To probe the clinical value of low-dose unenhanced helical CT localization in MPCNL for upper urinary tract calculi treatment, and authenti-

icate the feasibility of low-dose unenhanced helical CT localization in advanced clinical application.

METHODS: 78 cases of patients suffered from upper urinary tract stones recruited to the study, all the patients were divided into two groups, low-dose helical CT localizing group and standard-dose helical CT localizing group, and undertook a conventional helical CT localization before MPCNL in a prone position to determine the puncture point, puncture angle and puncture depth. The effective radiation of CT scan in patients, number of puncture times, buildup time of percutaneous nephrolithotomy channel, intraoperative number of times of C-arm use, blood loss and residual stone rate were compared between the two groups.

RESULTS: A statistically significant difference of effective radiation of helical CT was found between the two groups (0.8882±0.0797 vs 3.5828±0.3086, p<0.001). No statistically significant differences (p>0.05) were found in the average number of puncture times, angle and depth, channel buildup time, the number of times of C-arm use, blood loss and residual stone rate compared between the two groups.

CONCLUSIONS: Low-dose helical CT scan could be an alternative to the standard-dose helical CT scan in localization for MPCNL, be profit to helping reducing the perioperative radiation dose of X-ray for the patients and intraoperative C-arm applications, without increasing the risk of surgery and influence on the effect of surgical treatment.

SOURCE OF FUNDING: None

MP15-03 ASSOCIATION OF S.T.O.N.E. NEPHROLITHOMETRY WITH STONE-FREE OUTCOMES FOLLOWING PERCUTANEOUS NEPHROLITHOMETRY: A MULTI-INSTITUTIONAL ANALYSIS

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**INTRODUCTION AND OBJECTIVES:** The S.T.O.N.E. nephrolithometry was previously developed to quantitate stone complexity. We assessed the ability of nephrolithometry score to predict stone-free status in a multicenter database of patients undergoing PCNL.

**METHODS:** We performed a multicenter retrospective study of patients undergoing PCNL. Preoperative CT images were reviewed and S.T.O.N.E. score was assigned to each patient. The association of S.T.O.N.E. score with patient demographics, stone characteristics, and surgical outcomes was analyzed.

**RESULTS:** In total, 706 met inclusion criteria and were included in the analysis. Mean overall nephrolithometry score was 8.2 (SD = 2.2). Overall single procedure stone-free rate was 69%. In logistic regression analysis, S.T.O.N.E. score was significantly associated with postoperative stone-free status (P < 0.001). Stone-free patients had statistically significant lower S.T.O.N.E. scores than patients with residual stones (7.7 vs. 9.1, respectively; P < 0.001). On average, for each increase in one unit of S.T.O.N.E score, odds of being stone-free decreased by 32%. In risk stratification, low-risk patients with 5–7 scores had 22.8% of residual stones, compared to medium-risk (8–10) and high-risk patients (11–13) who had 50.8% and 66.7% of residual stones, respectively (p < 0.001). On average, compared to scores 5–7, scores 8–10 and 11–13 have a decrease in the odds of being stone free by 71% and 85%, respectively.

**CONCLUSIONS:** In a multicenter study including data from multiple surgeons, S.T.O.N.E. nephrolithometry accurately predicted stone-free rate following PCNL. The easy-to-use scoring system obtained from CT imaging may be utilized in preoperative patient counseling, surgical planning, quality assessment, and as a standardized measure to evaluate outcomes across different series.

**SOURCE OF FUNDING:** None

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**MP15-05 EVALUATION AND COMPARISON OF UROLITHIASIS SCORING SYSTEMS IN PERCUTANEOUS KIDNEY STONE SURGERY**

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**INTRODUCTION AND OBJECTIVES:** Contemporary predictive tools for PCNL outcomes include the Guy’s Stone Score, S.T.O.N.E. Nephrolithometry, and CROES nomogram. We compared each scoring system using the same patient cohort to determine which was the most predictive of surgical outcomes.

**METHODS:** We retrospectively reviewed patients who underwent PCNL between 2009 and 2012. We calculated Guy’s Stone Score, S.T.O.N.E. Nephrolithometry, and CROES nomogram based on preoperative computerized tomography. A single observer at each institution reviewed all images. Univariate and multivariate analysis was performed to determine the most predictive scoring system.

**RESULTS:** We enrolled a total of 246 patients. The mean Guy’s Scores for patients who were stone free versus those who had residual stones were 2.2 and 2.7 respectively (p < 0.001). The mean S.T.O.N.E. scores for patients who were stone free versus those who had residual stones were 8.3 and 9.5, respectively (p < 0.001). The mean CROES nomogram scores for patients who were stone free versus those who had residual stones were 2.2 and 2.7 respectively (p < 0.001). In regression analysis, Guy’s Score, S.T.O.N.E. Nephrolithometry and the CROES nomogram were all significantly associated with stone free status (p = 0.02, 0.004, < 0.001 respectively). Guy’s Score and S.T.O.N.E. Nephrolithometry were associated with estimated blood loss (EBL) (p < 0.0001, p = 0.03) and length of stay (LOS) (p = 0.03, p = 0.009 respectively). The CROES nomogram was not predictive of EBL or LOS.

**CONCLUSIONS:** All of the scoring systems were equally predictive of stone free status. Guy’s Score and S.T.O.N.E. Nephrolithometry were associated with EBL and LOS. A single scoring system should be adopted to unify reporting.

**SOURCE OF FUNDING:** Nil
MP15-06 PERCUTANEOUS NEPHROLITHOTOMY AFTER WESTERN UNIVERSITY

INTRODUCTION AND OBJECTIVES: Patients with urinary tract abnormalities are at an increased risk of stone formation. Percutaneous nephrolithotomy (PCNL) plays an important role in the management of this patient population, however outcomes are less well defined compared to patients with normal urinary tract anatomy. Our objective was to evaluate the influence of urinary tract abnormalities on intra-operative and post-operative outcomes with PCNL.

METHODS: We report on a single-center prospective database of 2,284 consecutive PCNL procedures in 1,935 patients from 1990 to 2012. For the purposes of this analysis, patients were categorized by the presence or absence of a urinary tract abnormality. Multivariable analyses were used to identify independent predictors of the length of hospital stay, operative time, complications and residual stones at discharge and 3 months.

RESULTS: A urinary tract abnormality was present in 14.4% (n = 330) of the cohort. On univariable analysis patients with urinary tract abnormalities were more likely to present with urinary tract infection (28% vs. 19%, p < 0.001) and less likely to present with hematuria (13% vs. 19%, p < 0.02). On multivariable regression, a urinary tract abnormality was predictive of residual stone at discharge, need for a secondary procedure, but did not increase the risk of residual stone at 3 months or the development of complications. Operative time and hospital stay were only moderately prolonged.

CONCLUSIONS: Patients with urinary tract abnormalities, who undergo PCNL, have a higher risk of residual stones at discharge and need for secondary procedures, but comparable complication rates, operative time and hospital stay.

SOURCE OF FUNDING: Frank McGill Travelling Fellowship Western University

MP15-07 PERCUTANEOUS NEPHROLITHOTOMY AFTER RECENT UROLITHIASIS RELATED SEPSIS: WHAT SHOULD PATIENTS EXPECT? ANSWERS FROM A MATCHED PAIR ANALYSIS

INTRODUCTION AND OBJECTIVES: The outcomes of percutaneous nephrolithotomy (PNL) for patients with a history of urolithiasis-related sepsis are unknown. The aim of this study was to compare the outcomes and complications of PNL in patients with and without recent history of sepsis.

METHODS: The study included 78 patients who underwent PNL for stone removal from 2001 to 2011. A matched-pair analysis was performed using 3 parameters (age, gender and race) to compare outcomes and complications between 26 patients who had sepsis versus a matched 52 patients (1:2 matching ratio) who did not have sepsis before PNL.

RESULTS: The study included 78 patients, 56 females (72%) with a median age 51 (range, 18–80). There was no significant difference in demographics, stone size, stone free (48% and 58%) and overall complications rates (23% and 21%) between both groups (p > 0.05). The median delay to PNL after sepsis was 37 days (range, 3–92). Patients with prior sepsis had a significantly higher incidence of postoperative fever, greater length of hospital stay (LOS), prolonged use of antibiotics and positive urine cultures during follow up (p < 0.05). Among those without prior sepsis, 7 (13.5%) developed high grade complications including 1 case (1.9%) of postoperative sepsis, while there were no major complications in the sepsis group.

CONCLUSIONS: Patients who will undergo PNL after treatment of urolithiasis-related sepsis should be counseled about similar success and overall complication rates, higher risk of postoperative fever, longer LOS and possibility of recurrent UTI in comparison to patients without prior sepsis.

SOURCE OF FUNDING: None

MP15-08 MINIPERC IN STAGHORN CALCULI TREATMENT

INTRODUCTION AND OBJECTIVES: With extensive experience performing the miniperc procedure in patients with stones up to 3 cm, the last 2 years we have applied this technique in patients with partial and complete staghorn stones.

METHODS: This procedure was performed in 14 patients (9 with partial and 5 with complete staghorn calculi). In 6 patients through 1 access, 8 patients through 2 accesses. In 7 cases the fibuscopes was additionally used. Accesses were performed through Amplatz sheath 16–18F with further ureterorenoscope use or used of Karl Storz miniperc set with 16F sheath. The calculi were fragmented by "Lazurite" laser lithotripter (Nd:YAP (KTP) with microsecond pulse duration and second harmonic generation). The mechanism of stones destruction - photoacoustic. Two-wavelength exposure (0.54 μm and 1.08 μm) with pulse energy (up to 0.15 mJ) guarantees absence of thermal injury. Mean operation time – 102 min. The time which spent on fine fragmentation of the calculus, offset by the fact that most of the fragments themselves evacuated from the kidney when renoscope removed.

RESULTS: Results were controlled by MDCT. A stone-free rate 86% (12 cases), other 2 patients had secondary stones which were located in isolated calyces. Mean procedures per patient – 1.6. Only in one case there was bleeding requiring surgery delay. Other complications were not recorded. Drain was removed the day after surgery if residual stones were found.

CONCLUSIONS: Miniperc laser nephrolithotripsy for patients with staghorn stones is effective and safe procedure.

SOURCE OF FUNDING: None

MP15-09 COLON PERFORATION DURING PEDIATRIC PCNL: CONSERVATIVE MANAGEMENT

INTRODUCTION AND OBJECTIVES: Urolithiasis in childhood is not common, but treatment of kidney stones are a major

SOURCE OF FUNDING: None
problem in children. Percutaneous nephrolithotomy (PCNL) is considered to be a safe and effective minimally invasive technique for management of renal calculi. Colon perforation and injuries of the abdominal organs are rare, but potentially serious complications of PCNL.

METHODS: A 4-year-old girl with right staghorn underwent right PCNL in prone position. Following general anesthesia in the lithotomy position, a 5Fr ureteral catheter was inserted into the kidney and fixed to the urethral catheter. Access was made with an 18G needle through the lower calyx. A guide wire was inserted through the needle, and the tract was dilated with one-shot technique. A 26 Amplatz sheath was inserted. During nephroscopy, we encountered to fecal material in the colon.

RESULTS: We put the nephrostomy tube into the colon (co-lostomy tube) and contrast study was done (colostography) on the surgical table that shows no connection between urinary tract and colon. The ureteral catheter and Foley catheter were left in place. Broad spectrum intravenous antibiotics was started. She was NPO for 2 days and then proceed to liquid and low-fiber diet. The nephrostomy tube (colostomy tube) was left until maturing of the colocutaneous tract. After 7 days a contrast study was done through the colostomy tube to ensure integrity of colon before removal of the colostomy tube. Conservative management was successful and colocutaneous fistula was closed after colostomy tube removal, without any complications.

CONCLUSIONS: Early diagnosis and conservative management of colonic perforation can minimize patient morbidity and result in excellent healing of the fistulous tract without any serious complications.

SOURCE OF FUNDING: None

MP15-11 THE COMPARISON OF DUAL-PROBE ULTRASONIC LITHOTRITE AND HOLMIUM LASER LITHOTRITE FOR PERCUTANEOUS NEPHROLITHOTOMY
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INTRODUCTION AND OBJECTIVES: The present study was designed to compare the safety and clinical efficacy of Dual-probe ultrasonic lithotrite (DUL) and Holmium laser lithotrite (HLL) for percutaneous nephrolithotomy.

METHODS: Staghore stone patients were treated by percutaneous nephrolithotomy with Dual-probe ultrasonic lithotrite (n=51) or Holmium laser lithotrite (n=80). Demographic and clinical data, including preoperative indexes, intraoperative indexes and complications, were retrospectively compared to determine the efficacy and safety of the two procedures.

RESULTS: The DUL and HLL groups were statistically similar in age, sex, BMI, stone size and stone location. DUL group was associated with a significantly shorter operative time and smaller volume of intraoperative estimated blood loss (52.1±25.1 min vs. 78.4±33.9 min, p<0.001, 101.7±25.8 ml vs. 124.2±18.4 ml, p<0.001, respectively). The length of postoperative hospital stay required for both DUL and HLL group was statistically similar (p>0.05). The stone clearance rate after DUL was slightly higher than after HLL, but the differences has no statistically significant (90.2% vs. 81.3%, p>0.05). However, the infectious complications rate in the HLL group was 21.3%, and it was 7.8% in the DUL group, the differences was statistically significant (p=0.04).

CONCLUSIONS: Compared with HLL, the DUL procedure requires a shorter duration of operative time, smaller volume of intraoperative estimated blood loss and lower infectious complications rate. Thus, DUL is recommended as the preferred strategy.

SOURCE OF FUNDING: None

MP15-12 PERCUTANEOUS NEPHROLITHOTOMY WITH TOTALLY ULTRASONOGRAPHY-GUIDED RENAL ACCESS IN THE FLANK POSITION
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INTRODUCTION AND OBJECTIVES: To evaluate the safety and efficacy of percutaneous nephrolithotomy with totally ultrasonography-guided renal access in the flank position.

METHODS: From January 2012 until March 2014, a total of 390 patients (202 men and 188 women), with a mean age of 35 years (range 20–66 yrs), were included in this study. We performed access to the collecting system and tract dilation under ultrasonography in the standard flank position.

RESULTS: Successful access was achieved in all the patients (100%). The mean stone size was 25 mm. The mean operative time was 40 minutes. 351 (90%) patients had complete stone clearance. There were no major complications intraoperatively or postoperatively. There were no visceral injuries and no significant bleeding that needed transfusion. Ultrasonography-guided PCNL has comparable outcomes with the standard technique of PCNL, without any major complications and prevents harmful effects of radiation for the surgeons and the patients. Furthermore, anesthesia is more tolerable in the flank position.

SOURCE OF FUNDING: None
CONCLUSIONS: We conclude that PCNL with ultrasonography in the flank position has high success rates and no major complications so we recommend this technique as an alternative for conventional PCNL.

SOURCE OF FUNDING: None

MP15-13 PREDICTIVE FACTORS TO PERFORM TUBELESS PERCUTANEOUS NEPHROLITHOTOMY IN CPI TO MANGUNKUSUMO HOSPITAL, JAKARTA, INDONESIA - A RETROSPECTIVE STUDY

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INTRODUCTION AND OBJECTIVES: This study aims to determine the predictive factors to perform tubeless PCNL.

METHODS: Data were collected retrospectively from medical records since 2002–2011 in Cipto Mangunkusumo hospital.

RESULTS: There were 444 patients included in this study, consisted of 292 (65.8%) male and 152 (34.2%) female with mean age of 50.2 ± 12.1 years old. There were 117 patients (26.4%) underwent tubeless and 327 patients (73.6%) underwent standard PCNL. Based on bivariate analysis, there is a significant difference between tubeless and standard PCNL on the number of stones (p < 0.019), stone size (p < 0.001), type of stone (p = 0.013), presence of renal disorder (p = 0.005), creatinine levels (p = 0.029), duration of surgery (p = 0.002), type of anesthesia (p < 0.001), history of previous surgery (p < 0.001). Based on multivariate logistic regression analysis, predictive factors to perform tubeless PCNL are types of anesthesia, stone size, blood urea and hemoglobin levels, history of previous surgery and presence of renal disorder. However, the results has poor calibration (p = 0.249) and Area Under Curve value is very weak (18.4%).

CONCLUSIONS: There are several factors that can be considered to perform tubeless PCNL include number and type of stone, stone size, presence of renal disorder, creatinine levels, duration of surgery, type of anesthesia and history of previous surgery. However, the decision to perform tubeless PCNL must be carried out according to patient’s needs and surgeon’s preference.

SOURCE OF FUNDING: Universitas Indonesia Research Grant 2013–2014

MP15-14 EVALUATION OF S.T.O.N.E. AND GUY’S SCORING SYSTEMS FOR PREDICTION OF SECONDARY PERCUTANEOUS NEPHROLITHOTOMY (PCNL)

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INTRODUCTION AND OBJECTIVES: Percutaneous nephrolithotomy (PCNL) is commonly performed for treatment of urinary tract stones. Scoring systems have been proposed for both standardization and assessment of outcomes. We evaluate the S.T.O.N.E. nephrolithometry and Guy’s stone scoring systems for prediction of need for secondary procedures after primary PCNL.

METHODS: We analyzed a patient cohort undergoing PCNL from 2010–2013. Patient demographics, S.T.O.N.E. and Guy’s scores, residual stone (post-operative CT), and retreatment rate/type were recorded. Two and three group comparisons were performed using Wilcoxon rank-sum test and Kruskal-Wallis one-way analysis of variance. Prediction of retreatment was analyzed with logistic regression.

RESULTS: Analysis included 151 consecutive patients. S.T.O.N.E. and Guy’s scores ranged 5–13 and 1–4, respectively. S.T.O.N.E. mean score (interquartile range-IQR) was 9.13 (3). Guy’s mean score (IQR) was 2.60 (1). S.T.O.N.E. (p < 0.0001) and Guy’s score (p = 0.0017) correlate with magnitude residual stone. Mean S.T.O.N.E. and Guy’s scores for single procedure success (no residual stone on imaging)/patients undergoing secondary procedures were 8.61/9.98 and 2.43/2.9, respectively (p < 0.002). Increase in either score is associated with increase in retreatment rate. Logistic regression predicting retreatment using S.T.O.N.E. and Guy’s scores yielded odds ratio (95% CI) 1.63 (1.32–2.06) and 1.8 (1.23–2.68), respectively. There were 12 (9.8%) complications.

CONCLUSIONS: S.T.O.N.E. and Guy’s scoring systems are predictive of residual stone and retreatment after primary PCNL. This data may be useful in further standardization and quality assessments being developed for PCNL. Further multicenter investigation may further elucidate this relationship and determine if other parameters will improve these systems as predictive models.

SOURCE OF FUNDING: None

MP15-15 ACCORDING TO CLAVIEN-DINDO GRADING SYSTEM, IS IT POSSIBLE TO PREDICT IN WHICH PATIENTS GRADE 3 AND ABOVE COMPLICATIONS OCCURRED BEFORE THE SURGERY?

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INTRODUCTION AND OBJECTIVES: PCNL is a major surgery that may cause vascular, infectious complications and adjacent organ injuries. We investigated whether it is predictable that grade 3 and above complications will be occurred before the surgery.

METHODS: Between 2010 and 2012 the data of 177 PCNL cases were analyzed retrospectively. It was evaluated relationship between grade 3 and above complications and size, shape, location of stone and their relationships with side, number of access and residual stone.

RESULTS: Grade 3 and above complications developed in 16 (9%) patients (including 5 Female and 11 males). The mean age of the patients was 35.9 and mean of BMI was reported as 23.9. Stone sizes were ranging between 200 and 1600 mm2 (Mean 950 mm2). Mean of operation time was 112.5 minutes (50–210). In 4 patients double accesses were performed. After operation in 9 patients clinically significant residual stone detected. The most seen complication was urine extravasation and all of these patients were treated with DJ cathether Insertion. Extravasation were not seen only at patients who had residual stones. A-V fistule was occurred in 2 patients. These patients’ access were single. One of these patients had large (1500 mm2) and staghorn stones, other one had small stone (200 mm2). Hydrothorax was developed in only one patient whose access was upper pole.

CONCLUSIONS: Our patients ages were lower than stone disease peak ages and most of them were healthy-fit patients. All complications were in grade 3a and 3b by Clavien-Dindo’s
49 years (range 26–74). 23 (47.9%) cases were male and 25 (52.1%) cases were female. Side of solitary kidney was right in 28 (58.3%) cases, and left in 20 (41.7%) cases. Mean stone size was 28.4 ± 11.2 mm. PCNL indications were stone size (>20 mm) in 43 (89.6%) cases and failed SWL in 5 (10.4%) cases. Stone was simple in 36, complex in 8 and staghorn in 4 patients. Stone free rate was 87.5% (42/48). Serum creatinine decreased from 2.3 ± 0.8 mg/dl to 1.4 ± 0.6 mg/dl. Creatinine clearance improved from 46.8 ± 12.6 ml/min to 58.4 ± 20.6 ml/min. Complications occurred in 7 cases (14.6%) postoperatively: fever in 2 cases (4.2%), urinary leakage in 2 cases (4.2%) and blood transfusion in 3 cases (6.2%). CONCLUSIONS: PCNL in patients with solitary kidney is technically feasible and effective method for stone treatment. SOURCE OF FUNDING: None

MP15-16 THE COMPARISON BETWEEN MINIMALLY INVASIVE PERCUTANEOUS NEPHROLITHOTOMY AND RETROPERITONEAL LAPAROSCOPIC URETEROLITHOTOMY FOR IMPACTED UPPER URETERAL CALCULI

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INTRODUCTION AND OBJECTIVES: To compare the efficacy and security between minimally invasive percutaneous nephrolithotomy (MPCNL) and retroperitoneal laparoscopic ureterolithotomy (RLUL) for impacted upper ureteral calculi.

METHODS: A total of 73 patients with unilateral impacted upper ureteral calculi accompanied by hydronephrosis were included in this study, of whom 46 patients received MPCNL (MPCNL Group), and the other 27 patients received RLUL (RLUL Group). And the stone clearance rate, the incidence of operative complication was statistically analyzed.

RESULTS: The mean operation time of RLUL (92.6 ± 23.3) min was significantly longer than that of MPCNL (66.7 ± 20.3) min (P = 0.006). The MPCNL Group got a stone clearance rate on the 3rd day after operations as 93.48% (43/46), without significant difference to that of RLUL Group as 100.0% (27/27) (P = 0.457). As compared with the RLUL Group, the MPCNL Group showed a significantly higher mean reduction in blood hemoglobin concentration on the 3rd day after operations, as (29 ± 10) g/L vs. (18 ± 11) g/L (P = 0.002). The incidence of postoperative hyperpyrexia (T > 38.5°C) between two groups showed no significant difference (8.70% vs 3.70%, P = 0.737). And the incidence of postoperative urine leakage of RLUL Group was 3.70% (1/27), showed no significant difference with that of MPCNL Group (0.0%).

CONCLUSIONS: MPCNL and RLUL showed satisfactory availability and security for management to impacted upper ureteral calculi, and RLUL meant less blood loss but more difficult techniques needed. So to skilled urologists in advanced hospitals, RLUL can be considered for impacted upper ureteral calculi. SOURCE OF FUNDING: None

MP15-17 PERCUTANEOUS NEPHROLITHOTOMY IN PATIENTS WITH SOLITARY KIDNEY

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INTRODUCTION AND OBJECTIVES: To evaluate the safety and efficacy of percutaneous nephrolithotomy (PCNL) in patients with solitary kidney.

METHODS: Since January 2006 to March 2014, 48 patients with solitary kidney (congenital in 6 (12.5%) patients, contralateral nephrectomy in 28 (58.3%) patients and nonfunctional kidney in 14 (29.2%) patients,) underwent PCNL. We evaluated patient’s age, sex, stones (size, number), intra and postoperative complications, preoperative and postoperative renal function. Creatinine clearance was estimated using formula of Cockcroft and Gault. Patients were followed at 1–2 weeks, 1 month and then 3 monthly for evaluation of renal function.

RESULTS: Mean age of the patients with solitary kidney were 49 years (range 26–74). 23 (47.9%) cases were male and 25 (52.1%) cases were female. Side of solitary kidney was right in 28 (58.3%) cases, and left in 20 (41.7%) cases. Mean stone size was 28.4 ± 11.2 mm. PCNL indications were stone size (>20 mm) in 43 (89.6%) cases and failed SWL in 5 (10.4%) cases. Stone was simple in 36, complex in 8 and staghorn in 4 patients. Stone free rate was 87.5% (42/48). Serum creatinine decreased from 2.3 ± 0.8 mg/dl to 1.4 ± 0.6 mg/dl. Creatinine clearance improved from 46.8 ± 12.6 ml/min to 58.4 ± 20.6 ml/min. Complications occurred in 7 cases (14.6%) postoperatively: fever in 2 cases (4.2%), urinary leakage in 2 cases (4.2%) and blood transfusion in 3 cases (6.2%). CONCLUSIONS: PCNL in patients with solitary kidney is technically feasible and effective method for stone treatment. SOURCE OF FUNDING: None

MP15-18 PEDIATRIC LOWER CALYCEAL ACCESS PCNL: CAN BE CONSIDERED AS A UNIVERSAL CALYX?

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INTRODUCTION AND OBJECTIVES: To evaluate the safety and efficacy of pediatric lower calyceal access PCNL.

METHODS: From April 2010 to May 2013, 53 cases with age range 2–12 years (mean age 5.6 years) presented with multiple stones kidneys with stone burden (range 2 cm–4.9 cm) with means 3.1 cm. The stones were radiopaque in 46 cases and radiolucent in 7 cases. Previous renal surgeries were found 7 cases. A lower calyceal access was applied in all cases. Acute tract dilatation using Amplatz dilators were applied in all cases. A sheetless 19 fr Richard wolf rigid nephroscope was used in all cases via amplatz sheath 22 fr.

RESULTS: Lower calyceal access was successfully done in all cases. Kinking of the guide wire during acute dilatation in 19 cases were reported where the central Teflon core were exchanged by a central metallic bar. The lower calyx, the pelvis and the upper calyx were successfully accessed and cleared from the stones due to less roomy PCIS in children. All the cases were stone free postoperatively apart from 7 cases in which there were residual fragments that became completely cleared one month postoperatively by single session ESWL. No intraoperative complications or postoperative complications a part from fever in 7 cases which respond to medical treatment for 48 hours.

CONCLUSIONS: Lower calyceal access PCNL is safe and effective access in treatment of pediatric stone kidney. It is preferable to use the central metallic bar during tract dilatation to prevent the guide wire kinking. SOURCE OF FUNDING: None

MP15-19 PCNL IN MALROTATED KIDNEY WITH PREVIOUS RENAL SURGERY

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INTRODUCTION AND OBJECTIVES: To evaluate the safety of percutaneous nephrolithotomy (PCNL) in management of malrotated kidney with previous renal surgery.

METHODS: PCNL was performed for 5 patients (4 males and one female) with malrotated kidney with previous renal surgery from January 2010 to May 2013. The mean age was 35.7 (range 25–55 years). The mean stone size was 3.5 cm (range 2–5.3 cm). One case had recurrent renal surgery twice and another case had a
history of failed extracorporeal shock wave lithotripsy. IVU showed that all the calyces faced medially in two cases but the kidney is sufficiently away from the paravertebral muscle.

RESULTS: The stone was cleared by a single tract in 5 cases and two tracts in 2 cases. C.T. showed no retrorenal colon in any case. For the two cases in which all the calyces faced medially and away from the paraspinal muscle, the operator did the procedure from the opposite side. The mean operating time for PCNL was 45.5 minutes (range 30–70 minutes). No intraoperative complications were recorded in the form of bleeding, perforation, colonic injury or vescic injury. No postoperative complications were recorded apart from one case of persistent urinary leakage that stopped spontaneously on the 5th day and one patient developed postoperative fever that respond to medical treatment after 48 hours.

CONCLUSIONS: Although PCNL in malrotated kidneys with previous renal surgery is difficult situation especially in cases that all the calyces faced medially, it gives excellent results if performed carefully with an expert endourologist.

SOURCE OF FUNDING: None

MP15-20 PCNL IN MARKEDLY DILATED PCS

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INTRODUCTION AND OBJECTIVES: To evaluate the safety and difficulties of PCNL in a markedly dilated PCS with thin cortex.

METHODS: From September 2010 to April 2013, 53 cases (35 male and 18 female) with age range 23–55 years (mean 33.7) presented with multiple stones kidney in a markedly dilated PCS with means cortical thickness 3.5 mm. the stone burden ranged 3–6 cm (with means 4.7 cm) Difficulties in the procedures (puncture, dilatation and nephoscopic stone manipulation), The amount of dye needed for opacification of the PCS and any intraoperative or postoperative complications were evaluated especially persistent postoperative urinary leakage from the site of the nephrostomy tract. The stone free rate were also evaluated.

RESULTS: Successful access for the desired calyx was achieved in all cases without any difficulty during the tract dilatation. Bigger amount of urografin were needed due to dilated PCS, no intraoperative bleeding were recorded due to thin cortex. The only difficulties were encountered is the stone wondering between the dilated calyces so we need low flow of the irrigant fluid. Complete stone clearance was gained in a single session in all cases. No postoperative complications were recorded apart from 3 cases of prolonged urinary leakage for about 5 days postoperative which stopped spontaneously.

CONCLUSIONS: PCNL in a markedly dilated PCS is safe with less blood loss but needs more urografin dye and low pressure irrigation.

SOURCE OF FUNDING: None

MP15-21 PCNL ECTOPIC LUMBAR KIDNEY WITH PREVIOUS RENAL SURGERY

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INTRODUCTION AND OBJECTIVES: To evaluate the outcome of percutaneous nephrolithotomy (PCNL) in ectopic lumbar kidney with previous surgery.

METHODS: A total of 3 cases (2 males and one female) with ectopic lumbar kidney with previous renal surgery were offered PCNL from June 2010 to April 2013 at our department. The ages were 38, 45 and 55 years. The stones sizes were 2, 2.8 and 3.7 cm. In addition, one case had recurrent renal surgery twice. C.T. was done for all cases preoperative to exclude retrorenal colon.

RESULTS: Complete clearance was achieved in all cases in a single session via a single tract in 2 cases and two tracts in one case (due to unavailability of flexible nephroscope). C.T. showed no retrorenal colon in any case. Subcostal upper calyceal access was performed in all cases. The operating time for PCNL was 43, 64 and 72 minutes. No recorded intraoperative complications in the form of failed access, bleeding, perforation, colonic injury or visceral injury. No postoperative complications in the form of bleeding, colic or fever.

CONCLUSIONS: Patients with ectopic lumbar kidney with previous surgery can be managed safely and effectively with PCNL.

SOURCE OF FUNDING: None

MP15-22 PCNL IN CHILDREN WITH PREVIOUS OPEN STONE SURGERY

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INTRODUCTION AND OBJECTIVES: To evaluate the safety and efficacy of PCNL in children with previous renal surgery.

METHODS: 13 children (9 boys and 2 girls) with previous open renal stone surgery with a mean age of 8.6 years (5–12 years) underwent PCNL procedures between January 2009 and April 2013. Of the patients, 2 had a solitary kidney and 2 were SWL failures. The mean stone size was 2.6 cm (range 1.5–5 cm). Operations were performed under fluoroscopy guidance. Tract dilatation was done using Teflon amplatz dilators. Amplatz sheath 22 fr. were used in all cases. Pneumatic lithotripsy and forceps extraction were used with a sheathless 19 fr (Richard wolf) rigid nephroscope.

RESULTS: 11 children (84.6%) were stone free at the time of discharge and 2 patients having insignificant residual fragments after the procedure. There is no intraoperative difficulties were encountered during the puncture or the dilatation apart from some restriction of the maneuverability of the nephroscope which not affect the accessibility of the stone. There was no contiguous organ injury, but in one case intraoperative hemorrhage was seen and blood transfusions were required. No postoperative complication were recorded in the form of colic or bleeding but one child get feverish that respond to medical treatment within 48 hours.

CONCLUSIONS: Pediatric PCNL is safe and an effective line of treatment with low complication rate even in children with previous renal surgery.

SOURCE OF FUNDING: None

MP15-23 MANAGEMENT OF LOWER CALYCEAL (LC) STONES <1.5 CM: RANDOMISED CONTROLLED TRIAL MICROPERC VS. RIRS

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INTRODUCTION AND OBJECTIVES: The management of lower calyceal stone has always been a controversial topic. The goal of this study is to compare the outcome of retrograde intrarenal surgery (RIRS) and microperc for LC stone less then 15 mm.
CONCLUSIONS: OSS should be considered a viable and cost-effective treatment option, especially for patients with complete staghorn calculi. Preoperative, intraoperative and postoperative parameters were noted prospectively.

RESULTS: 8 patients were randomized in each group. Age, stone size, operative time, haemoglobin drop, VAS at 24 hours, hospital stay in Microperc Vs RIRS were 39.1 ± 20.5 Vs 42.8 ± 11.5 years, 9.4 ± 2.6 Vs 10.8 ± 2.2 mm, 29.4 ± 13.50 Vs 33.57 ± 10.7 minutes, 0.7 ± 0.36 Vs 0.08 ± 0.22 gm/dl, 2.6 ± 0.7 Vs 3.43 ± 1.13, 74 ± 20 hours vs 62 ± 12 hours respectively. In both the group the stone free rate at 1 month was 100%. In Microperc group none of the patient required conversion to RIRS however in RIRS group 2 patients required conversion to Microperc. In Microperc group one patient had Clavien-Dindo grade 2 complications and another had grade 3 complication requiring DJ stenting post operatively. In RIRS group no patient had any complications.

CONCLUSIONS: Both Microperc and RIRS are efficient and a comparable procedure for LC calculus. Microperc is associated with lesser conversion to other procedure as compared to RIRS. RIRS patient had no complications and minimal blood loss. Further large multicentric randomized controlled trials are necessary.

SOURCE OF FUNDING: None

MP15-24 COMPARISON OF PERCUTANEOUS NEPHROLITHOTOMY WITH OPEN STONE SURGERY FOR MANAGEMENT OF PATIENTS WITH LARGE STAGHORN CALCULI: A HEALTH ECONOMIC EVALUATION.
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INTRODUCTION AND OBJECTIVES: The development and advances in extracorporeal shock wave lithotripsy and endourological procedures have greatly diminished the need for open surgery in the treatment of renal stones. We reviewed our experience of PNL with open stone surgery (OSS) to determine the clinical efficiency and economic efficacy of these therapeutic modalities.

METHODS: A retrospective study was conducted comparing open stone surgery (11 patients), and percutaneous nephrolithotomy (60 patients) for the treatment of large staghorn calculi. Hospital and office charts, operative records, and pertinent radiographic studies of all patients undergoing OSS from March 2000 through June 2013 and PNL from 2007 December through June 2013 at our institution were reviewed. Patient characteristics, stone burden, indications, surgical outcomes were reviewed for each patient.

RESULTS: For countering the single large staghorn stone, OSS resulted in a greater stone-free rate, lesser following procedures, total shorter hospitalization and total lower costs while complication rates were similar in our experience.

CONCLUSIONS: OSS should be considered a viable and economic treatment option, especially for patients with complete staghorn calculi.

SOURCE OF FUNDING: No

MP15-25 COMPARISON OF PERCUTANEOUS NEPHROLITHOTOMY AND RETROGRADE INTRARENAL SURGERY IN TREATING RENAL STONES
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INTRODUCTION AND OBJECTIVES: To compare the outcomes of percutaneous nephrolithotomy (PCNL) and retrograde intrarenal surgery (RIRS) in treating renal stones between 20 and 40 mm in diameter.

METHODS: 146 patients, who were treated with RIRS and 146 patients, who were treated with PCNL for renal stones between 20 and 40 mm in diameter were compared retrospectively using a matched-pair analysis. The size and localization of the stones and also the patient age, gender, and body mass index were used as the matching parameters. The operative and post-operative outcomes of both groups were analyzed retrospectively.

RESULTS: The mean age, gender, body mass index and stone laterality were similar between the groups. The mean stone size was 28.39 ± 4.67 mm for the PCNL group and 25.08 ± 6.07 mm for the RIRS group (p = 0.21). The mean operative times were statistically longer in the RIRS group, whereas the fluoroscopy times, hospitalization times and post-operative visual analgoune scores were statistically higher in the PCNL group. The stone-free rates (SFRs) after a single procedure were 91.7% in the PCNL group and 74.4% in the RIRS group (p = 0.04). After auxiliary procedures, the overall SFRs reached 94.4% for the PCNL group and 92.3% for the RIRS group (p = 0.72). No major complications were observed for both groups. Minor complication (Clavien 1–3) rates were 25% and 7.7% for the PCNL and RIRS group, respectively (p = 0.022).

CONCLUSIONS: RIRS has some advantages over PCNL such as lower complication rates, shorter hospitalization times, shorter fluoroscopy times and less post-operative pain in treating renal stones. However, PCNL has a higher SFR with only a single session.

SOURCE OF FUNDING: None

MP15-26 COMPARISON OF MINI-PERCUTANEOUS NEPHROLITHOTOMY AND PERCUTANEOUS NEPHROLITHOTOMY IN PATIENTS WITH MODERATE-SIZE KIDNEY STONES
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INTRODUCTION AND OBJECTIVES: To compare the outcomes of percutaneous nephrolithotomy (PNL) and miniaturized percutaneous nephrolithotomy (mini-perc) for 10- to 30-mm renal calculi by evaluating operative data, stone-free rates, and associated complications.

METHODS: The records of 70 patients who underwent PNL (n = 42) or mini-perc (n = 28) for intrarenal stones of 10- to 30-mm size were reviewed retrospectively. The χ2 test was applied to compare the intraoperative use of flexible ureteroscope or cystoscope, postoperative DJ stent insertion, stone-free rates, postoperative complications, and the Mann-Whitney U test was
INTRODUCTION AND OBJECTIVES: The Guy’s stone score (GSS) was first described by Thomas et al (2010) to grade the complexity of renal calculi prior to percutaneous nephrolithotomy (PCNL). In this retrospective study, we aim to assess the association between the GSS and post-operative stone clearance in our institution.

METHODS: The study sample was patients that underwent PCNL in our institution from 1/1/2011 to 31/12/2012. The pre-operative CT scans were assessed by two urology residents and graded according to GSS. Residual fragments (RF) were evaluated on post-operative CT scans. The primary outcome was the association between GSS and post-operative RF < 4 mm and RF < 2 mm. Secondary outcome of the study was the correlation between GSS with operative time, length of hospitalization and post-operative complications.

RESULTS: 88 patients were included in the study. Following PCNL, post-operative RF < 4 mm was 100% in GSS-1, 85.7% in GSS-2, 35.9% in GSS-3 and 17.6% in GSS-4 (p < 0.001). Post-operative RF < 2 mm was 100% in GSS-1, 61.9% in GSS-2, 25.64% in GSS-3 and 5.88% in GSS-4 (p < 0.001). Thus, higher GSS was associated with lower post-PCNL stone clearance. PCNL for patients with GSS-4 took 55.2 minutes longer than GSS-1 (p = 0.02). Patients with GSS-4 stayed longer in hospital compared to those with GSS-1 after PCNL (5.35 days vs. 3.54 days, p = 0.0004). There was no association between GSS and post-PCNL complications.

CONCLUSIONS: The GSS is a simple and effective tool to grade the complexity of renal calculi prior to PCNL. It provides an objective description of the complexity of renal calculi so that adequate pre-operative preparation and advice to the patients can be given.

SOURCE OF FUNDING: None

MP15-29 PATIENTS WITH BMI > 60 HAVE EQUIVALENT OUTCOMES AFTER PERCUTANEOUS NEPHROLITHOTOMY COMPARED TO SUPER AND MORBIDLY OBESE PATIENTS: SINGLE CENTER STUDY

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INTRODUCTION AND OBJECTIVES: Obesity is a known risk factor for recurrent nephrolithiasis and perioperative complications. Percutaneous nephrolithotomy (PCNL) has previously been shown to be safe in the obese (BMI 30–34.9), and severely obese (BMI 35–39.9); however, there is limited evidence supporting its use in morbidly obese (BMI 40–44.9) or super obese (BMI ≥ 45) patients.

METHODS: A retrospective review of 67 cases with a BMI ≥ 40 from a single surgeon. Patients were divided according to BMI: 40–49.9, 50–59.9, and ≥ 60. Operative time, length of hospital stay, stone burden, complication rate, and stone free rate were measured. Stone burden was measured on preoperative CT scans.

RESULTS: Of the 67 patients who underwent PCNL (age 51.4 ± 12; 33% male), the mean BMI was 51.1 ± 8.9. 36 patients had a BMI 40–49.9, 16 had a BMI 50–59.9, and 15 had a BMI ≥ 60. Stone burden was similar among the groups: 4.3 cm ± 2.6, 3.6 cm ± 1.3, and 3.9 cm ± 2.7, respectively. The overall stone free rate was 72%, with a complication rate of 10%. A trend was seen in patients requiring a second procedure more often within one year with increasing BMI (p = 0.096). No statistically significant differences were observed between the BMI groups.
INTRODUCTION AND OBJECTIVES: Percutaneous Nephrolithotomy (PNL) has replaced open surgical technique for removal of large or complex calculi in most institutions. Compared to general anesthesia, regional anesthesia could lessen the side effects of multiple medication and post operative pain. In this study, we compare the safety and effectiveness of Paravertebral Nerve Block (PNB) anesthesia with spinal anesthesia in accompanying PNL.

METHODOLOGY: PNB was performed by injecting 10–15 ml bupivacain HCL 0.5% mixed with 10–15 ml lidocain 2% at T10 and L1 paravertebral nerve site. Patients were sedated. Spinal anesthesia was performed by injecting bupivacain HCL 0.5% and fentanyl at L4 or L5 spinal space. VAS and complications were observed during operation and post operation.

RESULTS: Ten cases of PNL under PNB were compared with 10 cases under spinal anesthesia. In PNB group, the mean of stone size was 41.2 × 25.0 mm2, intra-operative VAS was 1.0, 6 hours post-operative VAS was 1.6, estimated blood loss was 97.0 ml, and length of post-operative stay was 1.9 days. There was 1 failure using PNB, resulted in conversion to general anesthesia. In the spinal anesthesia group, the mean stone size was 37.7 × 23.1 mm2, intra-operative VAS was 0, 6 hours post-operative VAS was 2.8, estimated blood loss was 122.2 ml, and length of post-operative stay was 2.0 days.

CONCLUSIONS: We conclude that PNB could be a safer anesthesia procedure for PNL with earlier mobilization and better post-operative pain management compared to spinal anesthesia.

SOURCE OF FUNDING: Universitas Indonesia Research Grant 2013–2014
MP16-02 INSULIN RESISTANCE CORRELATES WITH STONE BURDEN AND URINARY METABOLIC CHANGES IN NON-DIABETIC STONE FORMERS

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INTRODUCTION AND OBJECTIVES: Metabolic syndrome and diabetes are associated with stone formation. The lithogenic pathways include hyperinsulinemia leading to hypercalciuria and insulin resistance causing low urinary pH. Fasting plasma insulin (FPI) and insulin resistance are not routinely assessed in stone formers. Our multidisciplinary stone center recently began measuring FPI. This study examined whether the incidence of hyperinsulinemia and insulin resistance was significant in non-diabetic stone formers and if they are predictive of stone burden and changes in urinary parameters.

METHODS: All patients with available FPI and computed tomography (CT) imaging were included. Insulin resistance was determined with the Homeostasis Model Assessment of Insulin Resistance (HOMA-IR = glucose/insulin×405). Stone burden was assessed by totaling the maximal diameter of all stones seen on CT. Student’s t-test determined statistical difference. Correlation was evaluated with the Pearson product-moment correlation coefficient.

RESULTS: 28 patients met inclusion criteria. 2/28 (7.1%) had diabetes, 6/28 (21.4%) had metabolic syndrome and 17/28 (60.7%) had insulin resistance (HOMA-IR > 5). Insulin resistance correlated with a larger stone burden (17.1 mm vs. 6.6 mm, p = 0.007), more acidic urinary pH (5.5 vs. 6.2, p = 0.037) and more metabolic syndrome factors (1.53 vs. 0.27, p = 0.006).

CONCLUSIONS: While metabolic syndrome and diabetes are linked to an elevated risk of stone formation, these findings suggest that assessment of FPI and insulin resistance may provide a more sensitive method to identify high-risk stone formers. In the future, targeting reduction of fasting insulin levels may represent a key element of stone disease prevention.

SOURCE OF FUNDING: None

MP16-04 GEOGRAPHIC DIFFERENCES IN THE QUALITY OF CARE FOR PATIENTS WITH METABOLIC STONE DISEASE

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INTRODUCTION AND OBJECTIVES: Prior empirical work has shown significant variability between physicians regarding the intensity of metabolic testing provided to patients with urinary stone disease. However, no studies, as of yet, have explored geographic differences in the quality of metabolic stone management. To address this knowledge gap, we analyzed data from one of the largest independent laboratories in the United States. METHODS: Using analytical files from the Litholink Corporation (1995 to 2013), we identified adult patients with urinary stone disease who had a metabolic abnormality on 24-hour urine collection. After assigning all patients to a hospital referral region (HRR) based on the ZIP code of residence, we determined the proportion patients in each hospital referral region (HRR) who performed a repeat collection within six months of their abnormal one. We then fitted hierarchical regression models to quantify the amount of variation in this proportion across HRRs. Finally, after adjusting for a variety of sociodemographic factors, we examined for associations between repeat testing and an HRR’s healthcare capacity.

RESULTS: Among 205,997 patients with evidence of abnormalities, only 33,165 (16.1%) performed a repeat collection within six months of their abnormal test. There is five-fold variation across HRRs in the proportion of patients who underwent follow-up testing. Waterloo, Iowa reported the lowest proportion (6.5%), while Olympia, Washington had the highest (36.5%).

CONCLUSIONS: Our study demonstrates wide variation across healthcare markets in the quality of metabolic stone management. Collectively, our findings indicate substantial opportunities to improve the care delivered to patients with urinary stone disease.

SOURCE OF FUNDING: None

MP16-05 COMPARISON OF STONE COMPOSITION AND URINARY RISK FACTORS BETWEEN ELDERLY AND YOUNGER COHORT WITH NEPHROLITHIASIS

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INTRODUCTION AND OBJECTIVES: Stone composition and urinary risk factors have been shown to differ between younger and elderly patients with nephrolithiasis. The purpose of this study was to compare the composition and risk factors between the two age groups.

METHODS: We conducted a retrospective chart review of patients with nephrolithiasis seen at our institution. Stones were classified as calcium, struvite, uric acid, xanthine, cystine or other. We recorded patient demographics, medical history, and risk factors for stone formation.

RESULTS: A total of 200 patients were included in the analysis. The elderly group (≥65 years) had a significantly higher proportion of calcium stones (63.3% vs. 47.6%, p = 0.01) compared to the younger group (<65 years). The elderly group also had a higher prevalence of hypertension (45.4% vs. 33.1%, p = 0.05) and hyperuricemia (16.5% vs. 4.1%, p = 0.004) compared to the younger group. Other risk factors, such as hypercalciuria and hyperoxaluria, were not significantly different between the two groups.

CONCLUSIONS: This study highlights differences in stone composition and risk factors between elderly and younger patients with nephrolithiasis. These findings may inform the development of targeted prevention strategies for this population.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: Several studies have reported the relationship between age and stone composition. Our aim was to review the distribution of stones composition and urinary risk factors in elderly patients and compare it to younger cohort of patients.

METHODS: We have reviewed the 24 hour urine analysis of 1013 patients. Patients were divided into two groups: older than 65 years and younger than 45 years. Stones composition and urinary risk factors were compared. We excluded women and men with 24 hour urine creatinine collection of less than 600 mg and 800 mg, respectively, and patients younger than 18 years.

RESULTS: The elderly group included 120 patients (71 males and 49 females) with mean age of 70 years and the young group included 137 patients (43 males and 94 females) with mean age of 34 years. There was no difference in mean BMI between the groups. Stone composition data was available for 88 patients (64%) in the young group and 84 patients (70%) in the elderly group. Calcium Oxalate monohydrate and uric acid stones were significantly more common in the elderly group (62% vs. 36%, 12% vs. 3%) whereas apatite stones were more common in the young group (20% vs. 3%). 24 hour urine analysis in the elderly group had statistically significant lower PH (5.9 vs. 6.2), calcium (203 mg/d vs. 234 mg/d), uric acid (0.6 g/day vs. 0.67 g/day), and sodium (168 mmol/d vs. 196 mmol/d) compared to the young group.

CONCLUSIONS: Elderly patients have a different distribution of stone composition and fewer urinary risk factors when compared to young patients.

SOURCE OF FUNDING: None

MP16-06 THE CHALLENGES OF CYSTINURIC PATIENTS: A COHORT QUALITY ANALYSIS

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INTRODUCTION AND OBJECTIVES: Cystinuric stone patients continue to challenge treatment paradigms. To better understand the quality of care delivered and clinical outcomes of an institutional cystinuric cohort.

METHODS: 23 patients (11 female) with cystinuria were treated from 2000 to 2013 and were queried from our 24-hour urine database. Two patients were excluded for incomplete records. Charts were reviewed for demographic data, medical management, compliance with medications, emergency room visits for renal colic, surgical intervention, and 24-hour urine data.

RESULTS: The mean age at presentation was 36.9 years (18–69 years). Patients were followed for average of 4.5 years (up to 13.1 years). Females underwent an average of 2.5 procedures versus 4.1 procedures in their male counterparts. Patients were treated with tiopronin, potassium citrate and D-penicillamine at 71.4%, 76.0%, and 14.3%, respectively. All patients were non-compliant with one or more prescribed medications during the course of their treatment. We recorded 27 emergency room visits for renal colic; 74% occurred in those patients with ≥2 laser ureterorenoscopy (LURS), whereas only 26% occurred in those patients with <2 LURS. Follow-up in a dedicated stone clinic only resulted in 67% of patients repeating their 24-hour urine collections; of those performed revealed modest improvements in the following: cysteine capacity (~ 53.1 mg/L to 20.0 mg/L), total cysteine excretion (930.7 to 853.54 mg/L) and cysteine super saturation parameters (1.11 to 0.93).

CONCLUSIONS: Despite a comprehensive stone clinic, these patients had only modest improvements in 24-hour urine parameters. The cystinuric patient remains a challenge for the urologist and an opportunity for quality improvement.

SOURCE OF FUNDING: None

MP16-07 IMPACT OF NUTRITIONAL INTERVENTION ON URINARY PARAMETERS IN STONE FORMER PATIENTS

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INTRODUCTION AND OBJECTIVES: Renal lithiasis is a complex disease. Genetic and lifestyle factors may contribute to the development of stones, and dietary measures are usually recommended for prevention and treatment of renal lithiasis. However, the impact of these measures is sometimes disappointing. The goal of this study was to evaluate the impact of nutritional intervention on urinary parameters of stone former patients.

METHODS: One hundred and twenty five patients were initially enrolled in this protocol. At baseline time, patients were oriented in order to increase the consumption of water and foods that are sources of citrate and fibers, and avoid the intake of salt and meat. Twenty-four hour urine samples were collected and urinary volume, uric acid, citrate, calcium, potassium, phosphorus and sodium were recorded. The same parameters were collected after 3–6 months. Patients that did not have at least two urine samples available were excluded from the protocol. Forty-four patients met this criteria and comprise the subjects of this series.

RESULTS: Patients mean age was 43 years old. 55.6% were men and BMI was 27.2 ± 5.5 kg/m2. At baseline time, urinary volume was 2.1 ± 0.6 liters, uric acid was 648.3 ± 231.8 mg/24 h, calcium was 228.9 ± 134 mg/24 h, citrate was 517 ± 238 mg/24 h, phosphorus was 867 ± 344 mg/24 h, potassium was 54 ± 19 mg/24 h and sodium was 206 ± 90 mg/24 h. The urinary samples collected after 3–6 months showed no significant differences from the baseline data.

CONCLUSIONS: Nutritional intervention performed on our patients had no impact on urinary parameters usually evaluated in stone former patients.

SOURCE OF FUNDING: None

MP16-08 INCONSISTENCY AND VARIABILITY IN DIETARY OXALATE CONTENT REPORTING

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INTRODUCTION AND OBJECTIVES: Patients with hyperoxaluria are often referred to the internet for information on a low oxalate diet. Herein, we reviewed dietary oxalate information available on the internet for appropriateness, consistency, and potential variability of content.

METHODS: An extensive online search for “low oxalate diet kidney stones” was conducted through both Google and Pubmed. Identification of primary sources of information was pursued for all search results. A standardized evaluation of recommended daily intake and food specific oxalate content level was completed.
MP16 METABOLIC STONE DISEASE

RESULTS: Google search yielded 201,000 websites and PubMed.gov yielded 93 publications pertaining to humans. Twenty-nine primary sources were identified. According to these primary sources, recommended daily intake varied from less than 40 mg, and up to 80 mg oxalate per day. Categorical levels of oxalate content had significant variability as to total mg/serving in foods described as ‘low’, ‘moderate’, or ‘high’, among primary sources, with low ranging from 2 to 10 mg/serving, moderate from 2 to 25 mg/serving, and high from 10–99+ mg/serving. Values of oxalate content for specific foods also varied widely among primary sources. Finally, food lists were often not all-inclusive, nor did they list a standard serving size.

CONCLUSIONS: The internet and PubMed have widely varying, often conflicting, and generally incomplete information regarding proper oxalate intake amount and the oxalate content of specific foods. Given the lack of concordance on this important dietary modification, we encourage the publication or endorsement of a single accurate and complete dietary recommendation for oxalate intake in those attempting to prevent kidney stones.

SOURCE OF FUNDING: None

MP16-09 DOES MEDICAL MANAGEMENT OF CYSTINURIA REDUCE STONE INTERVENTIONS?

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INTRODUCTION AND OBJECTIVES: We report our long term experience with the efficacy of medical management for preservation of renal function and reduction of stone related events in patients with cystinuria.

METHODS: We performed a retrospective cohort study of patients with cystinuria treated at our facility over 24 years with ≥6 months follow up. Results of urine metabolic evaluations, renal function, side effects, patient reported compliance and stone interventions (ER visits and surgical procedures) were recorded. Using a Poisson framework regression model accounting for differential length of follow up, we assessed the relationship between cystine concentration and rate of stone interventions.

RESULTS: We identified 31 patients with a median age of 29 (IQR 19–44) years at initial presentation; median follow-up was 7.6 (IQR 2.4–11) years. Females made up 52% of the cohort. There was no significant change in serum creatinine during follow-up (p = 0.37). Side effects were experienced by 26% and 52% reported all-cause therapy interruption. Follow-up non-compliance was documented in 68% of patients. When considering all labs, 39% obtained a lifetime mean cystine concentration of <250 mg/L. These patients had a 5 year intervention rate of 1.0 (95% CI 0.6–1.6) versus 2.8 (95% CI 2.1–3.6) for those who did not (p = <0.0001).

CONCLUSIONS: Patients who are able to maintain low cystine concentrations reduce their likelihood of requiring stone interventions over time. However, compliance with medical therapy remains a challenge and demands continued focus.

SOURCE OF FUNDING: None

MP16-10 COMPARING URIC ACID STONE ATTENUATION IN LOW-DOSE AND CONVENTIONAL NON-CONTRAST COMPUTERIZED TOMOGRAPHY

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INTRODUCTION AND OBJECTIVES: Conventional non-contrast computerized tomography (NCCT) has high sensitivity, specificity and is able to predict stone composition using Hounsfeld units (HU) but is associated with high radiation exposure. In an attempt to reduce radiation exposure, low dose stone protocols have been developed which provide excellent detection of stones. However, it is not known whether these protocols are equally effective in determining HU stone density of uric acid stones. The purpose of this study is to compare HU attenuation between low and conventional dose NCCT.

METHODS: In this prospective randomized, single-blinded study, 7 mm uric acid stones were randomly placed into cadaveric vehicles. Holding other parameters constant, NCCT was performed at varying mAs levels ranging from 5 to 140. Identical magnified images at each mAs setting were reviewed in a blinded fashion. Statistical analyses were performed using a Kruskal-Wallis test and a Spearman’s Rank Correlation, with p<0.05 considered statistically significant.

RESULTS: Median attenuation levels were 341, 344, 337, 337, 347, 346 and 349 at 5, 7.5, 15, 30, 50, 70 and 140 mAs; respectively. The differences in median attenuation levels were not significantly different (p = 0.64). No relationship was observed between attenuation variability and radiation dosage (p = 0.50).

CONCLUSIONS: Low dose NCCT reliably measures HU density with uric acid stones. Physicians should use low dose CT imaging without hesitation, knowing that HU density for uric acid stones are similar between conventional and extremely low dose settings.

SOURCE OF FUNDING: None

MP16-11 DO URINARY CYSTINE PARAMETERS PREDICT CLINICAL STONE ACTIVITY?

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INTRODUCTION AND OBJECTIVES: The goal of treatment for cystinuria has historically been to achieve a cystine concentration below the solubility limit (250 mg/L). Other estimates of cystine stone-forming potential include cystine supersaturation and cystine capacity, a proprietary assay from the commercial laboratory, Litholink® (Chicago, IL). The superiority of one measure of stone-forming potential over the others has not yet been determined. We sought to compare the ability of urinary cystine parameters in predicting clinical stone activity.

METHODS: We prospectively followed 35 well-characterized cystinuric patients and recorded stone activity, defined as an increase in size of existing stones, development of new stones, and passage or intervention for stones not previously seen on imaging. We compared capacity, concentration, and supersaturation...
obtained at times of stone activity with those obtained during periods of quiescence and then performed ROC analysis to evaluate the performance of the tests in predicting clinical stone activity.

**RESULTS:** With mean follow-up of 61.7 months (range 4.7–262.9 months), 63 stone events occurred that could be linked to a recent urine collection, while 183 urines were submitted during periods of quiescence. Statistical analysis demonstrated significant differences between stone event and quiescent urine collections for mean cystine supersaturation 1.08 vs. 0.82, mean cystine concentration 321.8 mg/l vs. 235.6 mg/l, and mean cystine capacity –22.8 vs. 62.3, respectively (all p<0.01). ROC analysis revealed an AUC of 0.74 for supersaturation, 0.71 for concentration, and 0.74 for capacity (p>0.05).

**CONCLUSIONS:** Urinary cystine parameters correlate with clinical stone activity; however, no parameter demonstrated superiority with regard to differentiating stone activity from inactivity.

**SOURCE OF FUNDING:** None

**MP16-12 IS HYPERURICOSURIA IN STONE PATIENTS PREDICTIVE OF MYOCARDIAL INFARCTION RISK?**

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**INTRODUCTION AND OBJECTIVES:** Recent studies have shown a correlation with elevated serum uric acid and myocardial infarction (MI) risk, specifically as an indicator of poor prognosis post MI. However, urine uric acid (UUA) levels may be elevated even with normal serum uric acid (UA). We sought to identify an association between UUA levels and cardiovascular risk in our stone population.

**METHODS:** 7593 stone patients with available 24 H UUA between April 2001 and April 2013 were stratified into three groups: UUA < 700, UUA 700–1000 and UUA > 1000. Clinical and demographic data at the time of 24 H urine collection and the prevalence of MI was compared between the three groups.

**RESULTS:** Patients with elevated UUA were more likely to be male, have hypertension (HTN), diabetes (DM2), and elevated BMI. There was no statistical difference in the prevalence of MI between the three UUA groups (4.1% vs 3.6% vs 4.9%, p=0.7376) when patients with MI were matched to patients without MI by age, gender, BMI, smoking history, DM2, HTN and congestive heart failure.

**CONCLUSIONS:** In our kidney stone population, although elevated UUA is not an independent risk factor for MI, it is positively associated with cardiovascular risk factors such as male gender, elevated BMI, HTN and DM2, and may therefore be an important indicator of metabolic syndrome.

**SOURCE OF FUNDING:** None

**MP16-13 OUTCOMES AND COMPLICATIONS OF UROLITHIASIS TREATMENT IN ADULT SPINA BIFIDA PATIENTS**

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**INTRODUCTION AND OBJECTIVES:** Urolithiasis in Spina bifida (SB) patients presents unique challenges. We sought to assess stone composition and surgical outcomes in adult SB patients.

**METHODS:** A retrospective review of adult patients with SB who underwent treatment for urolithiasis at our institution between January 2001 and February 2014 was conducted. Patients without stone composition data were excluded. Demographic information, mobility status, voiding management, stone composition, procedures performed and outcomes were evaluated.

**RESULTS:** Of 124 adult SB patients, 34 were included in our analysis. Mean age and BMI was 31 and 31.1, respectively; 58% were male, 41% were ambulatory, 62% performed intermittent self-catherization, while 6% had indwelling catheters. Twenty-three patients had upper tract stones, of whom 14 were treated by percutaneous nephrolithotomy (PCNL), with a median hospital stay of 6.5 days, 8 (57%) patients required secondary procedures, and sepsis occurred in 7 (50%). The remaining 9 patients underwent SWL, ureteroscopy or passed stones spontaneously without complication. Of the upper tract stone formers, 78% were non-ambulatory compared to only 18% of strictly bladder stone formers. The 11 patients with bladder stones were treated by open or transurethral cystolitholapaxy with no complications. Fifty-eight percent of stones were calcium phosphate, 23% struvite, 11% calcium oxalate, and 5% uric acid.

**CONCLUSIONS:** We report the largest series of adult SB patient outcomes for urolithiasis. Calcium phosphate and struvite stones are predominant in this population; PCNL was the most common procedure performed for upper tract stones, but was associated with a relatively high sepsis and retreatment rate.

**SOURCE OF FUNDING:** None

**MP16-14 THE IN VITRO EMPIRICAL STUDY OF PROBABILITY FOR UN-ENHANCED LOW-DOSE CT SCAN IN COMPOSITION ANALYSIS OF URINARY CALCULUS**

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**INTRODUCTION AND OBJECTIVES:** To investigate the feasibility of low-dose helical CT scan in composition analysis of urinary calculi in vitro.

**METHODS:** 50 stones removed from upper urinary tract by operation were studied in vitro with standard-dose (120 Kv/100 mA) and low-dose (120 Kv/25 mA) spiral CT scan for determination of CT value (Hu), and infrared spectroscopy were undertaken for determination of chemical composition of the stones for comparison. 38 stones in coincident ingredient was studied.

**RESULTS:** No statistically significant difference was found in CT value (p>0.05) and noise (p>0.05) of stones between low-dose group and standard-dose group. With the analysis methods, stone composition obtained show that calcium oxalate stones was the main stone ingredient. For the pure ingredients stones, the pure calcium oxalate stones had the highest CT density, while the lowest CT values is of uric acid stones and could be distinguished by CT value between the two ingredients stones, CT values of other mixed stones ranged between calcium oxalate and uric acid stones.
CONCLUSIONS: Low-dose spiral CT scanning can replace the standard dose helical CT for the preliminary composition analysis and determination of density in vitro.

SOURCE OF FUNDING: None

MP16-15 THE CLINICAL INVESTIGATION OF PROBABILITY FOR UN-ENHANCED LOW-DOSE CT SCAN IN PREDICTING COMPOSITION OF URINARY CALCULUS

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INTRODUCTION AND OBJECTIVES: To investigate the feasibility of low-dose spiral CT scan predicting stone composition in vivo.

METHODS: 52 cases of upper urinary stone patients underwent a standard -dose helical CT scan and a low -dose helical CT scan for CT value measurements, of which, 27 cases underwent MPCNL treatment and stone compositions were analyzed.

RESULTS: By the 52 patients with helical CT scan, no statistically significant difference was found in stone CT value between the two groups (p>0.05), but the standard deviation (noise) of the CT value showed statistically significant difference (p<0.001). 27 patients body stone composition analysis showed that the CT value of calcium oxalate stones and calcium phosphate, pure calcium oxalate and urinary ammonium stone were more than 1000 Hu, the lowest CT value of 1 case of no ingredients stones is 422.07 Hu, and the rests of the stones in the CT values were between the stones of the above ingredients and mutual cross, no statistically significant difference of the same ingredients stone was found between low-dose and standard-dose CT value (p>0.05).

CONCLUSIONS: Low-dose helical CT scan can replace standard-dose helical CT scan in CT value determination of stone and preliminary analysis for stone composition in vivo.

SOURCE OF FUNDING: None

MP16-16 A RETROSPECTIVE STUDY TO IDENTIFY DIFFERENCES IN THE BIOCHEMICAL MARKERS OF PRIMARY HYPERPARATHYROIDISM PATIENTS WITH AND WITHOUT STONES

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INTRODUCTION AND OBJECTIVES: Primary hyperparathyroidism (PHPT) predisposes to renal stone formation. So far there is no consistent correlation that has been identified between biochemical markers and the risk of stones in this group. This study aimed to establish if these observations were true within a UK population.

METHODS: A cohort of 187 patients who underwent parathyroidectomy for PHPT at a tertiary referral hospital was divided into two groups; those with confirmed kidney stones, and those without. Serum parathyroid hormone, serum calcium and urinary calcium at diagnosis were then compared using unpaired t-test and correlation between serum and urinary markers performed with Pearson coefficient.

RESULTS: Of 187 patients with PHPT, 34 were identified as stone formers (18%). The compared values observed in stone-formers [S] and non stone-formers [NS] are listed respectively; Serum calcium (mmol/L): 2.84 (± 0.07) [S] & 2.90 (± 0.04) [NS] p-value = 0.21 Serum PTH (ng/L): 150.0 (± 33.5) [S] & 174.2 (± 23.4) [NS] p-value = 0.34 24 hour Urinary Calcium (mmol): 6.38 (± 4.8) [S] & 8.48 (± 3.5) [NS] p-value = 0.24 Correlation between serum Ca & Urinary calcium: −0.77 [S] (strong negative correlation) & 0.23 [NS] Correlation between serum PTH & Urinary calcium: −0.57 [S] (strong negative correlation) & 0.24 [NS].

CONCLUSIONS: No statistically significant difference was observed in mean serum Calcium, PTH and urinary Ca between groups. A novel observation was a strong negative correlation with urinary Ca for both serum Ca and PTH in the stone-formers in contrast to a lack of correlation in the non stone-forming group. This could suggest an as yet unidentified difference in the underlying pathophysiology between the two groups, warranting further investigation.

SOURCE OF FUNDING: None

MP16-17 URINARY STONE RISK PROFILES IN STONE FORMER PATIENTS: A PRELIMINARY STUDY IN INDONESIA

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INTRODUCTION AND OBJECTIVES: The formation of urolithiasis is a complex process, multifactorial, and yet not fully understood. Promoting factors that favor formation of stones includes low water intake, low citrate levels, and an increase in solutes such as calcium, oxalate, uric acid, and phosphate. Therefore, urinary stone risk profiles in stone former patients is an important work up to be performed in prevention of stone formation.

METHODS: We were comparing the urinary stone risk profiles in stone former subjects group with normal population (non-stone former) group. Each group consist of 10 subjects. Urine samples used in this study was a 24-hour-urine. All subjects in this study were previously informed and voluntarily participating. Inclusion criteria in this study were adult, stone free, residing in Jakarta. Measurement was performed in Department of Molecular Biology and Biochemistry Faculty of Medicine Universitas Indonesia. Statistical analysis was performed using SPSS 20 (Chicago, USA) with Student’s t-test or Mann-Whitney (p < 0.05 was considered significant).

RESULTS: Mean age, weight, and height also did not differ significantly (p > 0.05) between each group. Significant difference (p < 0.05) in urinary profile was found in urea, uric acid, chloride, potassium, phosphate, and ammonia. Conversely, we found no significant differences (p > 0.05) in sodium, creatinine, calcium, magnesium, oxalate, and citrate levels.

CONCLUSIONS: There were no significant differences in urinary stone promoting and inhibiting factors between two groups. Bigger number of sample size with better sampling method must be conducted for future studies.

SOURCE OF FUNDING: This study was funded by Universitas Indonesia Research Grant 2013–2014.
Focusing on those with hypercalciuria, hyperoxaluria, hyperuricosuria, or hypocitraturia, we determined whether repeat testing was obtained within six months of the abnormal one. To evaluate the effectiveness of the metabolic stone clinic in reducing the number of stone episodes resulting in hospital attendance for symptomatic control or intervention.

**METHODS:** Patients were identified using a prospective database including demographics, clinical details and protocol based follow up data. The number of presentations of urinary calculi were recorded before and after attendance at the metabolic clinic, as were any interventions (medical and surgical).

**RESULTS:** 83 new patients were referred to the metabolic stone clinic over 4 years, totalling 168 stone episodes. Patient age ranged between 19–82 (mean 52.0), 22 females to 61 males. Mean follow up time 19.2 months. Diseases diagnosed include renal tubular acidosis, hyperparathyroidism, cystinuria and medullary sponge kidney. 62 patients were given fluid and dietary advice and 37 were prescribed medication. Patients experienced 149 stones episodes before being seen in the stone clinic and 19 after.

67 patients did not have any further stone presentations and 5 had no change in their stone burden.

**CONCLUSIONS:** Disease specific dietary advice and medication given at the metabolic stone clinic has greatly reduced the number of stone episodes experienced by stone formers over a 4 year period.

**SOURCE OF FUNDING:** None

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**INTRODUCTION AND OBJECTIVES:** Nephrolithiasis is more common in patients with a family history (FH). There are no studies assessing the influence of first, second and third degree FH on stone recurrence and the difference of metabolic risk factors for patients with adult vs. pediatric onset of disease.

**METHODS:** Adults with a history of calcium-based nephrolithiasis and positive FH were sequentially identified from our stone clinic from 2012–2013; pediatric patients were sequentially selected from 2007–2013. We evaluated number of episodes of stone recurrence and evidence of metabolic abnormality on 24-h urine evaluations.

**RESULTS:** Of 92 patients, 62 were adults (age 49.1 ± 12.3) and 30 were pediatric patients (age 12.2 ± 4.6). In the adult cohort, most patients had a positive first-degree FH (90.3%), 32.3% second-degree and 11.3% third-degree. In the pediatric cohort, 53.3% had a first-degree FH, and 53.3% second-degree. Hyperoxaluria was more common with an adult age of onset, and patients with > 1 degree of FH (p < 0.05). Patients with > 1 degree of FH (n = 20) were more likely to experience a greater number of stone recurrences compared to those with only 1 degree (n = 72), 15.7 vs. 5.5, respectively (p = 0.04).

**CONCLUSIONS:** The degree of FH is a predictor of stone recurrence; patients with > 1 degree of FH had more stone episodes than those with only 1 degree of FH. Hyperoxaluria was the only metabolic risk factor found to be more common in patients with adult onset stone disease and in those with > 1 degree of FH. FH should be queried of all stone patients in order to set appropriate goals for treatment.

**SOURCE OF FUNDING:** None

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**INTRODUCTION AND OBJECTIVES:** When dietary changes or selective medical therapy is initiated on a patient with an abnormal urine chemistry, assessing response to the intervention with a repeat 24-hour urine collection is recommended. However, compliance with this recommendation remains unknown.

**METHODS:** Using Litholink data (1995 to 2013), we identified adults with urinary stone disease, who performed a 24-hour urine collection, as well as the provider who ordered it. Focusing on those with hypercalciuria, hyperoxaluria, hyperuricosuria, or hypocitraturia, we determined whether repeat testing was obtained within six months of the abnormal one. To quantify provider variation in ordering repeat testing, we fitted two-level generalized linear models, adjusting for patient and provider factors.

**RESULTS:** Among 208,125 patients with an abnormal 24-hour urine collection, only 33,413 (16.1%) underwent repeat testing within six months. While most of the variation in repeat testing was attributable to the patient, the provider contribution was non-trivial (18.0%). Spread in follow-up testing among provider panels ranged from 3% to as high as 67% of patients. The specialty of the ordering provider was important. For example, compared to patients seen by a primary care physician, those treated by an endocrinologist had 40% higher odds of receiving follow-up testing (OR, 1.40; 95% CI, 1.05–1.86).

**CONCLUSIONS:** Follow-up testing in patients with an abnormal 24-hour urine collection is uncommon. The provider that a patient sees determines, in part, whether a repeat collection will be performed. As such, efforts to educate providers on the value of follow-up testing are likely to have salutary effects on patients with metabolic stone disease.

**SOURCE OF FUNDING:** None

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**INTRODUCTION AND OBJECTIVES:** We hypothesized that a history of first, second and third degree FH would be associated with an increased risk of recurrent urolithiasis. As such, we sought to determine the degree of FH was a predictor of stone recurrence; patients with > 1 degree of FH had more stone episodes than those with only 1 degree of FH. Hyperoxaluria was the only metabolic risk factor found to be more common in patients with adult onset stone disease and in those with > 1 degree of FH. FH should be queried of all stone patients in order to set appropriate goals for treatment.

**SOURCE OF FUNDING:** None
INTRODUCTION AND OBJECTIVES: Metabolic evaluation for patients with struvite stones remains controversial. We report our contemporary experience with metabolic evaluation and directed medical therapy in patients with struvite stones.

METHODS: Between 2005–2012, 56 patients treated with PNL for struvite stones were identified. Seven had pure struvite stones with metabolic evaluation (Group 1), 32 had mixed struvite stones with metabolic evaluation (Group 2), and 17 had pure struvite stones without metabolic evaluation (Group 3). The frequency of metabolic abnormalities and stone activity (defined as stone growth, recurrence or stone related events) were compared between groups.

RESULTS: The median age was 55 years (IQR 42–63.5) and 64% were female. No significant difference in demographics including race, UTI history, family history, stone location or volume existed between groups. Metabolic abnormalities were found in 57% and 81% in Group 1 and 2; respectively. Antibiotic prophylaxis and Acetohydroxamic acid were used more frequently in patients with pure struvite stones while metabolic directed medical therapies were used in >85% of patients with metabolic evaluation (group 1 and 2). Stone activity rates were 20%, 30% and 50%; in group 1,2 and 3; respectively. Kaplan Meier analysis demonstrated earlier and more frequent stone events in group 3 with no metabolic evaluation.

CONCLUSIONS: Metabolic abnormalities in struvite stone formers including patients with pure struvite stones appear to be more common than previously reported. Although likely underpowered, our findings appear clinically significant. While a larger study is needed, metabolic evaluation and directed medical therapy may be considered for patients with pure struvite stones.

SOURCE OF FUNDING: None

MP16-23 UPPER TRACT CALCULI AND ASSOCIATED SURGICAL COMPLICATIONS IN SPINA BIFIDA PATIENTS

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INTRODUCTION AND OBJECTIVES: Risk of urolithiasis is thought to be higher in the spina bifida (SB) population. The management of urinary tract stones in SB patients is often challenging but poorly described in the literature. Our objective was to compare the treatment and related complications of urolithiasis interventions in SB patients to other stone formers through a national all ages database.

METHODS: We retrospectively reviewed the Nationwide Inpatient Sample (NIS) for admissions with renal and ureteral stones from 1998–2011. We used ICD-9-CM codes to identify urologic interventions [Shockwave lithotripsy (ESWL), ureteroscopy (URS), percutaneous nephrolithotomy (PCNL), ureteral stent placement], and National Surgical Quality Improvement Program (NSQIP) post-operative complications. Logistic regression and negative binomial regression were performed.

RESULTS: We identified 4,287,529 stone admissions including 12,315 (0.3%) SB patient admissions. Compared with non-SB patients, SB patients with urolithiasis were significantly younger (mean 34 vs 53 years), less likely to have private insurance (24 vs 43%), more likely to have renal calculi (81 vs 58%), and to undergo PCNL (27 vs 8%). After adjusting for age, comorbidity, treatment year, surgery type, and stone location, SB patients were more likely to have urinary tract infections (p < 0.001), urinary complications (p < 0.001), acute renal failure (p < 0.001), respiratory complications (p < 0.001), pneumonia (p = 0.005), prolonged mechanical ventilations (p < 0.001), sepsis (p < 0.001), pulmonary embolism (p = 0.030), cardiac complications (p = 0.020), post-op bleeding (p = 0.010), and longer length of stay (p < 0.001).

CONCLUSIONS: Compared with non-SB stone admissions, SB patients were younger, have a higher risk of renal stones, and are more likely to undergo PCNL. Urolithiasis procedures in SB patients were associated with significantly higher risk of immediate post-operative complications.

SOURCE OF FUNDING: None

MP16-24 ESTIMATING THE ECONOMIC IMPACT OF PEDIATRIC UROLITHIASIS

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INTRODUCTION AND OBJECTIVES: Mounting evidence suggests that urolithiasis is on the rise among children and adolescents; however, the economic impact of this problem is unclear. We examined two large databases to estimate the nationwide economic impact of pediatric urolithiasis.
METHODS: We analyzed the 2009 Nationwide Emergency Department Sample (NEDS) and Kids Inpatient Database (KID). We used ICD-9-CM codes to identify children ≤18 years of age diagnosed with urolithiasis. We abstracted demographic and charge data from each database.

RESULTS: In total, 7,348 inpatient admissions (32.1% males) were identified from KID and 33,038 ED encounters (35.9% males) were identified from NEDS. KID patients were younger than NEDS (mean 13.9 vs. 15.7 years). Most patients had private insurance (KID 52.9%, NEDS 57.2%), and the South was the most common geographic region (KID 39.5%, NEDS 44.4%). The most common procedures performed were ureteral stent placement (20.4–24.1%), followed by URS (4.4% KID v. 3.8% NEDS). The mean charges per admission were $31,253, for a weighted total of $229 million/year. Mean ED charges were $4,440/encounter for a weighted total of $146 million/year.

CONCLUSIONS: Each day in 2009, an average 20 children were admitted and 91 were treated in the ED for a kidney or ureteral stone. A conservative estimate of the annual economic impact of pediatric urolithiasis is at least $375 million. This figure is likely a significant under-estimate of the true economic burden of stone disease in children, as it accounts for neither non-ED outpatient stone management nor indirect costs such as patient and caregiver time away from work and/or school.

SOURCE OF FUNDING: None

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MP16-25 THE CLINICAL AND DEMOGRAPHIC FACTORS ASSOCIATED WITH PATIENTS’ COMPLIANCE AND INFLUENCE ON URINARY STONE FORMATION IN FIRST-TIME URETERAL STONE FORMERS

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INTRODUCTION AND OBJECTIVES: To assess the clinical and demographic factors associated with compliance with a modified diet and lifestyle in first-time ureteric stone formers, and to determine the influence of compliance on urinary stone risk factors.

METHODS: We performed a retrospective review of stone formers (SF) presenting with ureteric calcium stones. From the answers to a self-completed questionnaire, patients were classified according to compliance with seven recommendations for modifying their diet and lifestyle, into a good compliance group (complied with ≥3 recommendations) and a poor compliance group. 24 hour urine samples were collected on a random diet and after prescribing the modifications.

RESULTS: Compared to patients in the good compliance group, those in the poor compliance group were more likely to have a smaller stone (P = 0.019), and to have been managed expectantly (P = 0.027). Citrate excretion was significantly increased in the good compliance group after adopting the modifications (P = 0.012), whereas the difference in the poor compliance group was not statistically significant. Moreover, patients in the poor compliance group had a significant increase in urinary calcium excretion at the end of the study (P = 0.040). After adjustments for age, sex, body mass index and metabolic abnormality status, poor compliance was found to be an independent risk factor for persistence.

CONCLUSIONS: Our results imply that patient education programs regarding diet and lifestyle should be tailored to the individual’s clinical and demographic characteristics.

SOURCE OF FUNDING: None

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MP16-26 DOES RENAL INSUFFICIENCY INFLUENCE ON STONE RECURRENCE RISK IN FIRST-TIME STONE FORMERS?

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INTRODUCTION AND OBJECTIVES: The study was designed to assess the relationship between glomerular filtration rate (GFR) and urinary stone-forming constituents, and to assess the effect of renal insufficiency on stone recurrence risk in first stone formers (SF).

METHODS: Baseline serum creatinine levels were obtained, and renal insufficiency was defined as creatinine clearance ≤ 60 mL/min (Cockcroft-Gault). This retrospective case-control study consists of 342 first SF; 171 SF with normal renal function were selected with 1:1 propensity scores matched to 171 SF with renal insufficiency. Urinary metabolic evaluation was compared to renal function.

RESULTS: GFR was positively correlated with urinary calcium, uric acid, and citrate excretion. Subjects with renal insufficiency had significantly lower urinary calcium, uric acid, and citrate excretion than those with normal renal function, but not urine volume. With regard to urinary metabolic abnormalities, similar results were obtained. SF with renal insufficiency had lower calcium oxalate supersaturation indexes and stone recurrence rates than SF with normal renal function. Kaplan-Meier curves showed similar results.

CONCLUSIONS: GFR correlates positively with urinary excretion of stone-forming constituents in SF. This finding implies that renal insufficiency is not a risk factor for stone recurrence.

SOURCE OF FUNDING: None

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MP16-27 DOES HYPERTENSION IMPACT 24-HOUR URINE PARAMETERS IN PATIENTS WITH NEPHROLITHIASIS?

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INTRODUCTION AND OBJECTIVES: Previous studies have demonstrated an association between hypertension (HTN) and nephrolithiasis. Abnormalities in renal calcium metabolism among patients with HTN have been proposed, leading to increased urinary calcium excretion. The objective of our study was to examine the differences in 24-hour urine parameters between patients with and without HTN.

METHODS: We performed a retrospective review of stone patients who had completed a 24-hour urinalysis (Litholink®) and for whom demographic information was available, including the presence of HTN. Univariate t test analysis was performed comparing the 24-hour urinalysis profiles of patients with HTN to that of normotensive patients. Multivariate linear regression models were also performed, controlling for a number of patient characteristics and 24-hour urinalysis parameters.

RESULTS: Of the 1115 patients eligible for inclusion in this study, 442 (40%) had HTN and 673 (60%) did not. Univariate
analysis revealed significantly lower urine calcium, supersaturation (SS) of calcium oxalate (CaOx) and SS calcium phosphate (all \( p < 0.05 \); Table 1) in patients with HTN. Multivariate analysis showed significantly lower calcium (mean difference = \(-20.13\)), citrate (\(-74.04\)), and SS CaOx (\(-0.648\)) in patients with HTN (all \( p < 0.05 \); Table 2).

**CONCLUSIONS:** Our results demonstrate lower 24-hour urine calcium and SS CaOx in patients with HTN compared to normotensive patients on both univariate and multivariate analyses. Additionally, multivariate analysis revealed significantly lower 24-hour urine citrate in patients with HTN. These results argue that lower levels of stone inhibitors such as citrate may play a greater role in stone formation in patients with hypertension than deranged calcium metabolism.

**SOURCE OF FUNDING:** None

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**MP16-28 THE CORRELATION BETWEEN ABDOMINAL OBESITY AND STONE ANALYSIS IN KOREAN**

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**INTRODUCTION AND OBJECTIVES:** The purpose of our study was to assess relation between subcutaneous adipose tissue, visceral adipose tissue, and stone analysis in Korean patients.

**METHODS:** Between 2011 and October 2012, 320 patients underwent stone surgery (ureteroscopic stone extraction, laparoscopic ureterolithotomy, Percutaneous nephrolithotomy) at a tertiary center. 285 patients were enrolled and the data were collected retrospectively in medical records. Assessment of total, visceral and subcutaneous abdominal fat compartments was performed by single slice CT. Analyses were performed using Alice software (version 4.3.9; Parexel, Waltham, MA).

**RESULTS:** The median age was 56 years. 177 patients had male and 108 patients had female. In stone analysis, 145 patients had calcium stone, 35 patients had carbonate stone, 89 patients had uric acid stone and 16 patients had struvite stone. There were performed to assess the association of the visceral adipose tissue, subcutaneous adipose tissue, Total adipose tissue, area ratio (V/V + S, %), outer circumference (cm). In male group and female group, the visceral adipose tissue, area ratio and outer circumference were not significantly different but subcutaneous adipose tissue (146.2 ± 61.4, 189.0 ± 58.7), total adipose tissue (269.8 ± 95.3, 309.3 ± 91.8) were significantly different. In calcium stone, carbonate stone, uric acid stone and struvite stone, there were not significantly different.

**CONCLUSIONS:** In man and female, the difference in visceral adipose tissue and outer circumference is not significant, but subcutaneous adipose tissue and total adipose tissue in woman increases the proportion of findings showing an increase in stone incidence. This is a common finding in women is associated with increased incidence of stone be considered.

**SOURCE OF FUNDING:** None

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**MP16-29 EFFECTIVENESS OF MEDICAL EXPULSIVE THERAPY FOR PEDIATRIC UROLITHIASIS: SYSTEMATIC REVIEW AND META-ANALYSIS**

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**INTRODUCTION AND OBJECTIVES:** Despite its well-documented success in adults, published success rates of Medical Expulsive Therapy (MET) for pediatric urolithiasis vary widely. Our objective was to determine whether the aggregated evidence supports the use of MET in children.

**METHODS:** We searched the Cochrane Controlled Trials Register, clinicaltrials.gov, MEDLINE, EMBASE databases, and recently presented meeting abstracts for reports in any language. The bibliographies of included studies were then hand-searched in addition. The protocol was prospectively registered at PROSPERO (CRD42013005960).

**RESULTS:** We identified 11,197 studies, 5 of which (3 randomized controlled trials, 2 retrospective cohorts) were included in the pooled meta-analysis. The pooled results demonstrate that MET significantly increased the odds of spontaneous stone passage (OR 2.21, 95% CI 1.40–3.49). Between-study heterogeneity was not significant (\( I^2 = 14\% \), \( p = 0.36 \)). Despite a relatively low heterogeneity, very few studies met inclusion criteria; we therefore included both randomized trials and observational studies. Although we found little evidence of significant publication bias, we were unable to assess the likelihood of other forms of bias (allocation, selection) for most included studies due to reporting limitations.

**CONCLUSIONS:** Consistent with the adult literature, pediatric studies demonstrate that MET results in an increased probability of spontaneous stone passage and a low rate of adverse events. However, due to inconsistent reporting it is unclear whether published studies are at risk of bias.

**SOURCE OF FUNDING:** None

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**MP17 LAPAROSCOPIC SURGERY: NEW TECHNOLOGY 1**

**MP17-01 FLUORESCENCE - TARGETED LAPAROSCOPIC LYMPH NODE DISSECTION IN PROSTATE CANCER**

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**INTRODUCTION AND OBJECTIVES:** Recently we have introduced fluorescence by means of Indocyanin Green (ICG) in addition to radio-guided dissection using Technetium 99 (Tc99) for laparoscopic pelvic sentinel node dissection (Urology 2012). Hence we could show that ICG alone gave equal results compared to TC99. Since ICG visualizes the complete drainage system we have as an evolution now left the sentinel concept to completely remove this template.

**METHODS:** 38 consecutive men with intermediate and high risk prostate cancer have undergone targeted Lymphnode dissection
MP17-02 ULTRA-TARGETED FLUORESCENCE LYMPH-NODE DISSECTION IN PROSTATE CANCER

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INTRODUCTION AND OBJECTIVES: In recent research we described the evolution and efficacy of the fluorescence (Indocyanin Green –ICG) targeted lymphnode dissection from a combined approach (ICG+Tc99) Sentinel PLND to an individualized template PLND (ICG). New image fusion techniques now allow us to inject the tracer directly into the tumor. We herewith present the data of the first 9 patients of our prospective series, which will be updated at the time of the congress.

METHODS: 9 patients (3 high risk, 6 intermediate risk) were diagnosed with prostate cancer by a perineal TRUS/MRI Fusion biopsy (Biojet system) and scheduled for laparoscopic RPE. At the beginning of laparoscopic RPE ICG was injected directly into the tumor using the Biojet system. First all ICG-visualized nodes were dissected, followed by an ePLND as control.

RESULTS: A total of 171 nodes were dissected (mean 21.4 + – 7.1 LN/pat). 55% of these nodes were F(ICG) positive (12 + – 6.7 LN/pat) and 42.2 % were found outside the ePLND template. In 3 pat LN met. were found (33%), of which 1 was outside the ePLND template. ICG distribution in the prostate specimen was measured with a Fluorescence camera postoperatively and it could be shown that the injected ICG was distributed within and around the tumor(s) and did not dissolve through the prostate. No non-stained metastases were found in addition to F+ Metastases.

CONCLUSIONS: Ultra targeted fluorescence PLND opens the opportunity for a precise taylor made lymphnode dissection. With this approach 45 % of plnd could be spared without missing positive nodes, leading to a possible significant reduction in PLND-morbidity.

SOURCE OF FUNDING: None

MP17-03 SUTURLESS LAPAROSCOPIC PARTIAL NEPHRECTOMY USING LASER TISSUE WELDING

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INTRODUCTION AND OBJECTIVES: Current partial nephrectomy standard requires suturing the resected area, which may take longer than the actual tumor resection, resulting in extended arterial clamp times and potential renal damage. We present a novel Laser Tissue Welding (LTW) technique where a human Albumin-Indocyanine Green dye solder is applied to the resected surface area of the kidney and a 60 Watt 810 nm diode laser causes coagulation of the albumin resulting in complete hemostasis. We present our results in a laparoscopic swine model.

METHODS: 24 Yorkshire pigs (12 males and 12 females; 41–71 kg) were assigned to study or control groups and were terminated at 3 days and 8 weeks post-treatment. Both groups had temporary occlusion of the left renal artery. The study group also had the lower pole excised and sealed using LTW. 5–8 ml of solder was used for each case.

RESULTS: All animals survived the procedure without an apparent complication. Total procedure time was mean 39 min, (range 18–69 min); total renal clamping time was mean 11 min (range: 6–12 min); Laser tissue welding sealing time was mean 100 sec (range 74–133 sec); intraoperative bleeding <5 ml; Postoperative bleeding was not seen; creatinine & Hemoglobin Pre and post were stable and no urine leaks were observed.

CONCLUSIONS: We demonstrated that LTW in laparoscopic partial nephrectomy in a swine model is feasible and safe. This technique is much faster and less challenging technically than suturing. We are currently conducting an FDA approved trial to assess feasibility and safety of LTW in humans.

SOURCE OF FUNDING: NIH- SBIR grant, Laser Tissue Welding, Inc

MP17-04 LAPAROSCOPIC SACROCOLOPSEXY USING BARBED SUTURES FOR MESH FIXATION AND PERITO-NEAL CLOSURE: A SAFE OPTION TO REDUCE OPERATIONAL TIMES

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INTRODUCTION AND OBJECTIVES: Laparoscopic sacrocolpopexy (LSC) represents the gold standard treatment option for the management of severe pelvic floor prolapse. Nevertheless, a significant learning curve associated with dissection of vaginal wall, mesh fixation and closure of the peritoneum exists. Barbed sutures have been proven a useful aid in several laparoscopic procedures in urology. In this work our experience with barbed sutures during LSC operation is presented.

METHODS: During the last two years we incorporated barbed sutures for the fixation of mesh onto vaginal wall and the closure of the peritoneum over the mesh. We herein present our technique and outcomes. In total 20 patients with a mean age of 63 y (range: 50–79 years) were subjected to laparoscopic sacrocolpopexy.
RESULTS: Mean operative time was 100 min (range: 65–140 min), blood loss >100 ml was evident only in 3 cases (15%) and none required transfusion. Complications were rare and of low grade (Fever x2, Bladder perforation x1, ileus x1). During a mean follow-up of 13.6 months (range: 3–30) no mesh erosion was evident. Patient satisfaction up to 95% was reported, while objective failure was evident in one cystocele relapse and 3 rectoceles relapses at the beginning of experience.

CONCLUSIONS: The use of barbed sutures reduced significantly operational times without any impact on the expected excellent outcomes of LSC. During a follow-up up to 30 months no mesh erosion was evident.

SOURCE OF FUNDING: None

MP17-05 WHAT'S MORE IMPORTANT FOR LAPAROSCOPIC PERFORMANCE OF NOVICE SURGEONS: MODALITY OF VISION OR PREVIOUS EXPERIENCE?

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INTRODUCTION AND OBJECTIVES: Lack of third dimensional perception is a known limitation of conventional two-dimensional (2D) laparoscopy. Three-dimensional (3D) laparoscopic systems have been recently introduced to overcome this problem. In this study, the impact of conventional 2D and 3D systems on laparoscopic performance of novice surgeons is examined.

METHODS: This prospective randomized trial included 25 participants consisting of urology residents and 6th year medical students with minimal or no skills in laparoscopy. The participants were directed to complete four basic tasks from European Training in Basic Laparoscopic Urological Skills (E-BLUS) with both 2D and 3D systems in a random order. (Table 1) Tasks were carried out in a pelvic trainer box with two working ports and one camera port. NASA TLX Task Load index was used for subjective workload assessment. Mean opinion score was used to assess perception of depth and visual comfort.

RESULTS: Participants demonstrated a better performance in the majority of tasks with the 3D system. (Table2) On the other hand previous task experience also seemed to play an important role in performance. Participants performing a particular task for the second time tended to perform better in most of the tasks regardless of if they started in 2D or 3D. (Figure1) Overall the participants reported a better perception of depth and spatial orientation with 3D system. Subjective work load was also lower for the tasks performed in 3D (Table 3).

CONCLUSIONS: Novice surgeons tend to perform better and feel much more comfortable with 3D laparoscopy. However previous task experience seem to have an important impact on laparoscopic performance.

SOURCE OF FUNDING: None

MP17-06 INCORPORATING THREE DIMENSIONAL (3D) VISION IN LAPAROSCOPY: LEARNING CURVE OF AN EXPERT!

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INTRODUCTION AND OBJECTIVES: Recently three dimensional (3D) laparoscopy systems have been introduced to overcome the technical drawbacks of conventional two dimensional (2D) laparoscopy. With this prospective study we aim to investigate the learning curve transition from 2D to 3D laparoscopy and benefits of 3D in daily urological practice in expert hands.

METHODS: Data from the fifteen consecutive operations performed with a 3D system, by one expert surgeon with 30 days period at our department were collected The procedures were carried out with a 0° or 30°, 10-mm Karl Storz laparoscope equipped with a high definition Storz (HD) camera with 3D capability.

RESULTS: Our first 15 cases with 3D laparoscopy showed similar outcomes with our previous 2D experience in terms of blood loss, operation time and safety. (Table 1), (Table2). Even though our expert surgeon felt comfortable within 30 minutes of his first procedure in 3D, a steep decrease in operation times was observed after couple of cases as documented by radical prostatectomy. (Figure 1).

CONCLUSIONS: The adaptation from 2D to 3D laparoscopy for the expert surgeon seems to be very rapid without a steep learning curve. 3D systems still have drawbacks that need to be addressed such as fatigue of eyes after 90 mins operation time, impairment of vision with closer objects and limited viewing angle. Overall current 3D systems provide excellent perception of depth and spatial resolution capabilities and we would favor working with 3D laparoscopy in the future.

SOURCE OF FUNDING: None

MP17-07 COSMETIC IMPACT OF PORT VERSUS PORTLESS NEEDLESCOPIC SURGERY-A PROSPECTIVE, RANDOMIZED, SINGLE-BLINDED STUDY

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INTRODUCTION AND OBJECTIVES: Use of needlescopic instruments may restore triangulation lost with LESS and NOTES techniques, although their small size limits their functionality. Portless access of needlescopic instruments allows for larger caliber instrumentation thereby improving functionality. The purpose of this study was to characterize the cosmetic impact of needlescopic instrumentation used with and without a port.

METHODS: 172 identical grids were tattooed onto the abdomens of female pigs. Grids were randomized to a 2.75 mm needlescopic port through which a 2.25 mm surgical tool was placed (n=80), a 2.75 mm portless needlescopic instrument (n=80), or a control group (n=12). Instruments were manipulated identically for 180 mins to simulate surgical shearing forces. Cosmesis was evaluated 4 weeks later by a blinded plastic surgeon using a Vancouver Scar Scale (VSS). Sample size was calculated to a power of 0.80 to detect a 20% difference. Fisher’s exact and Mann-Whitney tests were used, with p<0.05 considered significant.
RESULTS: Average scar size of port and portless sites were 3×2.2 mm with no difference in lengths or widths (p = 0.81, p = 0.69). Only 31.3% (25/80) of the port sites and 27.5% (22/80) of the port-less sites were identified from 5 ft (p = 0.73). At close range there was also no difference in number of visualized scars with 46.3% (37/80) in the port and 45.0% (36/80) in the portless group (p = 1.00). Mean VSS scores in the port (0.78) and portless group (0.75) were similar (p = 0.97).

CONCLUSIONS: Less than 1/3 of needlescopic ports were detected at 5 ft by a cosmetic surgeon. Omission of the port did not increase scarring. Larger instruments placed without a port could improve the functionality of needlescopic surgery without impacting cosmesis.

SOURCE OF FUNDING: None

MP17-08 5-YEAR FUNCTIONAL OUTCOME OF LAPAROENDOSCOPIC SINGLE SITE PERITONEAL DIALYSIS CATHETER INSERTION FOR THE MANAGEMENT OF PATIENTS WITH CHRONIC KIDNEY DISEASE UNDER PERITONEAL DIALYSIS

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INTRODUCTION AND OBJECTIVES: Peritoneal dialysis is one of the treatment options for patients with chronic kidney disease under dialysis status. Laparoendoscopic surgery (LESS) was first reported in 2008 and only limited data were reported regarding the feasibility of laparoendoscopic PD catheter insertion. The aim of this study is to report the 5-year functional results in patients with chronic kidney disease under dialysis status received laparoendoscopic peritoneal dialysis catheter insertion.

METHODS: From July 2009 to April 2014, total 77 patients received laparoendoscopic single site peritoneal dialysis catheter insertion were enrolled into this study. There were 40 males and 34 females. The perioperative data were collected by retrospective chart review. The catheter survival rate and patient crude survival rate were calculated using Kaplan-Meier survival method.

RESULTS: The 2-year and 5-year catheter survival rate was 90.3% and 75.7% respectively. The 2-year and 5-year patient crude survival rate was 90.5% and 13.1% respectively. There were 4 patients received renal transplantation. The perioperative complication rate was 11.7% while the long term complication rate was 9.09%.

CONCLUSIONS: The 2-years and 5-year catheter survival rate was 90.3% and 75.7% after laparoendoscopic single site peritoneal dialysis catheter insertion. This technique might serve as a treatment option for patients with chronic kidney disease under uremic status requiring peritoneal dialysis.

SOURCE OF FUNDING: None

MP17-09 IMPACT OF BARBED SUTURE IN CONTROLLING DORSAL VEIN COMPLEX DURING LAPAROSCOPIC RADICAL PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: Herein, we presented our barbed suture experience for dorsal venous complex (DVC) controlling, in our laparoscopic radical prostatectomy (LRP) series.

METHODS: This was a non-randomized, prospective matched-pair study. Thirty one LRP cases with using barbed suture (V-Loc®) were match-paired with 31 LRP cases in which traditional two single polyglactin stitches according to patient’s prostate volume, and body mass index (BMI). Time periods of DVC ligation, DVC control and operation time were recorded. Peri and postoperative parameters were noted. Statistical analyses were performed.

RESULTS: Mean age was 65.4 ± 6.3 years. Mean follow-up was 20.2 ± 3.3 months. Mean BMI and prostate volume were similar in two groups. Mean preoperative clinical stage, Gleason score, and PSA were comparable between two groups. Mean DVC ligation time and mean DVC controlling time in group 1 were statistical shorter than group 2 (p = 0.04, p < 0.001). Continence rates were significant higher in group 1 than in group 2, in early follow-up (p = 0.005).

CONCLUSIONS: The usage of the V-Loc®, in the DVC control, can decrease the time of this specific operative step even, in expert hands. Additionally, significant early continence rates could be provided by our suturing technique with V-Loc®.

SOURCE OF FUNDING: None

MP17-10 NEPHROSCOPE ASSIST LAPAROSCOPIC PERITONEAL DIALYSIS CATHETER PLACEMENT—A NEW APPLICATION

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INTRODUCTION AND OBJECTIVES: Continuous ambulatory peritoneal dialysis is a common alternative method for end stage renal disease patients. Various procedures has been reported for this application. We reported our method using nephroscope guidance during this surgical procedures.

METHODS: From 2011 to 2013, 148 consecutive patients who received peritoneal dialysis catheter placement underwent nephroscope guidance procedures. The operation time, immediate and delay surgical complications were recorded. The other group using conventional laparoscopic method were included for comparison.

RESULTS: The operation time was significant less in the nephroscope guidance group than in the conventional laparoscopic group. The common surgical complications in the laparoscopic group was leakage from trocar sites which was less in the nephroscope group.

CONCLUSIONS: The nephroscope guidance procedure is feasible in this new application.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: To investigate the feasibility and experience of retroperitoneal laparoscopic (retro-laparoscopic) resection of primary retroperitoneal tumor.

METHODS: This research retrospectively analyzed 15 primary retroperitoneal tumor patients received retro-laparoscopic resection in surgical department of Urology of the First Hospital of Jilin University during January 2008 to January 2014. All patients performed preoperative imaging tests; 15 patients took preoperative abdominal ultrasound examination; 12 patients took computer tomography (CT); 5 patients took magnetic resonance imaging (MRI). The average tumor size was 5.8 cm (2.3 cm ~ 8.1 cm). The PRT was located in right adrenal area (n = 3), left adrenal (n = 2), beside spine (n = 1), right renal under (n = 2), psoas major muscle ahead (n = 2), beside postcava (n = 3), beside aorta (n = 2) respectively. Retro-laparoscopic resection was performed.

RESULTS: The operation was accomplished successfully in all cases without any adjacent organ or vessel injury. The average operative time was 115.6 min. The average blood loss was 155.8 ml, and average postoperative hospital stay was 5.8 days. The pathologic diagnosis included four schwannoma cases, three ganglioneuroma cases; two retroperitoneal cyst cases; one paraganglioma case; two lipoma cases; one mature teratoma case; one ganglioneuroma cases; two retroperitoneal cyst cases; one para-aorta (n = 2) respectively. Retro-laparoscopic resection was performed.

CONCLUSIONS: Even if the tumor is large and adhering to adjacent viscera or major vessels, retro-laparoscopic resection is a minimally invasive, safe and effective option with preoperative imaging studies, retroperitoneal approach, and skilled retro-laparoscopic techniques.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Laparoscopic partial nephrectomy has been shown to be less invasive and acceptable for favorable cancer control in renal tumor. We evaluated the usefulness and oncological outcomes of laparoscopic partial nephrectomy using a microwave tissue coagulator for small renal tumors.

METHODS: From February 2002 to February 2014, 94 patients with small renal tumors, from 8 to 47 mm in diameter, underwent laparoscopic partial nephrectomy with a microwave tissue coagulator with or without ischemia (ischemia in 3 cases and non-ischemia in 91).

RESULTS: Three and 91 patients were treated by the transperitoneal and retroperitoneal approaches, respectively. The median operative time was 173 minutes (range 105 to 393), and the median blood loss was 88 mL (range 0 to 1220). No patients had conversion to nephrectomy. The histopathological study revealed renal cell carcinoma (RCC) in 79 cases, oncocytoma in 4, angiomyolipoma in 8, and other in 3. In 4 patients (4.2%), frozen sections revealed a positive surgical margin and 2 (2.1%) of these 4 patients showed a local recurrence later. Postoperative complications were mild and tolerable, and renal function was preserved well without significant deterioration. With the median follow-up of 20 months, 2 patients showed local recurrence, one patient distant metastasis and 2 died of other causes. Three-year recurrence-free survival for patients with RCC was 97.5%.

CONCLUSIONS: Non-ischemic laparoscopic partial nephrectomy using a microwave tissue coagulator may be useful and less invasive method for treatment of small renal tumors.

SOURCE OF FUNDING: None
analyzed retrospectively. There were 7 cases performed with 3 males and 4 females. The age of patients was from 42 to 72 years. The range of tumor size was 1.1 to 3.8 cm and depth in the kidney was 0.1 to 1.5 cm. After exposing the tumor, the surgeon adopted endoscopic artery clamp to block the renal artery or not and cut the kidney with scissors 0.5–1 cm from the tumor margin. With no residual tumor was observed, the hemorrhage of renal parenchyma was controlled by bipolar electrode.

RESULTS: The procedures was technically successful in all cases. None was converted to open procedures. The estimated blood loss was 10 to 200 ml and warm ischemia time was 0 to 18 min. There was no secondary bleeding, wound infection, incision hernia and other severe postoperative complication. Pathological results were clear cell carcinoma (3 cases), hamartoma (3 cases) and papillary carcinoma (1 case). Pathological margins were all negative. Follow-up of 5 to 12 months shows no local recurrence.

CONCLUSIONS: Sutureless technique is comparatively simple and can apparently shorten the warm ischemia time, which is feasible by experienced surgeons in high selective patients with renal tumors.

SOURCE OF FUNDING: None

MP17-15 LAPAROSCOPIC RADICAL NEPHRECTOMY BY MODIFIED PFANNENSTIEL INCISION

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INTRODUCTION AND OBJECTIVES: Laparoscopic radical nephrectomy has become a standard of care when dealing with large renal tumors or other renal cancers not amenable to partial nephrectomy or ablative therapy. We present a novel incision for transperitoneal laparoscopic radical nephrectomy with the benefits of improved cosmesis and reduced pain. The study is to evaluate the efficacy and safety of transperitoneal laparoscopic radical nephrectomy with the modified Pfannenstiel incision.

METHODS: Between Aug 2012 and Jul 2013, the same surgeon performed transperitoneal laparoscopic radical nephrectomy for 12 patients with renal masses. The approach was usually performed through 3 ports or 4 ports placed in a traditional manner. After laparoscopic radical nephrectomy was completed, and the specimen was enwrapped in a specimen retrieval bag, a 7 cm modified Pfannenstiel skin incision was made over the symphysis pubis, lateralized slightly toward the side of surgery.

RESULTS: All procedures were completed without conversion to open radical nephrectomy. The operative time was 106 to 234 minutes and blood loss was minimal. There was no intra- or post-operative complications. Pathological result is renal cell carcinoma. One patient died of multiple organ metastasis after 5 months. No recurrence is seen after 9 to 20 months follow-up.

CONCLUSIONS: Laparoscopic radical nephrectomy with the modified Pfannenstiel incision where the kidney is removed offers the benefits of improved cosmesis over the traditional muscle-cutting extension of an upper abdominal, lateral port site. The modified Pfannenstiel incision combines the advantages of a low abdominal incision and improved cosmesis, and can be considered a potential alternative for traditional laparoscopic nephrectomy.

SOURCE OF FUNDING: None

MP17-16 LAPAROSCOPIC ACCESS: MULTICENTRIC ANALYSIS IN MORE THAN 65,000 PROCEDURES

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INTRODUCTION AND OBJECTIVES: Analyze varying laparoscopic access, identify the favourite kind of entry technique and evaluate the related complications in urological surgery.

METHODS: We created an Overview by sending a questionnaire to 80 laparoscopist urologists from June 2013 to December 2013. The questionnaire analyzes the number and the kind of access, the number of intra- and post-operative complications and the kind of treatment of them. Incomplete questionnaires were excluded from analysis. Statistical analyses were performed using a Chi-square test, and a p-value < 0.05 was accepted as statistically significant.

RESULTS: The response rate amounts to 51.25%, corresponding to a total number of 65,636 procedures. 2 questionnaires are excluded because of incompleteness. The most used transperitoneal access is “blind trocar” (38.5%) of surgeons. The optical trocar technique seems to be the safest but it’s the least used. 61.5% of surgeons uses Verres Needle. 76.9% of surgeons uses retroperitoneal access by “open technique” or “optical trocar”. Intra-operative-complication rate amounts to 3.3% and the post-operative one to 9.6%. Conversion rate amounts to 0.33% (53.8% of surgeons), transfusion rate to 1.13% (56.4% of surgeons) and need for re-treatment rate amounts to 0.3%.

CONCLUSIONS: Laparoscopic access is a safe operation. Many complications could be managed laparoscopically or through a conservative management and they have no need of “open” conversion. By our questionnaire, the safest access is the “optical trocar” one. No definitive conclusions about the choice of the kind of access are found, but complications seem to be related to it.

SOURCE OF FUNDING: None

MP17-17 DORSAL VEIN COMPLEX LIGATION-FREE TECHNIQUE FOR LAPAROSCOPIC RADICAL PROSTATECTOMY: A SINGLE-CENTER EXPERIENCE OF CHINESE

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INTRODUCTION AND OBJECTIVES: To describe our experience in control bleeding from the dorsal vein complex (DVC) during laparoscopic radical prostatectomy (LRP).

METHODS: This retrospective study utilized prospectively collected data from December 2009 to June 2013 for 138 patients with localized prostate cancer who underwent LRP. Data of 90 consecutive patients in whom DVC bleeding was controlled without ligation (Group 1) were retrospectively compared with those of 48 consecutive patients in whom DVC bleeding was controlled with suture ligation (Group 2). Surgical, oncological, and functional outcomes were considered, with special emphasis on estimated blood loss (EBL) and postoperative continence.

RESULTS: Operative time was significantly shorter in Group 1 than in Group 2 (153.7 vs. 173.8 min; p = 0.005). No significant difference in EBL was noted between two groups. Ratio of positive apical surgical margin was almost the same. Post-operative continence rates at 1, 3 and 6 months in Groups 1 and 2
were 63.3% vs. 43.9%, 81.1% vs. 63.4%, and 88.8% vs. 73.1% respectively, these differences were statistically significant. But at one year after operation, the continence rates were not much difference between two groups. During follow-up, tumor recurrence or metastasis were not observed in any patient.

**CONCLUSIONS:** Ligation-free is a safe and convenient technique to control DVC bleeding. Operative time was decreased and the level of blood loss was acceptable. Use of this technique may enhance functional outcomes in the early stage, but its long-term therapeutic effects is still need large series with longer follow-up studies to fully evaluated.

**SOURCE OF FUNDING:** None

**MP17-18 A HYPOGASTRIC SUBCUTANEOUS APPROACH FOR ENDOscopic INGUINAL LYMPHADENECTOMy: CHINESE PRELIMINARY EXPERIENCE**

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**INTRODUCTION AND OBJECTIVES:** To report the technique of the hypogastric subcutaneous approach for endoscopic inguinal lymphadenectomy and evaluate the simplicity, effectiveness and importance in treatment of patients with penile cancer.

**METHODS:** From June 2011 to April 2013, 13 patients with penile cancer undergone endoscopic inguinal lymphadenectomy via a hypogastric subcutaneous approach. We used a minimally invasive approach with four trocars placed in the hypogastrum (respectively at the infraumbilical, both sides of the lateral rectus abdominis, anti McBurney point). Superficial inguinal group, Cloquet’s group and deep inguinal group of lymph node and adipose tissue are dissected. Perioperative data and postoperative outcomes were systematically assessed.

**RESULTS:** All laparoscopic procedures were successfully performed without conversion and intraoperative complications. Average operative time for the endoscopic procedure was 116.7 minutes, with estimated blood loss of approximately 92 milliliter. A mean of 11.7 nodes were retrieved. The drainage tube was removed on average time of 5.2 days whereas the mean hospital stay was 5.8 days. Of the 13 patients, only 1 patient exhibited subcutaneous hydrops. No other serious long-term complications were observed. All patients were followed up for more than 8 months with no significantly lower extremity swelling and movement disorder.

**CONCLUSIONS:** Hypogastric subcutaneous approach for endoscopic inguinal lymphadenectomy is a safe and feasible technique that may further diminish the wound-related complications. This approach could ensures the sweeping range with reducing surgical complications and improving the quality of life. However, its long-term therapeutic effects for cancer is still need large size with longer follow-up studies to be evaluated.

**SOURCE OF FUNDING:** None

**MP17-19 AVAILABILITY OF VIO SOFT-COAGULATION FOR LAPAROSCOPIC PARTIAL NEPHRECTOMY: INITIAL EXPERIENCE IN 15 CASES**

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**INTRODUCTION AND OBJECTIVES:** We report the initial experience of laparoscopic partial nephrectomy using VIO soft-coagulation without nephorrhaphy.

**METHODS:** We reviewed 15 cases for which laparoscopic partial nephrectomy using VIO soft-coagulation had been performed in 2013. Mean value of age was 65 with a male-to-female ratio of nine to six. All cases were proved to be a cT1a with a median tumor size of 25 mm. As for R.E.N.A.L. Nephrometry Score for tumor, seven cases were classified as low group and eight cases as moderate group. Soft-coagulation was used to achieve coagulatory hemostasis for incision surface after tumor resection. In all cases, hemostasis was completed by attaching a tissue sealing sheet.

**RESULTS:** Median value of surgical time and warm ischemic time (WIT) was 182 minutes and 25 minutes respectively. With 50 ml of intraoperative hemorrhage observed, allogeneic transfusion was not required in any case. In particular, neither complication nor postoperative hemorrhage was recognized in the perioperative period with all resection stumps found to be negative.

**CONCLUSIONS:** It has been proved to be possible to conduct this operative procedure safely. Further review on its availability and safety is planned for more difficult cases.

**SOURCE OF FUNDING:** None

**MP17-20 LAPAROSCOPIC OFF-CLAMP PARTIAL NEPHRECTOMY USING SOFT COAG ELECTROSURGICAL UNIT**

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**INTRODUCTION AND OBJECTIVES:** Laparoscopic Partial nephrectomy (LPN) has been spreading as a nephron-sparing surgery for small renal cancer. To conserve the renal function, shortening of the warm ischemia time (WIT) is important, and various modifications have been made to achieve this. Recently, zero ischemia partial nephrectomy has been reported. We performed partial nephrectomy using SOFT COAG unit which enabled off-clamp partial nephrectomy.

**METHODS:** LPN with off-clamp using SOFT COAG output was performed in 30 patients with T1 renal cell carcinoma from May 2012 to November 2013. Tumor resection was then performed with a combination of bipolar forceps and a ball electrode using SOFT COAG system without hilum clamping.

**RESULTS:** This procedure was could be completed in 29 cases. The mean age of the patient is 60 year old (range 30–71). The mean RENAL Nephrometry score was 6 (range 4–10). The mean operative time was 266 min (range 159–450 min). In off-clamp and hilum-clamp groups, serum creatinine % change at 3 months were 6.4 % vs. 7.3%. There were no differences between two groups.

**CONCLUSIONS:** This new technique using soft coagulation considered to be safe and feasible for laparoscopic partial nephrectomy.

**SOURCE OF FUNDING:** None

**MP17-21 A NOVEL TECHNIQUE OF NON-TISSUE SUTURING LAPAROSCOPIC PARTIAL NEPHRECTOMY**

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INTRODUCTION AND OBJECTIVES: Laparoscopic partial nephrectomy (LPN) has commonly performed for nephron sparing surgery, but renal ischemic time is still long. Furthermore, conventional suturing technique has potential occurring pseudoaneurysm and postoperative bleeding. Then, postoperative ischemic change would be a major concern. We compared clinical outcomes of a new technique of non-tissue suturing laparoscopic partial nephrectomy (NTS-LPN) with conventional laparoscopic partial nephrectomy (C-LPN).

METHODS: A hundred-three patients who underwent partial nephrectomy since 2008 were divided between NTS-LPN group (n = 36) and C-LPN group (n = 67). Perioperative data including the parenchymal volume of postoperative renal ischemic change (PV-PRIC) by 3D-CT volumetry, postoperative kidney function and adverse events were compared between 2 groups.

RESULTS: Mean operative time (C-LPN/NTS-LPN) was 236 ± 77.8/134 ± 33.5 minutes. Mean operative blood loss was 222 ± 913/54.2 ± 67.4 ml. Renal ischemic time was 54.8 ± 27.4/19.0 ± 7.62 seconds. PV-PRIC was 19.4 ± 5.49/4.26 ± 2.29 ml at 3 months, 15.9 ± 8.20/2.37 ± 1.02 ml at 6 months, 13.1 ± 6.00/1.67 ± 0.55 ml at 1 year. Changing PV-PRIC for 3/6 months was – 1.79/-0.46 ml in NTS-LPN less than – 3.51/-8.13 ml in C-LPN. Serum creatinine value of each points (1/3/6/12 months) was comparable in both groups (C-LPN: 0.97/0.95/0.98/0.90, NTS-LPN: 1.04/0.94/0.92/0.94). Major complications of Clavien-Dindo classification IIIa (postoperative bleeding and peri-renal abscess) were observed in C-LPN, whereas 2 cases of minor urinary leakage in NTS-LPN.

CONCLUSIONS: NTS-LPN was minimum invasive and feasible for nephron sparing surgery, it suggested that our newest maneuver certainly decrease parenchymal damage after LPN.

SOURCE OF FUNDING: The author have no financial conflicts of interest to disclose concerning the presentation.

MP17-22 COMPARISONS OF PERCUTANEOUS VERSUS RETROPERITONEOSCOPIC CRYOABLATION FOR SMALL RENAL MASSES: MID-TERM FOLLOW-UP
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INTRODUCTION AND OBJECTIVES: Preservation of renal function and oncological control are important while managing renal tumors in patients. We compare percutioperative and intermediate-term outcomes of renal percutaneous and retroperitoneoscopic cryoaoblation (PCA and RCA) in patients with renal neoplasms.

METHODS: We identified 74 patients from two medical centers, where 30 patients received CT-guide percutaneous renal cryoablation and 44 patients underwent retroperitoneoscopic renal cryoablation from August 2009 and to May 2013. We compared preoperative and postoperative parameters, such as age, Charlson comorbidity index (CCI), body mass index (BMI), tumor size, estimated glomerular filtration rate (eGFR), hemoglobin, operative time, tumor type, Clavien classification, and tumor recurrence by statistical analysis of t-test and chi-square test.

RESULTS: Retroperitoneoscopic method had shorter operative time and increased pathologic diagnosis of renal tumor. Percutaneous method had shorter length of stay and provided alternative access for patients with high CCI and BMI. No patients developed deterioration of renal function in both PCA and RCA groups during the follow-up. However, major complications and poor oncologic outcome were significant in those with tumor size > 4 cm.

CONCLUSIONS: In intermediate-term of follow-up, PCA and RCA had equal efficacy in oncological outcome. Patients underwent RCA had shorter operative time and higher pathologic diagnosis of renal tumor than PCA. If the renal tumor size is less than 4 cm, good oncological control and low morbidity were noted in both PCA and RCA groups.

SOURCE OF FUNDING: None

MP17-23 VAGINAL EXTRACTION OF EN BLOC SPECIMEN FOLLOWING LAPAROSCOPIC TOTAL URINARY TRACT EXENTERATION
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INTRODUCTION AND OBJECTIVES: The minimal invasive surgery is a prefer choice nowadays. We reported a single center experience of vaginal extraction of en bloc specimen following single-session laparoscopic total urinary tract extenteration (LTUTE) in female patients.

METHODS: We included the female patients diagnosed to have urothelial carcinoma who had undergone LTUTE with end stage renal disease (ESRD), from June 2005 to January 2014. All of the specimens were extracted via vagina in one piece. There were no exclusion criteria. The surgical procedure was described detail at previous reported article. Specimens were extracted via vagina in endobag. We analysis the peri-operative data including surgical duration, blood loss, specimen character and postop complication and recovery course. The data was obtained retrospectively by chart review and calculated by Microsoft Excel for Mac 2011.

RESULTS: There were 5 patients enrolled with average 64.8 years-old. The surgical duration was 370 ± 50.5 minutes with 320 ± 195.6 ml blood loss. The hospital stay was 15.2 ± 11.7 days and they can start enteral nutrition on postop day 3.8 ± 1.0. One of them has grad IV Clavien-Dindo complication because of postop gastric ulcer bleeding. All of them has regular followed up for 22.8 ± 23.2 months. None of them has mortality or morbidity during follow-up at clinic.

CONCLUSIONS: LTUTE is a considerable and safe surgical intervention for selected patient who was diagnosed to have urothelial carcinoma by experience surgeon with advanced laparoscopic skills. Extraction of specimen via vagina is a feasible procedure to reduce postop wound pain without obvious disadvantage.

SOURCE OF FUNDING: None

MP17-24 LAPAROENDOSCOPIC SINGLE-SITE CRYPTORCHIDECTOMY IN THE TREATMENT OF CRYPTORCHIDISM
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INTRODUCTION AND OBJECTIVES: To evaluate the safety and feasibility of laparoendoscopic single-site surgery (LESS) cryptorchidectomy in the treatment of cryptorchidism.

METHODS: From July 2011 to November 2012, three cryptorchidism patients were treated by LESS cryptorchidectomy. The patient ages were 20, 27 and 51 years. The body mass index (BMI) was 20.1, 19.4 and 31.2 kg/m2, respectively. LESS cryptorchidectomy was performed by a para-umbilical incision and transperitoneal approach using standard laparoscopic instruments and 5 mm flexible tip video-laparoscope.

RESULTS: All procedures were completed with pure LESS without additional assistant trocar or conversion to open or conventional laparoscopic surgery. The first patient was performed right LESS cryptorchidectomy plus inguinal herniorrhaphy, the second patient who was a male pseudohermaphroditism performed to be a female was performed bilateral LESS cryptorchidectomy, the third patient was performed right LESS cryptorchidectomy. After LESS cryptorchidectomy, all patients were performed internal ring repair. The operative time was 100, 110 and 50 min. The average estimated blood loss was less than 5 mL. There was no severe intra-operative complication. The first post-operative day VAPS was 1 in all patients. The post-operative hospital stay was 2, 3 and 2 days. All the incisions had hidden well in the umbilicus after heal. All the patients and physicians were satisfied with the cosmetic results.

CONCLUSIONS: The application of LESS cryptorchidectomy is safe and feasible. The advantages of the cryptorchidectomy are nearly post-operative pain free and good cosmetic results.

SOURCE OF FUNDING: None

MP17-25 COMPLETE OFF-CLAMP ZERO ISCHEMIA PARTIAL NEPHRECTOMY WITHOUT THE EXPOSURE OF RENAL ARTERY UNDER NORMAL BLOOD PRESSURE: INITIAL EXPERIENCES HAVE REVEALED SHORT OPERATION TIME

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INTRODUCTION AND OBJECTIVES: Complete off-clamp Zero Ischemia partial nephrectomy (ZIPN) is one of the most challenging procedure among several variation of partial nephrectomy. The exposure of renal artery is usually obligated to prepare shutting the blood stream in emergency situation. But it has been already reported that partial nephrectomy can be done without massive bleeding for small tumors. We tried Zero Ischemia partial nephrectomies without the exposure of renal hilum.

METHODS: Subjects are ten T1a tumors and one T1b tumor. Tumor size was 12–44 mm (median 20 mm). Initial clinical experience of pure transvaginal NOTES for nephrectomy: report of 16 cases

RESULTS: Blood loss was 0–280 mL (median 40 mL). Pneumoperitoneal time was 53–127 min (median 70 min). In the cases without the exposure of renal artery, Pneumoperitoneal time was 53–90 min (median 70 min). 7–50 min (median 22 min) was taken from the removal of tumor to the end of renorrhaphy. All procedure was completed without any complication.

CONCLUSIONS: Complete off-clamp ZIPN could be done under normal blood pressure. The exposure of renal hilum can be omitted safely. It made the procedure simple, which can contribute to shorten the operation time of partial nephrectomy. Besides, laparoscopic ZIPN has an advantage of pneumoperitoneum pressure to reduce blood loss from incised parenchyma. From our experience, this procedure could be a valuable option.

SOURCE OF FUNDING: None

MP17-26 LAP. NEPHROURETERECTOMY: HOW TO KEEP ONCOLOGICAL PRINCIPLE INTACT

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INTRODUCTION AND OBJECTIVES: Nephroureterectomy with urinary bladder cuff is the treatment for upper tract TCC. To maintain oncological principle it is important to close lower ureter first. Among many methods Pneumovesicu approach have superiority. Here we reported initial experiences of Pneumovesicu approach to en-bloc laparoscopic nephroureterectomy with bladder cuff.

METHODS: January 2010 to July 2012, 7 patients with upper tract TCC were underwent Pneumovesicus approach and ureteric orifice of dissection site closed by vicryl running suture then dissection of the lower ureter and excision of the bladder cuff were performed. The bladder defect was closed through pneumovesicus and standard Laparoscopic Nephroureterectomy was followed. Another 7 patients were underwent incision around the ureteric orifice by Collins knife, lower ureter pushed outside bladder then conventional laparoscopic Nephroureterectomy performed after clipping lower ureter.

RESULTS: 14 patient of 50–75 years, 8 renal pelvic tumor, 4 upper ureter tumor, 2 midureter tumor. 10 patients had T1 and 4 patients had T2 diseases. All of the patients had Grade II diseases. Average operation time was 180 minutes. Average hospital stay was 3 days. Analgesic requirement was single dose of inj. Pethedine. One patient develop urinary bladder infection in follow up period among those lower ureter dissected by Collins knife. No significant per operative and post operative complication were observed.

CONCLUSIONS: Pneumovesicus approach for Laparoscopic Nephroureterectomy with bladder cuff is safe, effective and strictly maintain the oncological principle. Hospital stay and return to normal activity is faster. Study of large number of cases in different institutes are required for further common.

SOURCE OF FUNDING: None

MP17-27 PURE TRANSVAGINAL NATURAL ORIFICE TRANSLUMINAL ENDOSCOPIC SURGERY (NOTES) FOR NEPHRECTOMY: REPORT OF 16 CASES

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INTRODUCTION AND OBJECTIVES: We describe the initial clinical experience of pure transvaginal NOTES for nephrectomy, and evaluate its feasibility.

METHODS: Fifteen female patients with non-function kidney (right 12, left 3), with a median age of 42.6 years, underwent pure
transvaginal NOTES nephrectomy. Patients were positioned in lithotomy with ipsilateral lumbar at 60° angle. A 5-mm incision was made at the posterior vaginal fornix, a 5-mm flexible-tip 0° laparoscope was inserted into the pelvic cavity confirming no rectum injury. A ZOU-port was introduced at the posterior vaginal fornix. Dissection was performed according to the method of the standard laparoscopic nephrectomy. The intact specimen was extracted transvaginally.

**RESULTS:** The procedures were successfully performed in all patients without additional trocars except for 1, who immediately underwent suprapubic-assisted laparoendoscopic single-site surgery conversion for rectal injury during vaginal entry. There was no other major perioperative complication occurred. The median operative time was 180 mins. The median estimated blood loss was 165 ml. The patients resumed ambulation on postoperative day 1. The pelvic drainage was removed on postoperative day 2 to 3. The patients resumed nutrition on postoperative day 1. The median follow-up of 14.5 months showed that the incision in the vagina healed well.

**CONCLUSIONS:** Pure transvaginal NOTES for nephrectomy is feasible and effective.

**SOURCE OF FUNDING:** None

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**INTRODUCTION AND OBJECTIVES:** The aim of the trial was to compare NOTES-A with LA regarding short-term pain, health-related quality of life (HRQoL), recovery, and complications.

**METHODS:** Eligible patients were randomized to receive NOTES-A or LA. Primary end points were pain until the morning of postoperative day (POD) 3 and cosmetic result. Secondary end points were intra- and postoperative complications, operative time, length of postoperative hospital stay, time to full recovery, and HRQoL up to 4 weeks.

**RESULTS:** Female patients were recruited between February 2011 and September 2013. Of 51 randomized patients, 42 received intervention: 19 NOTES-A and 23 LA. Operative times for NOTES-A were greater than LA (98.5 minutes vs. 74.6 minutes, P < 0.05), Length of postoperative hospital stay and the rate of intra- and postoperative complications were similar in the 2 groups. However, significant advantages were found for the NOTES-A regarding pain until POD 3 (all P < 0.05). In the NOTES-A group, patients were significantly more satisfied with the cosmetic result (P < 0.05). Time to full recovery was shorter in the NOTES-A group, HRQoL as determined by the SF-36 survey was not significantly different between groups.

**CONCLUSIONS:** NOTES-A requires a longer operative time than LA but may result in less pain, faster recovery, and increased satisfaction with the cosmetic result. Larger randomized trials performed later may identify more subtle advantages of one method over another.

**SOURCE OF FUNDING:** None
RESULTS: Baseline levels (T0) of CRP, IL-6, SAA and IL-1 were comparable in both groups. CRP, IL-6 and SAA levels increased during both kinds of surgery. The mean IL-6 and CPR values were significantly higher in the LRN group than in the NOTES-RN group at T1 (P=0.02 and 0.001), T2 (P=0.001 and <0.001), T3 (P=0.002 and <0.001), T4 (P=0.001 and 0.02), and T5 (P<0.001 and 0.03), respectively. Also, the serum levels of the SAA was higher for LRN at T2 (P<0.001), T3 (P=0.001), T4 (P=0.001) and T5 (P=0.003). IL-1 did not change at the different sample times.

CONCLUSIONS: NOTES-RN was associated with lesser extent of IL-6, CPR and SAA release indicating a smaller degree of surgical insult and the minimal-invasive nature of this procedure.

SOURCE OF FUNDING: None
METHODS: We performed a single-institution, single-surgeon review of 3,120 patients who underwent RARP from 2005 to 2012. 1,983 patients had a BMI documented and were included in analysis. Perioperative data was evaluated from a prospectively maintained RARP database. A one factor ANOVA test was used to compare the different BMI categories. A p-value of less than 0.05 was considered significant.

RESULTS: Based on the review of 1983 patients undergoing RARP, 428 (21.6%) were normal weight (BMI < 25), 998 (50.3%) were overweight (BMI 25–29.99), and 557 (28.1%) were obese (BMI ≥ 30). The length of time taken for RARP was significantly longer for obese patients than for normal and overweight patients. Estimated blood loss (EBL) during surgery was also significantly greater for obese patients as well. No significant differences were noted in regard to pre-operative and post-operative variables.

CONCLUSIONS: Our study demonstrated that obese patients had significantly higher times for length of surgery and EBL. Both EBL and length of surgery are commonly used surrogates for difficulty of an operation. This knowledge should be used when counseling obese patients preoperatively.

SOURCE OF FUNDING: None

MP18-03 ASSOCIATION BETWEEN URETHRAL AND VESICAL ANATOMICAL FEATURES AND EARLY RECOVERY OF URINARY CONTINENCE AFTER ROBOT-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: The aim of the present study was to elucidate factors contributing to early recovery of urinary continence after robot-assisted laparoscopic radical prostatectomy (RARP) from the perspective of urethral and vesical anatomical features after RARP.

METHODS: Sixty consecutive patients undergoing RARP also underwent pre- and postoperative urethrocystography (UVG). Both pre- and postoperative UVG evaluated anterior-urethral vesical angle and position of the urethrovesical junction (UVJ). Postoperative UVG was performed 7 days after RARP. Postoperative UVG evaluated postoperative membranous urethral length (MUL) and postoperative degree of atony of the external urethral sphincter (EUS). Associations between pre- or postoperative UVG variables and urinary incontinence, as well as between UVG variables significantly correlating with urinary incontinence and neurovascular bundle-preservation procedures, were analyzed.

RESULTS: Postoperative MUL was the only factor significantly associated with state of continence in the early postoperative period according to multivariate logistic regression analysis (odds ratio, 1.94; 95% confidence interval, 1.22–3.12; P = 0.005). A cut-off value of 17 mm offered the best accuracy in receiver-operating characteristics analysis. Postoperative MUL was significantly increased neurovascular bundle preservation group (P = 0.01).

CONCLUSIONS: Postoperative MUL is the most important factor for recovery of urinary continence in the early postoperative period after RARP. Postoperative MUL > 17 mm as measured on UVG can be expected to predict early recovery of urinary continence. Postoperative MUL was preserved by neurovascular bundle preservation. Neurovascular bundle preservation might thus allow early recovery of urinary continence by preserving the MUL.

SOURCE OF FUNDING: None

MP18-04 IMPACT OF PROSTATIC APICAL SHAPE ON EARLY RECOVERY OF CONTINENCE AFTER ROBOT-ASSISTED RADICAL PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: To investigate the impact of prostatic apical shape from preoperative magnetic resonance imaging (MRI) on early recovery of urinary continence after robot-assisted radical prostatectomy (RARP).

METHODS: We reviewed the records of 1,011 patients who underwent RARP at a tertiary center from October 2007 to March 2013. Patients were stratified into four different groups by prostatic apical shapes as shown on preoperative MRI (group A to D). The early recovery of urinary continence was defined as 0 or 1 security pad per day within 12 weeks after the surgery. The association between early recovery of continence and various factors were analyzed.

RESULTS: Overall 807 (79.8%) patients showed early recovery of urinary continence. The numbers of patients in group A, B, C, and D were 88 (8.7%), 478 (47.3%), 167 (16.5%), and 278 (27.5%), respectively. There were no significant differences in the rates of early recovery of urinary continence between different groups (P = 0.257). On multivariate analysis, the patient age (OR 0.960, P = 0.004), preoperative International Index of Erectile Function-5 score (OR 1.029, P = 0.009), neurovascular bundle preservation (OR 1.586, P = 0.013), and membranous urethral length (OR 1.104, P = 0.009) were revealed as independent prognostic factors in the early recovery of urinary continence.

CONCLUSIONS: The results of our study showed that the prostatic apical shape does not influence the early recovery of urinary continence. We believe this is another strong point of RARP compared to conventional open surgery, particularly for those patients with complex type of apical shape.

SOURCE OF FUNDING: None

MP18-05 CLINICAL ANALYSIS OF ROBOTIC ASSISTED LAPAROSCOPIC RADICAL CYSTECTOMY WITH A MODIFIED EXTRACorporeal DOUBLE-U SHAPED ORTHOTOPIC NEOBLADDER FOR THE TREATMENT OF MUSCLE INVASIVE BLADDER CANCER

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INTRODUCTION AND OBJECTIVES: To evaluate the feasibility and safety of robotic assisted laparoscopic radical cystectomy (RALRC) for the treatment of urothehial muscle invasive bladder cancer, and to introduce a new method of urethral reconstruction in the formation of double-U shaped neobladder.

METHODS: RALRC was performed for five selected male MIBC patients from March 2010 to November 2013 with their age ranging from 51–66, within four weeks after TURBT.
through which the pathological diagnosis was assured. After radical cystectomy was fulfilled, the urethral stump was pressurized with four stitches and the specimen was retrieved through a vertical suprapubic incision 5 cm in length. Then the terminal ileum was harvested to form a neobladder in double-U shape and anastomosed to the presutured urethral stump.

**RESULTS:** The operations were accomplished successfully. The operating time, estimated blood loss, transfusion was 300–420 minutes, 800–1200 ml, 600–1000 ml, respectively. One case of urinary leakage was encountered and relieved by itself after sufficient drainage and nutrition support. The postoperative hospital stay (PHS) was 12–21 days. The follow up period was 4–48 months, one patient died of distant metastasis and the remaining four cases survive till now, who are happy with their day continence. Nocturnal incontinence persists, but no evidence of hydronephrosis was identified by postoperative CTU.

**CONCLUSIONS:** RALRC is a safe and feasible modality for MIBC. Presururing the urethral stump in robotic visual field, which helps reducing the OT and incision length, could be a recommendable modality because intracorporeal urinary diversion (ICUD) remains technically challenging.

**SOURCE OF FUNDING:** None

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MP18-06 SAFETY OF SELECTIVE NERVE SPARING IN HIGH RISK PROSTATE CANCER DURING ROBOTIC ASSISTED RADICAL PROSTATECTOMY

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**INTRODUCTION AND OBJECTIVES:** We report our pathological outcomes in who underwent selective nerve sparing with pre operative D’Amico high risk prostate cancer.

**METHODS:** Between Jan 2008 till June 2013, 541 patients underwent robotic prostatectomy for D’Amico high risk prostate cancer. Nerve sparing (NS) was done selectively in patients with low volume high risk cancer to preserve the functional outcomes. Criteria for full nerve sparing were non palpable disease, <3 cores involvement, for partial nerve sparing was no palpable disease with T2 disease >3 cores involvement and T3 disease with multiple cores involvement for non nerve sparing procedures. Degree of nerve sparing (NS) was graded intra-operatively by the surgeon independently at either side as complete (group 1), partial (group 2) or none (group 3).

**RESULTS:** Of 541 patients who underwent RARP 139 underwent complete (group 1), 343 patients underwent partial (group 2) and 59 patients underwent non nerve sparing procedure (group 3). There were no difference in pre operative characteristic between the groups PSA (p=0.678), t stage (p=0.038) but group 3 had higher Gleason score sum (p=0.001) and number of cores positive (p=0.001). EPE extension (<0.001), seminal vesicle invasion (p<0.001) and tumor volume (p=0.001) were higher in Group 3. Side specific positive margins rates were higher for non nerve sparing compared to partial and full nerve sparing RARP (p<0.001).

**CONCLUSIONS:** Subjective nerve sparing using the surgeon’s intra-operative perception correlated significantly with negative margins and extra prostatic extension. Full nerve sparing and partial nerve sparing had lower positive surgical margin rates in a high risk population.

**SOURCE OF FUNDING:** None

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MP18-07 PERIOPERATIVE AND ONCOLOGICAL OUTCOMES IN HIGH RISK ELDERLY PATIENTS

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**INTRODUCTION AND OBJECTIVES:** The purpose of this study is to compare the perioperative and oncologic outcomes of robotic assisted radical prostatectomy (RARP) in D’Amico high risk, propensity score-matched elderly and younger cohorts.

**METHODS:** From January 2008 through August 2012, 3818 patients underwent RARP at our institution by a single surgeon (VP). Retrospective analysis of prospectively collected data from our Institutional Review Board approved registry identified 80 D’Amico high risk patients, 70 years of age and over. A propensity score-match analysis was conducted using multivariable analysis to compare elderly patients (age 70 and over) to those under 70. The final two study cohorts – D’Amico high risk elderly patients (n=80) and D’Amico high risk younger patients (n=80) constituted the clinical material for this comparative study.

**RESULTS:** The operative time, transfusion rate and intra-operative complications were similar for the two groups. The mean estimated blood loss was significantly greater in younger patients (156.1±84.2 mL vs 113.6±67.7; p=0.002). No significant differences were observed in laterality, ease of nerve sparing or surgeon subjectively assessed anastomosis and pathological outcomes between the groups. At follow-up, freedom from biochemical recurrence (BCR) in elderly patients was 85.0% vs. 83.8% in younger patients. The mean time to BCR in elderly patients was 15.0 months (range, 2.3 to 38.8) and 14.5 months (range, 5.2 to 35.1) in younger patients.

**CONCLUSIONS:** This study demonstrates that RARP can be performed in D’Amico high risk elderly patients without increasing perioperative morbidity and with oncologic outcomes comparable to high risk younger patients.

**SOURCE OF FUNDING:** None

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MP18-08 MIDTERM FUNCTIONAL AND ONCOLOGICAL OUTCOMES OF ROBOTIC ASSISTED RADICAL PROSTATECTOMY IN D’AMICO HIGH RISK PROSTATE CANCER PATIENTS

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**INTRODUCTION AND OBJECTIVES:** We report our midterm outcomes of Robotic Assisted Radical prostatectomy (RARP)in D’Amico high-risk prostate cancer.

**METHODS:** Between January 2008 and April 2013, 4401 men underwent RARP by a single surgeon (VP) at our institution. Retrospective analysis of prospectively collected data from our institutional review board approved registry identified 557 patients classified as D’Amico high risk. Perioperative and post-operative outcomes were analyzed.

**RESULTS:** The mean age was 63.0 (range, 40 to 82) years. Mean PSA was 9.7±10.2 ng/mL, and biopsy Gleason score 7.9±0.9. Full nerve sparing was performed in 83.5% of the patients, partial 5.9% and non-nerve sparing in 10.6%. On postoperative pathology, the proportion of patients with extracapsular extension, seminal vesicle invasion, lymphovascular invasion, perineural invasion and positive surgical margins was 49.0%, 21.5%, 24.4%,
89.1% and 25.3%, respectively. The mean positive lymph nodes was 0.08 ± 0.40. The pathological stage was < = T2c in 47.6% patients and > = T3 in 52.4%. Mean time to indwelling Foley catheter removal was 5.3 days ± 2.2. At follow-up, the mean time to continence was 2.9 months ± 0.2, and 5.6 months ± 7.0 for potency. At 60 months freedom from biochemical recurrence (BCR) ± standard error of the mean was 76.4% ± 2.9% (26 patients at risk). The mean time to BCR (n = 72) was 15.6 months ± 11.8.

CONCLUSIONS: RARP represents a feasible surgical alternative in D’Amico high risk prostate cancer patients. It offers viable treatment as monotherapy or part of multimodality. It can be accomplished with acceptable mid term functional and oncologic outcomes.

SOURCE OF FUNDING: None

**MP18-09 IMPACT OF PRIOR ABDOMINAL SURGERY ON ROBOTIC ASSISTED RADICAL PROSTATECTOMY**

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INTRODUCTION AND OBJECTIVES: The effectiveness of robotic assisted radical prostatectomy in men with prior abdominal surgery has not been clearly defined in a large cohort of patients. The objective of this study is to assess the perioperative outcomes of propensity score-matched groups undergoing RARP.

METHODS: From January 2008 through October 2012, 3874 men underwent RARP by a single surgeon (VP). Retrospective analysis of prospectively collected data from our Institutional Review Board approved registry identified 1327 patients who had prior abdominal surgery. This cohort was computer-matched to patients without prior abdominal surgery (n = 2311) in a multivariable design using propensity score analysis.

RESULTS: The two groups were homogenous in selected epidemiological and preoperative clinical and pathological variables. The mean operative time (OT: skin-to-skin) was 129.8 ± 30.3 minutes and 123.8 ± 24.3 minutes for patients with and without prior abdominal surgery. The estimated blood loss was comparable for both groups (137.3 ± 91.2 cc vs 135.6 ± 92.1 cc) as was the transfusion rate (0.9% vs. 1.1%). The rate of nerve sparing was comparable for both groups. The incidence of intraoperative complications was 0.1% and 0.5%, with postoperative complications at 2.0% and 3.1% for patients with and without prior abdominal surgery. Postoperative pathological outcomes were similar between groups. Post-operative pain scores (p = 0.523), length of stay (p = 0.074) and indwelling catheter duration days (p = 0.861) were comparable.

CONCLUSIONS: RARP in patients with prior abdominal surgery is feasible, safe and can be accomplished in patients with a wide variety of prior abdominal surgeries with excellent perioperative outcomes.

SOURCE OF FUNDING: None

**MP18-10 CONTINENCE OUTCOMES ROBOTIC ASSISTED RADICAL PROSTATECTOMY IN SUBOPTIMAL PATIENTS**

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INTRODUCTION AND OBJECTIVES: We analyzed the impact of large prostate size, elderly age, higher BMI, salvage prostatectomy and TURP on continence outcomes of robotic prostatectomy (RARP).

METHODS: From January 2008 through November 2012, 4023 patients underwent RARP by a single surgeon (VP) at our institution. Retrospective analysis of prospectively collected data from our Institutional Review Board approved registry identified 3362 men who had one year of followup. This cohort of patients was stratified into six groups: Group I- age 70 and over (n = 451); Group II-body mass index (BMI) 35 and over (n = 197); Group III- prior bladder neck procedures (n = 103); Group IV-prostate weight 80 g and over (n = 280); and Group Vsalvage prostatectomy patients (n = 41). Group VI contained patients (n = 2447) with none of these risk factors. Continence outcomes at follow-up were analyzed for all groups. Mean time to continence was compared among the groups using ANOVA and the Tukey-Kramer test to conduct multiple group comparisons.

RESULTS: The continence rate for patients 70 and over was 88.9% (401/451) and the mean time 3.2 ± 4.5 months; BMI 35 and over was 96.5% (190/197) 3.1 ± 4.5 months; prior bladder neck treatment 87.4% (90/103) 3.4 ± 4.7 months; prostate weight 80 g and over 89.3% (250/280) 3.3 ± 4.4 months; and salvage procedures 56.1% (23/41) 6.6 ± 8.3 months (p = 0.015). The time to continence was similar for Groups I, II, III, and IV.

CONCLUSIONS: This study has demonstrated that selected risk factors adversely affect the return of continence following RARP.

SOURCE OF FUNDING: None

**MP18-11 AGE STRATIFIED PROPENSITY SCORE MATCHED STUDY OUTCOMES OF ROBOTIC ASSISTED RADICAL PROSTATECTOMY**

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INTRODUCTION AND OBJECTIVES: Elderly patients have the potential of increased morbidity from prostate surgery. Our goal was to evaluate the perioperative and short term oncological outcomes of RARP in patients above 70 years.

METHODS: The study population (N = 3241) consisted of consecutive patients who underwent RARP for localized prostate cancer by a single surgeon (VP) from January 2008 through February 2012. A query of our IRB approved registry identified 400 men 70 years of age and over who were computer-matched in a 1:1 ratio to younger patients using an optimal matching algorithm. Perioperative and postoperative functional and oncologic outcomes for the two groups were compared.

RESULTS: The groups demonstrated no significant differences in preoperative clinical characteristics except age. At followup, younger patients had a continence rate of 94.1% vs older patients 90.4%. average time to continence was similar (3.0 months in younger men vs 3.2 months in older men) and for potency 6.5 months for younger patients vs. 5.7 months for older patients. A greater proportion of younger patients became potent than elderly (p < 0.001). At 60 months, freedom from biochemical recurrence (BCR) ± standard error of the mean for younger patients was 89.4% ± 2.1 (17 patients at risk) and 89.4% ± 2.1 (20 patients at risk) for the older group. The mean time to BCR for younger patients (n = 33) was 14.5 months ± 12.3 and 18.7 months ± 13.5 for olderpatients (n = 31).
**INTRODUCTION AND OBJECTIVES:** Active surveillance (AS) has become a more favorable option in low-risk prostate cancer patients. The decision to initiate an AS protocol is complex and dependent on multiple patient and provider factors. The objective of this study was to evaluate the impact of the urologist’s experience in selecting AS versus immediate treatment (IT) during the first-options review.

**METHODS:** We enrolled low-risk prostate cancer patients between March 2011 to March 2014 at 13 Kaiser Permanente centers. Patients had cT1-T2a stage prostate cancer, PSA <10 ng/ml, Gleason ≤6, <3 biopsy cores positive, and ≤50% cancer/core. The AS cohort had not undergone IT (surgery, radiation, other) within six months after diagnosis. The urologist’s experience was compared between AS and IT cohorts using Chi-squared and Wilcoxon Rank-Sum tests.

**RESULTS:** 713 patients were enrolled in the study; 433 (60.7%) AS and 280 (39.3%) IT, managed by 87 urologists. Patients were similar in baseline characteristics. Univariate and multivariate-adjusted analyses revealed no differences in urologist’s age or years in practice. Urologists with ≥50 robotic-surgeries performed were less likely to recommend AS (OR=0.13, 95% CI=0.07–0.23). Conversely, urologists with a fellowship in oncology and/or robotics tended to recommend AS (OR=1.64, 95% CI=0.95–2.81).

**CONCLUSIONS:** In addition to standard patient counseling, the decision to pursue AS may be influenced negatively by urologists with higher surgical volumes, but positively by those with a fellowship. This later finding may indicate that urologists with additional training are more stringent in selecting patients to operate on. It may also reflect a referral bias, since fellowship-trained surgeons often manage more complex patients.

**SOURCE OF FUNDING:** None
INTRODUCTION AND OBJECTIVES: The decision to undergo active surveillance (AS) for low-risk prostate cancer is multi-factorial. Studies have shown disparities in prostate cancer care in socio-demographic groups, partly due to unequal access to healthcare. The purpose of this study was to evaluate whether patient socio-demographic characteristics influence the selection of AS versus immediate treatment (IT) (surgery, radiation, other) when all subjects have equal access to healthcare. METHODS: Low-risk prostate cancer patients were enrolled between March 2011 and March 2014 at 13 Kaiser Permanente centers. Patients were considered on AS if they had cT1-T2a stage prostate cancer, PSA <10 ng/ml, Gleason ≤6, <3 biopsy cores positive, ≤50% cancer/core, and had not undergone IT within six months of diagnosis. AS and IT cohorts were compared with respect to all obtainable socio-demographic factors using Wilcoxon Rank-Sum and Chi-squared tests.

RESULTS: 713 men were enrolled in the study; 433 (60.7%) AS and 280 (39.3%) IT. AS patients were significantly older (62.7 ± 5 years, p <0.0003). Univariate analysis revealed Caucasian men favored AS, whereas Black and Hispanic men favored IT (p <0.04). English-speaking patients, and those with higher income and education levels were more likely to choose AS (p <0.05). After multivariable-adjusted analysis, differences in ethnicity, language, income, and education levels were no longer observed between cohorts.

CONCLUSIONS: There were no socio-demographic factors, apart from age, that influenced the choice of AS versus IT in low-risk prostate cancer patients. Patients within ethnic minorities and lower socio-economic groups appeared to receive equal access to care, illustrating a potential benefit of a capitated approach to healthcare.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: In most centres patients return to hospital for ureteric stent removal between 14 and 21 days post cystectomy. This return is inconvenient to patients who additionally find it technically challenging to change stoma bags with stents in situ. We pioneered removal of stents at day 7 by our hospital-at-home service to enhance our patient recovery program. We assessed the feasibility and outcome from this change of practice.

METHODS: A prospective single-centre study over 20-months from August-2012. All patients who underwent robotic or open cystectomy were followed up to assess if they had their stents removed at day 7 at home and any complications following this.

RESULTS: 42 cystectomies were performed, 12 open and 30 robotically. 17% of patients discharged before 7 days following open procedure compared to 87% after robotic cystectomy. All of these patients had stents removed at home on day 7. Those who did not have their stents removed at 7 days had a mean removal time of 18 days (range 9–42) after an open procedure and 16 days (range 14–20) following robotic surgery. There were no urine leaks in the robotic group and one following an open procedure. No uretero-ileal anastomotic strictures. There was 1 readmission for sepsis post stent removal. Hospital-at-home teams were able to remove stents without difficulty in all patients.

CONCLUSIONS: Early removal of stents post cystectomy by hospital-at-home teams is a viable and beneficial option particularly to patients. This is safe practice, allowing patients to change their stoma bags more easily and avoid an extra visit to hospital.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: To investigate the post-operative recovery of continence and erectile dysfunction after robotic-assisted radical prostatectomy (RARP).

METHODS: We retrospectively reviewed database of RALP in our institute. Urinary Distress Inventory (UDI-6) and International Index of Erectile Function (IIEF-5) questionnaires were used to evaluate continence and erectile function pre-operatively and 3, 6, 9, and 12 months post-operatively. Peri-operative parameters including: age, body mass index (BMI), blood loss, operation time, neurovascular bundle (NVB) sparing, Gleason score, and cancer stage were collected and analyzed the correlation between these scores.

RESULTS: From October, 2009 to March, 2013, a total of 167 patients were recruited. The difference of 3, 6 and 9 month UDI-6 score minus pre-operative value were showed statistical decrease (p=0.001, 0.001, and 0.008 respectively), while 12 month UDI-6 score minus pre-operative value showed no statistical significance (p=0.396). The difference of 3, 6, 9, and 12 months IIEF-5 minus pre-operative value all revealed significantly decreased (p<0.001 in all four groups). The difference of 6 and 9 month IIEF-5 score were related to higher Gleason score (p=0.019, 0.048). The difference of 9 and 12 month IIEF-5 score were related to increased age (p=0.004, 0.013) and bilateral NVB sparing (p=0.012, 0.001).

CONCLUSIONS: Voiding condition worsened after RALP, but urinary continence showed recovery after 12 months since...
RALT. Age and nerve-sparing were correlated with erectile function recovery after RALT.

SOURCE OF FUNDING: Deny

**MP18-18** **ONCOLOGY AND FUNCTIONAL OUTCOME IN ELDER PEOPLE WITH PROSTATE CANCER RECEIVED ROBOTIC ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY, IN COMPARISON WITH RADIOTHERAPY: A SINGLE-CENTER EXPERIENCE

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**INTRODUCTION AND OBJECTIVES:** RaLRP offers excellent short-term trifecta outcomes (Continence, potency and oncology) when performed by an experienced surgeon. As our single center experience, RaLRP is safe and feasible in high-risk prostate cancer patients. So is there any benefit in elderly patient? Radical prostatectomy seems to be the most common treatment for this kind of patients with better overall and cancer-specific mortality. However, traditionally, radical prostatectomy was rarely offered to patients older than 70 years due to short life expectancy and poor functional outcomes. As RaLRP introduced, reduced surgical morbidity, and a lower risk of a positive surgical margin was proof. So could it do benefit in patients age >70 with prostate cancer?

**METHODS:** We retrograde review total 188 patients aged >75 years with prostate cancer in VGHTC in past 5 years (79 patients received RaLRP and 109 patients received radiotherapy). Oncology result was defined as one year BCR and among surgical and radiotherapy group, the definition was separated. Functional result was defined as continence rate, and clinical condition of LUTs.

**RESULTS:** In oncology control with one year BCR rate, there is no difference between (two group (20.9% vs. 15.12%, p = 0.5623). Continence rate among RaLRP group was 72.9%. In contrast in RT group, 77.9% patient suffered from LUTs need medication and 24.4% with bladder outlet obstruction. 31.4% with radiation cystitis and 13.9% of radiation prostatitis.

**CONCLUSIONS:** There may no significant benefit in oncology control in RaLRP but they may meet less low urinary tract symptoms and better early continence.

SOURCE OF FUNDING: None

**MP18-19** **NATIONAL MULTI-INSTITUTIONAL COMPARISON OF 30-DAY POSTOPERATIVE COMPLICATION AND READMISSION RATES BETWEEN OPEN RETROPUBIC RADICAL PROSTATECTOMY AND ROBOT-ASSISTED LAPAROSCOPIC PROSTATECTOMY USING NSQIP

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**INTRODUCTION AND OBJECTIVES:** Many American hospitals will soon face readmission penalties deducted from Medicare reimbursements, placing further scrutiny on techniques that may offer reduced postoperative morbidity. We aimed to perform the first multi-institutional study using the National Surgical Quality Improvement Program (NSQIP) database, to compare predictors of readmission within cohorts of open radical retropubic prostatectomy (RRP) and robot-assisted laparoscopic radical prostatectomy (RALRP) in a contemporary nationwide series.

**METHODS:** All patients who underwent radical prostatectomy in 2011 were identified in the NSQIP database using procedural codes. As no patients in the analysis underwent LRP, patients were grouped as RRP or RALRP for analysis. Perioperative variables were analyzed using chi-squared and Student’s t-tests as appropriate. Multiple logistic regression was used to identify readmission risk factors.

**RESULTS:** Of 5471 patient cases analyzed, 4374 (79.9%) and 1097 (20.1%) underwent RALRP and RRP, respectively. RRP and RALRP cohorts experienced different readmission rates (5.47% vs. 3.48%, respectively; p = 0.002). In addition, RRP experienced a higher rate of overall complications than RALRP (23.25% vs. 5.62%, respectively; p < 0.001), but not higher rates of reoperation (1.09% vs. 0.96%, respectively; p = 0.689). Overall predictors of readmission included operative time, dyspnea, and RRP or RALRP procedure type. Current smoking and patient age were predictive of readmission for RRP only, while dyspnea was predictive of readmission following RALRP only.

**CONCLUSIONS:** This is the first multi-institutional retrospective study that examines readmission rates and procedural inrachorh predictors of readmission for RRP in the contemporary United States. We report a significant difference in postoperative complication and readmission rates in RRP compared with RALRP.

SOURCE OF FUNDING: None

**MP18-20** **THE OUTCOME OF PENTAFECTA IN 212 CASES OF ROBOTIC-ASSISTED RADICAL PROSTATECTOMY WITH BILATERAL NEUROVASCULAR BUNDLE PRESERVATION

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**INTRODUCTION AND OBJECTIVES:** To analyze the pentafecta outcome [free complication, continence, potency, negative surgical margin and free biochemical recurrence (BCR)] of 212 cases of robotic-assisted laparoscopic radical prostatectomy (RALP) with bilateral neurovascular (NVB) preservation performed by a single surgeon in Taiwan.

**METHODS:** A prospective assessment of outcomes in 212 patients who underwent RALP with bilateral NVB and followed up more than one year. Those patients were classified: low risk: 113 cases, intermediate risk: 74 cases and high risk: 25 cases. We evaluated the perioperative complication, continence and potency function and cancer control with negative surgical margin and free biochemical recurrence. Continence was defined as the use of ‘no pads’. Potency was defined as the ability to achieve and maintain satisfactory erections firm enough for sexual intercourse with/without the use of oral PDE5 inhibitors. Positive surgical margin (PSM) was defined as the presence of tumour tissue on the inked surface of the specimen. BCR was defined as two consecutive PSA levels of >0.2 ng/mL after RALP.

**RESULTS:** Mean age of patient was 60.8 years and mean PSA level was 7.8 ng/mL. The free complication rate was 94.34% (200/212). The continence rate was 98.58% (209/212), potency 86.79% (184/212), negative surgical margin 77.83% (165/212) and free-BCR 92.92% (197/212). The trifecta rate (continence, potency and free BCR) was 80.18% (170/212). The pentafecta rate was 65.09% (138/212).

**CONCLUSIONS:** Conclusions: The pentafecta is a new-standard of outcome for robotic-assisted laparoscopic radical prostatectomy...
with bilateral NVB. The key to best pentafecta outcome is learning curve and patient selection.

SOURCE OF FUNDING: Nil

MP18-21 EXPERIENCE OF COMPLICATION IN 800 CASES OF ROBOTIC-ASSISTED RADICAL PROSTATECTOMY BY A SINGLE SURGEON

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INTRODUCTION AND OBJECTIVES: To report the complications of 800 cases of robotic-assisted laparoscopic radical prostatectomy (RALP) performed by a single surgeon in Taiwan.

METHODS: Complication (Clavien system) rates were prospectively assessed in 800 consecutive patients undergoing RALP (Group I: cases 1–200; II: 201–400; III: 401–600 and IV: 601–800). Clinical pathway was described below: Patients were allowed to have water and then resumed regular diet on POD 1–2. The drainage tube was removed and intravenous fluid discontinued on POD 1–3. Urine leakage was defined as urine drainage >100 ml at POD 4. Ileus was defined as inability to resume normal diet at POD 4.

RESULTS: Significantly less blood loss occurred after every 200 cases of RALP (Group I 180 ml, II 119 ml, III 92 ml, IV 91 ml, p < 0.05). Blood transfusion (BT) incidence was 3.5%, 0.5%, 1% and 0% in Groups I, II, III and IV, respectively. The total complication was 6.75% (54/800) (surgical/medical: 5.25%/1.5%). Complication rate was 12%, 5.5%, 6% and 3% in Groups I, II, III and IV respectively. Major complications (grade III-IV) were 2.5%, 1.5%, 2% and 0.5% in Groups I, II, III and IV, respectively. The most complication was BT (10/800 = 1.25%).

CONCLUSIONS: Learning curve for every 200 cases of RALP showed significantly less blood loss and BT rate. The keys to prevent complication was pre-operation evaluation meticulously and a dedicated robotic team to do RALP intra-operatively. Early diagnosis and management of complication is paramount in patients have any deviation from the normal postoperative course and clinical care pathway.

SOURCE OF FUNDING: None

MP18-22 THE IMPACT OF ANATOMICAL DIMENSIONS USING PREOPERATIVE MAGNETIC RESONANCE IMAGING ON THE LEARNING CURVE FOR ROBOT-ASSISTED LAPAROSCOPIC PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: In this study, we evaluated the impact of bony pelvic dimensions and prostate dimensions, which were measured using preoperative magnetic resonance imaging (MRI), on console time for robot-assisted laparoscopic prostatectomy (RARP).

METHODS: We retrospectively reviewed 100 consecutive RARP procedures for the treatment of clinically localized prostate cancer that were performed by a single-surgeon at our institution; all RARP procedures involved preoperative MRI. The preoperative clinical data and anatomical measurements, including calculated prostate volume (PV) and pelvic cavity index (PCI), were determined based on preoperative MRI, and compared with console time. In particular, correlative and multiple-regression analyses were performed to compare the clinical data and anatomical measurements with console time.

RESULTS: Body mass index, prostate anteroposterior diameter, prostate craniocaudal diameter, PV and the PV-to-PCI ratio were all significantly correlated with console time based on univariate analysis (p = 0.025, 0.008, 0.002, 0.009 and 0.014, respectively). However, based on multiple linear-regression analysis, only the PV-to-PCI ratio was found to be a significant predictor of console time (p = 0.001). Furthermore, when the 100 total cases were divided into 50 early cases and 50 late cases, the PV-to-PCI ratio correlated with console time only in the early group (p = 0.001) and not in the late group.

CONCLUSIONS: MRI can be a valuable adjunct to RARP. Our data indicate that patients with larger prostates and narrow, deep pelvises may have more difficult in RARP procedures. However, our data also show that this problem can be overcome by an experienced operator with improved surgical techniques.

SOURCE OF FUNDING: None

MP18-23 ROBOTIC ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY AFTER TRANSURETHRAL RESECTION OF THE PROSTATE

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INTRODUCTION AND OBJECTIVES: The aim of this study was to assess surgical, oncologic and functional results after robotic-assisted laparoscopic radical prostatectomy (RALP) with and without previous transurethral resection of the prostate (TURP).

METHODS: From December 2005 to March 2014, 730 patients underwent RALP at our institution, of whom 73 (10%) had received previous TURP (Group 1). Data was retrospectively collected with the same number of match-paired controls (without previous TURP, Group 2). Matching variables included age, body-mass index (BMI), clinical stage, PSA level, and biopsy Gleason score. Statistical analysis was made using the independent sample t test & chi-square test with P < 0.05 considered as statistical significance.

RESULTS: Group 1 patients were found to have significantly more need for bladder neck reconstruction, higher incidence of bowel injury, and more major complications. The oncological outcome and continence rate seems to be no significant different. A nerve-sparing technique was significantly less successfully performed in Group 1 patients than in Group 2.

CONCLUSIONS: We conclude that the surgical procedure of RALP after TURP is more technically difficulty with higher incidence of major complications. Nerve-sparing technique is more technically challenging. However, the oncological and continence outcome is not hampered.

SOURCE OF FUNDING: None

MP18-24 PNEUMOPERITONEUM PRESSURE OF 20MMHG IS SAFE IN PATIENTS UNDERGOING ROBOT-ASSISTED RADICAL PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: Initial studies on laparoscopy reported the use of 15 mmHg insufflation pressure to establish pneumoperitoneum. This study evaluates the short-term perioperative outcomes of patients undergoing robot-assisted radical prostatectomy (RARP) with insufflation pressures of 20 mmHg.

METHODS: A single-institution, prospectively maintained database of patients undergoing RARP was retrospectively analyzed. Data from 550 patients who underwent RARP from 2009–2012 were evaluated. Pre- and post-operative hemoglobin and estimated glomerular filtration rate (eGFR) along with complications, operative time, and estimated blood loss were examined.

RESULTS: 550 patients were included with a mean age of 59 ± 7 (years), operative time of 198 ± 58.6 (min), and estimated blood loss of 249.5 ± 181 (mL). The change in hemoglobin from pre-operative to post-operative day 1 was −1.18 ± 1.14 (gm/dL). The mean preoperative eGFR was 88.8 ± 20.4 (mL/min/1.73 m2), post-operative eGFR was 76.67 ± 17.7 (mL/min/1.73 m2), and post-operative day 1 eGFR was 88.38 ± 22.0 (mL/min/1.73 m2). Changes in eGFR from pre-operative to post-operative as well as from preoperative to post-operative day 1 were −13.88 ± 15.77 (mL/min/1.73 m2) and −0.49 ± 15.39 (mL/min/1.73 m2), respectively. The complication rate was 8.73%; urinary retention (4.9%), ileus (1.1%), bladder neck contracture (0.73%), lymphoceles (0.55%), incisional hernia (0.55%), rectal injury (0.36%) and clot retention (0.18%) were the most common complications.

CONCLUSIONS: Pneumoperitoneum using a pressure of 20 mmHg for RARP is safe and effective with minimal short-term effects on renal function and hemoglobin levels. Randomized controlled trials are needed before this approach can be recommended.

SOURCE OF FUNDING: Department

INTRODUCTION AND OBJECTIVES: To evaluate the utility of the GreenLight-SIM™ (GL-SIM) simulator to assess Photoselective Vaporization of the Prostate (PVP) skills of urology postgraduate trainees (PGTs) during Objective Structured Clinical Examinations (OSCEs).

METHODS: After obtaining ethics approval, PGTs in Post-Graduate Years (PGY-3 to PGY-5) from all four Quebec urology training programs were recruited during two annual OSCEs. During a 20-minute OSCE station, PGTs were asked to perform two exercises: identification of endoscopic landmarks and PVP of a 30 g normal prostate. Grams vaporized, global scores and number of correct anatomical landmarks were recorded and correlated with PGY level, practice on the GL-SIM and previous PVP experience.

RESULTS: 25 PGTs were recruited at each OSCE with 13 PGTs participating in both OSCEs. When comparing scores from the 1st to the 2nd OSCE, there was a significant improvement in the number of grams vaporized (2.9 vs. 4.3 g; p = 0.003) and global score (100 vs. 165; p = 0.03). There was good correlation between the number of previously performed PVPs and the global score (r = 0.4, p = 0.04). Similarly, PGTs with previous practice on the GL-SIM had significantly higher global score (100.6 vs. 162.6; p = 0.04) and grams vaporized (3.1 vs 4.1 g; p = 0.04) when compared with those who did not practice on GL-SIM. PGY level did not significantly affect grams vaporized and global score (p > 0.05).

CONCLUSIONS: Performance on the GreenLight-SIM at OSCEs significantly correlated with previous practice on the GL-SIM simulator and previous PVP experience rather than PGY level.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: We have been developing a patient specific laparoscopic surgical simulator. In a process for developing a surgical simulator, quantifying the surgical procedures and evaluating the safety of forceps operation in laparoscopic surgery are required. Then, we analyzed the measured pressure of forceps with sensor during laparoscopic surgery.

METHODS: We performed the procedure to hit the abdominal wall vertically from inside the trocar to the abdominal wall during laparoscopic surgery for a pig using the forceps with the sensor which could measure the push force pressure of the tip. We analyzed the push force pressure. These procedures were performed by each ten urologists under the condition of moving forceps slowly or rapidly, and gripping forceps softly or strongly. Surgeons closed their eyes during all procedures.

RESULTS: The mean push force pressure under the condition of moving forceps slowly and gripping strongly (slowly/strongly) was 2.0 N, slowly/softly was 1.1 N, rapidly/strongly was 2.8 N, and rapidly/softly was 1.7 N. A two way of factorial analysis of variance revealed either the operating speed and the gripping power affect the push force pressure (p < 0.001), the gripping power had stronger impact than operating speed. Experience of laparoscopic surgery had no influence on the push force pressure.

CONCLUSIONS: The gripping power and the speed of moving forceps affect the push pressure and the sense of touch. Gripping strongly and moving rapidly raised the push force pressure and made the sense of touch blunted.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Urology, the once traditional male dominated field, has been evolving over the past several decades. Perceived gender bias has been one factor in dissuading women from entering our field. A survey was...
undertaken to determine patient preferences with regard to the gender of physicians providing urologic care.

**METHODS:** A self-administered survey was conducted on all new patients seeing an endourology fellowship trained Urologist (JEK) for an outpatient visit in her first 11 months of practice as the sole female physician within a large (22 person) academic group. A total of 555 surveys were administered from July 2013 through May 2014. The survey evaluated the reason for seeing this physician: referral from another physician, referral from a friend or family member, convenience of appointment time/date or female physician gender preference. Patient data including sex, race, and age were also collected.

**RESULTS:** Amongst 555 surveys administered, 293 patients responded (53% response rate) of which 197 (67%) were female. The most common reason for visit amongst all patients surveyed was preference of female physician (32%), followed by convenience (31%), physician referral (30%) and recommendation by friend/family (7%). When stratified by patient gender, 41% of female patients chose the physician for the primary reason of preferred female gender. Perhaps surprisingly, 12% of male patients chose this physician because they preferred a female practitioner.

**CONCLUSIONS:** Gender preference plays a significant role in the selection of a new physician for outpatient urologic office visit. With this demand for women urologists, women should be encouraged to pursue urologic careers.

**SOURCE OF FUNDING:** None

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**MP18-28 IMPROVEMENT OF PROCEDURAL SKILLS WITH A SHORT-TERM ROBOTIC PEDIATRIC UROLOGY HANDS-ON TRAINING COURSE**

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**INTRODUCTION AND OBJECTIVES:** Commonly, short-term (1–2 days) robotic training courses are used as an initial credentialing requirement for many institutions; however, there is limited data demonstrating any tangible skills benefit of these courses. Herein we investigate the benefits of short-term training on robotic technical skills during a two-day pediatric urology robotic training course.

**METHODS:** Twelve attendees at a pediatric urology robotic hands-on course were prospectively enrolled in the study during a 2-day comprehensive course. Computer-generated VR task scores and GEARS scores (Goh A et al, J Urol 2012) were used to assess the overall performances of the participants. Pre-and post training skills assessment scores were compared using the paired t-test. Spearman’s analysis was used to correlate VR and in vivo performance.

**RESULTS:** Eight pediatric urology attendings and four pediatric urology fellows with a mean age of 40 years (range 32–49) participated in the study. Mean overall VR task performance scores were significantly improved from 225.3 to 244.6 ($p < 0.05$) (Table 1). The mean of the porcine GEARS scores was increased from 19.70 to 19.83, but this difference did not reach statistical significance ($p > 0.05$). Spearman’s analysis revealed a positive correlation between the total simulator and GEARS scores both at the beginning (rho = 0.563) and at the end (rho = 0.685) of the course ($p < 0.05$ for both).

**CONCLUSIONS:** Statistically significant improvements in simulator performance suggest that short-term courses are effective models for robotic training in pediatric urology. In vivo porcine model performance was improved, but did not reach statistical significance.

**SOURCE OF FUNDING:** Institutional

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**MP19-01 MAGNETIC BLACKSTAR® URETER STENT – FEASIBILITY STUDY**

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**INTRODUCTION AND OBJECTIVES:** Ureteral stenting (DJ) is a common procedure in urology. There are certain indications for DJ placement as for example after retrograde intrarenal stone surgery. The cystoscopic removal of a ureteral stent can cause unpleasant side effects, such as urinary frequency, urgency or haematuria, which have a negative impact on a patient’s life.

**METHODS:** The magnetic Blackstar DJ is a standard 7 french ureteral stent with a small magnetic cube fixed via a string on the distal loop. To remove the DJ a special catheter-like retrieval device with a magnetic Tieman tip is needed. The retrieval device is inserted into the bladder where the two magnets connect. In 20 cases a magnetic DJ was placed after retrograde stone surgery. No additional catheter was placed. The DJ was removed in the prescribed way by a physician or a nurse. The study was conducted with ethical approval.

**RESULTS:** The removal of the magnetic DJ could be performed fast and easy without any complications in the patient bed. The removal time was less than 30 seconds. The patients had no discomfort during indwelling DJ and did not complain about pain during the removal.

**CONCLUSIONS:** The magnetic DJ can be removed fast and easy without significant discomfort for the patient. Additional studies to compare the magnetic DJ with standard DJ for longer stay focusing on pain perception and quality of life are necessary. Furthermore the cost effectiveness regarding operating time for cystoscopic removal, material and setting compared to the removal of the magnetic DJ needs to be evaluated.

**SOURCE OF FUNDING:** Urotech provided the DJs.
MP19-02 A NOVEL MINI-INCISION NEPHROURETERECTOMY FOR THE TREATMENT OF UPPER TRACT UROTHELIAL CANCER: A 13-YEAR EXPERIENCE

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INTRODUCTION AND OBJECTIVES: We present a novel surgical technique of mini-incision nephroureterectomy for the treatment of patients with upper tract urothelial cancer in regard to cost-effectiveness, safety and efficacy in a long term followup.

METHODS: From January 2001 through December 2013, there were 260 patients undergoing mini-incision unilateral nephroureterectomy with the intent to treat upper tract urothelial cancer. The patient was put in lithotomy position. A midline incision was made. After division of the ipsilateral spermatic cord (or round ligament), retroperitoneum could be easily accessed. With the aids of certain laparoscopic instruments and self-customized long right-angle retractors, the kidney and ureter were dissected and removed through the small incision. The management of distal ureter and bladder cuff was done by extravesical open method. Followup examinations were carried out every 3 months for the first postoperative year, semi-annually for 2 years and annually thereafter.

RESULTS: Mean operative time was 128 minutes. Mean estimated blood loss was 285 ml. Mean hospital stay was 5.1 days. No major complication was encountered except 2 postoperative hemorrhage due to inappropriate sizing of endo-GIA and inadvertent IVC injury. Median followup was 59 months. The tumor recurrence rate at 5 years was 32%. Median time to recurrence was 14.9 months. The 5-year metastasis-free survival rate was 88%. The 5-year cancer specific and overall survival rates were 89.7% and 87.2%, respectively.

CONCLUSIONS: The novel surgical technique of mini-incision nephroureterectomy is feasible and can be easily performed by experienced surgeons. The advantages of this procedure are gasless, minimally invasive, time saving and equivalent tumor control.

SOURCE OF FUNDING: None

MP19-03 THE USE OF BIDIRECTIONAL BARBED SUTURE DURING ROBOTIC ASSISTED RADICAL PROSTATECTOMY: IMPACT ON THE PERIOPERATIVE AND FUNCTIONAL OUTCOMES.

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INTRODUCTION AND OBJECTIVES: Bidirectional barbed self-retaining sutures represent a new advancement in the application of suture materials used in reconstructive urology. This analysis represents our preliminary effort to examine the intraoperative, postoperative and intermediate functional outcome of bidirectional sutures during robot assisted radical prostatectomy (RARP).

METHODS: Between January 2008 and December 2010, 2168 RARP procedures were performed at our institution by a single surgeon (VP). In this cohort there were 97 patients in whom a bidirectional-barbed suture (Angiotech-Quill™) was used for bladder neck reconstruction, posterior reconstruction and urethrovesical anastomosis (Group 1). These 97 patients were then computer-matched using multivariable analysis to those who did not undergo bidirectional-barbed suture during the procedure (Group 2). Retrospective analysis of the perioperative and functional outcomes was conducted.

RESULTS: There were no differences between the preoperative clinical and demographic variables between the two matched groups. The anastomosis subjectively evaluated by the surgeon was easier in the group 1 (<0.001). Time required for anastomosis in this group was significantly shorter (6.1 ± 2.6 min. vs. 4.3 ± 0.8; p < 0.001). Postoperatively, group 1 had a reduced incidence of radiologic leakage (8.3% vs 5.2%; p = 0.031) but without differences in clinical leakage. However, both groups had similar duration of indwelling catheterization (5.1 ± 1.6 vs 5.0 ± 1.6; p = 0.722). At follow-up, group 1 had a continence rate of 95.8% (92/96) and group 2 had a continence rate of 94.6% (87/92).

CONCLUSIONS: Usage of bidirectional barbed suture during RARP results in easier and quicker urethrovesical anastomosis and in a lower incidence of radiologic urinary leakage.

SOURCE OF FUNDING: None

MP19-04 SENSITIVITY OF NOVEL FLUORESCENCE URINE CYTOLOGY USING 5-AMINOlevulinIC ACID (5-ALA) IS HIGHER THAN THAT OF CONVENTIONAL URINE CYTOLOGY

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INTRODUCTION AND OBJECTIVES: In screening test for bladder cancer (BCa), conventional urine cytology (CUC) is subjective exam with low sensitivity and cystoscopy is invasive and expensive exam for patients. We developed the new fluorescent urine cytology using spectrophotometer for voided urine treated with 5-ALA. The objective of this study is to elucidate the sensitivity of CUC and fluorescent urine cytology using 5-ALA (FUC-ALA).

METHODS: 111 urine samples were collected from 61 patients who were proved BCa by TURBT and 50 patients who were treated sample, was evaluated as positive.

RESULTS: Of 61 cases with proven BCa, 50 were evaluated as positive by FUC-ALA (sensitivity: 82%) and 30 were evaluated as positive by CUC (sensitivity: 49%). Of 50 cases with proven no cancer with cystoscopy, 10 FUC-ALA positive cases were detected (specificity: 80%). The proportion of FUC-ALA positive in proven cancer was increased to 71% in pTa, 77% in pT1, 93% in pTis and 100% in T2, respectively (< 0.05).

CONCLUSIONS: Our novel FUC-ALA system using a spectrophotometer is a sensitive, semi-automatic and quantitative diagnostic modality without any variations between examiners.

SOURCE OF FUNDING: No COI in this presentation
**MP19-05 NOVEL CONTRAST-ENHANCED ULTRASOUND AGENTS FOR SENTINEL LYMPH NODE DETECTION IN PENILE CANCER**

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**INTRODUCTION AND OBJECTIVES:** Sentinel lymph node status is pivotal in choosing the most appropriate treatment for a number of malignancies. The nodal status in penile cancer is currently determined via intra-operative inguinal lymph node sampling. Unfortunately, this means that a second stage, definite lymphadenectomy is often required. To circumvent this issue in breast cancer, micro-bubble contrast-enhanced ultrasound agents have been trialled in the outpatient clinic for dynamic detection and biopsy of the sentinel lymph node. Unfortunately their use is limited by multiple issues including high bubble fragility and a narrow sonographic response. We describe the manufacture and testing of a novel non-toxic micro-bubble contrast-enhanced ultrasound agent that shows promise for dynamic sentinel lymph node detection in the outpatient clinic.

**METHODS:** Layer-by layer hydrogel assembly on core-etched particles form homogeneous micro-bubbles whose toxicity is determined by metabolic assays in cell lines. Their sonographic response is characterised using an AGAR tissue phantom.

**RESULTS:** The new agents are biodegradable and non-toxic with an IC50 > 1E8 particles/ml. They are also stable at room temperature and give a strong and durable sonographic response at a wide range of concentrations (0.4E6 to 1E8) and mechanical indices (0.02 to 1.2).

**CONCLUSIONS:** We have developed novel durable, biocompatible and non-toxic ultrasound contrast agents that show promise for the detection of sentinel lymph nodes. The advantage of this technology lies in the ability to accurately determine nodal status in the outpatient clinic, prior to definite surgical management. We anticipate that this type of technology will replace lymphoscintigraphy and blue dye currently performed intra-operatively.

**SOURCE OF FUNDING:** Salary costs were met via a multi-disciplinary research grant from the University of Cambridge/University of Cambridge/ Cambridge Cancer Centre.

**MP19-06 ENDOSCOPIC THERAPY COMBINED ANTEGRADE PERCUTANEOUS APPROACH AND RETROGRADE TRANURETHRAL APPROACH FOR URETERAL OBSTRUCTION AFTER KIDNEY TRANSPLANTATION**

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**INTRODUCTION AND OBJECTIVES:** To evaluate the method and efficacy of endoscopic therapy combined antegrade percutaneous approach and retrograde transurethral approach for ureteral obstruction after kidney transplantation (KTx).

**METHODS:** Eight cases were analyzed retrospectively who received endoscopic therapy combined antegrade percutaneous approach and retrograde transurethral approach when they had been diagnosed with ureteral obstruction in the transplant kidney from February 2007 to March in our institution. The cases included three males and five females, with average ages 44 years old (30~64 years). The interval between ureteral obstruction and kidney transplantation ranged from one months to 12 months. Four cases were presented with increased serum creatine; two cases with anuria; two cases with urinary leakage. The stricture site located in ureter terminal part in seven cases; middle part in 1 case. In three cases, percutaneous nephrostomy were carried out immediately while endoscopic therapy combined antegrade percutaneous approach and retrograde transurethral approach were carried out later. The rest five cases were treated simultaneously.

**RESULTS:** The average serum creatine decreased from 237±43 μmol/L to 121±29 μmol/L (P<0.05) after therapy. No perioperative complications occurred. Two urinary fistula healed. Six cases were treated successfully with two cases failed following by percutaneous nephrostomy. The ureteral obstruction occurred in one case after six months with recurrence rate of 16.7%(1/6).

**CONCLUSIONS:** Endoscopic therapy combined antegrade percutaneous approach and retrograde transurethral approach is an effective therapeutic approach to treat ureteral obstruction in transplant kidney which shows good clinical results.

**SOURCE OF FUNDING:** None

**MP19-07 SILS PLUS ABDOMINAL IRRIGATION FOR RETROPERITONEAL ORGANS**

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3Teikyo University, Medical Center. (Japan)

**INTRODUCTION AND OBJECTIVES:** Endourology is performed under irrigation which has several advantages: avoid desiccation induced inflammation, suppress venous bleeding, and afford visualization of bleeding spots and cross section of parenchymal organs with ultrasonography in real-time manner. Application of irrigation to the abdominal space would provide similar benefit (Water-Filled Laparo-Endoscopic Surgery: WaFLES, JLAST 22: 70–5, 2012). The first hurdle of applying irrigation to wide abdominal cavity or retroperitoneal space is dispersion of blood and floating organs that intercept laparoscopic vision. We found controlled irrigation can rinse blood from laparoscopic vision. Since retroperitoneal organs are “fixed” to ligaments, we tested feasibility of applying WaFLES to retroperitoneal organs.

**METHODS:** Two SPF pigs were prepared with general anesthesia under approval of local ethic committee, and set in a lateral position for kidney incision and in supine position for resection/incision of bladder and prostate. Recirculation circuit, consisted of high powered pumps, heater and filters was used. On the small incision, an extracorporeal cistern was set to reduce turbulence and bubble formation. Saline was used as irrigant.

**RESULTS:** After exploration of retroperitoneal space, surface of the kidney can be observed in the irrigant. After incising renal parenchyma, bleeding point can be identified clearly, and is controlled by microwave coagulator. Cystectomy was undertaken via abdominal cavity. Pedicles of the bladder were managed using bipolar electro-cautery. In both maneuvers, simultaneous observation of ultrasonography was feasible.

**CONCLUSIONS:** Sils plus WaFLES is new and feasible for retroperitoneal organs with variety of advantages. Adverse events should be examined further.
MP199 ENDUROLOGY: NEW TECHNOLOGY 1

SOURCE OF FUNDING: The research is funded by special governmental budget from Japanese Ministry of Education, Culture, Sports, Science and Technology.

MP19-08 DEVELOPMENT OF A NEW PUNCTURE NEEDLE USING MICRO-OPTICAL HDIG SYSTEM FOR PCNL

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2Jefferson Medical College of Thomas Jefferson University (United States)
3Takei Medical & Optical Co. Ltd. (Japan)
4Sumita Optical Glass Inc. (Japan)

INTRODUCTION AND OBJECTIVES: PCNL is the first-line therapy for calculi >2 cm in diameter, and is also the treatment of choice for staghorn calculi. To perform PCNL safely and effectively, the most important step is the formation of a nephrostomy tract and tract dilatation. In this study, PCNL was performed using a newly-developed puncture needle using the micro-optical HDIG (High Definition Image Guide) system.

METHODS: A 19G puncture needle equipped with a 0.82 mm micro-optic, having an integrated light lead was developed as part of a collaborative research with Takei Medical & Optical Co. Ltd. (Tokyo, Japan) and Sumita Optical Glass Inc. (Saitama, Japan). The micro fiber optic consists of a φ0.5 mm precise object lens and optical glass fiber, where real-time HD images can be seen through the digital image processing device. After evaluating safety, optical quality and operation performance in an animal study using adult swine, a clinical study on the application of the puncture needle to PCNL, in patients with renal calculus, was carried out at Okayama University Hospital from June, 2013.

RESULTS: A total of 4 patients were enrolled in this study, and PCNLs were performed in prone or Galdakao-modified supine Valdivia positions. The initial nephrostomy formation, using the puncture needle as an all-seeing system combined with ultrasound, was successfully conducted. All patients underwent PCNL without adverse events related to the puncture needle system.

CONCLUSIONS: The present puncture needle is extremely useful for safer PNS puncture. We are now planning to expand it to a new micro-PCNL system with LASER lithotripsy.

SOURCE OF FUNDING: Utsukushima (Next-Generation Medical Industry Agglomeration Project).

MP19-09 NOVEL GREEN-LIGHT KTP LASER EN BLOC ENUCLEATION FOR NON-MUSCLE-INVASIVE BLADDER CANCER

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INTRODUCTION AND OBJECTIVES: The standard procedure for staging and treating non-muscle-invasive bladder cancer (NMIBC) is still transurethral resection of the bladder tumor (TURBT) via a wire loop. However, TURBT is associated with serious disadvantages that facilitate tumor recurrence. Recently, lasers have been explored as treatment tools for bladder tumors. Here, we report a novel tumor en bloc enucleation using a front-firing green-light potassium-titanyl-phosphate laser and its initial clinical application.

METHODS: 45 patients with NMIBC received modified transurethral resection using a front-firing green-light laser. En bloc enucleation was performed on all tumors. Preoperative and intraoperative data were retrospectively collected.

RESULTS: All patients successfully went through a session of treatment with front-firing green-light laser enucleation of the bladder tumor. Complications such as bladder hemorrhage, vesicle perforation and obturator nerve reflex were not encountered during the treatment. The tumor diameter ranges from 0.3 to 3.0 cm with a mean value of 1.8 cm. Mean operative time and enucleation time were 21 (12–38) and 12 (4–23) minutes, respectively. Serum hemoglobin decreased 1.1 (0.1–2.4) mg/dl averagely. Mean catheter time was 2.0 (1.0–3.0) days, and mean postoperative hospital stay was 2.5 (1.5–4.0) days. The stages of bladder cancer included 27 Ta, 15 T1, and 3 T2a. No tumor recurrence was observed at the initial 6-month follow-up.

CONCLUSIONS: The modified technique using a front-firing green-light laser to en bloc enucleate bladder tumors is effective and safe for treatment of NMIBC. Moreover, it may improve the accurate valuation of tumor stage and prediction of postoperative prognosis.

SOURCE OF FUNDING: None

MP19-10 CLASSIFICATION AND ENDOSCOPIC REPAIR OF INFRAVESELICAL OBSTRUCTION AFTER HIGH-INTENSITY FOCUSED ULTRASOUND (HIFU) THERAPY FOR PROSTATE CANCER

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INTRODUCTION AND OBJECTIVES: Post-HIFU obstruction caused by fibrotic stenosis or necrosis in different locations within the prostate is the most common side effect after „radical HIFU“ (TURP & complete HIFU).

METHODS: We analyzed prospective Munich-HIFU database (n=2,735), extracted 684 cases with secondary obstructions, reviewed HIFU-files and OR-reports, categorized different types of obstructions and analyzed their frequency. We developed and describe and report a new safe and effective mode of endoscopical repair of these sometimes recurrent occurring stenosis.

RESULTS: In 25% of 2,735 cases post-HIFU obstructive symptoms -which needed a secondary endourological intervention-occurred: 6% (n=164) for necrotic tissue obstruction only, 19% (n=520) for infravesical fibrotic stenosis. 4 typical types of stenosis locations could be identified by analysis of >630 OR reports: Typ I (bladderneck stenosis) occurred in 12% (n=328), Typ II (intraprostatic sandlock-stenosis) occurred in 5% (n=137), Typ III (apical-retrosphincteric stenosis) in 2% (n=55) and Typ IV (classical urethral stenosis) occurred in <0.5% (n=13) of the cases. Endoscopic repair by ante-retrograd resection (Endo-V) showed to be fast and effective, nevertheless there were few cases (n<20) with recurrent stenosis formation which needed repetitive resections or urethral redundand dilatations.

CONCLUSIONS: Obstruction after TURP & HIFU is mostly correlated to small prostates and good onco logical outcome but occurs in 25% of the cases. HIFU induced shrinkage of the
MP19-12 CLAMPLESS AND SUTURELESS TECHNIQUE IN LAPAROENDOSCOPIC SINGLE-SITE PARTIAL NEPHRECTOMY: INITIAL CLINICAL EXPERIENCE

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INTRODUCTION AND OBJECTIVES: How to shorten warm ischemia time is the essential point during laparoscopic single-site partial nephrectomy. We present a novel no-ischemia technique without renal artery blocking and parenchyma suturing in LESS partial nephrectomy. Aim of this study is to evaluate the feasibility and clinical outcome of clampless and sutureless technique in laparoscopic single-site partial nephrectomy.

METHODS: Between Jan 2014 and Apr 2014, the same surgeon performed retroperitoneal laparoscopic single-site partial nephrectomy for 4 patients with renal masses. The range of tumor size was 1.2 to 2.5 cm. Our homemade single-port equipment was used by homemade Single-Ring device and a 6 F sterile surgical glove. The thumb, middle, and ring fingers of the glove were implanted and fixed with 11 mm, 5 mm and 5 mm diameters’ trocar respectively. We performed the single-site surgery by conventional laparoscope and instruments. The surgeon cut the kidney with scissors 0.5–1 cm from the tumor margin without artery clamping and then resected the tumor completely. The hemorrhage of opened renal tissue was controlled by bipolar electrode.

RESULTS: The procedures was technically successful in all cases. None was converted to traditional three-port procedures. There was no secondary bleeding, wound infection, intestinal obstruction, incision hernia and other severe postoperative complication. Pathological results were renal cell carcinoma (2 cases) and renal hamartoma (2 cases). Pathological margins were all negative. Follow-up of 2 to 6 months shows no local recurrence.

CONCLUSIONS: Clampless and sutureless technique in laparoscopic single-site partial nephrectomy is real non-ischemic and feasible by experienced surgeons in highly selective patients with renal tumors.

SOURCE OF FUNDING: None

MP19-13 ADVANCED PROSTATE CANCER: SIGNIFICANCE OF PSA NADIR AFTER TURP AND HIFU

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INTRODUCTION AND OBJECTIVES: Low PSA Nadir after local HIFU therapy is a recognized positive prognostic factor for therapeutic success in localized prostate cancer (PCa). Prognostic role of PSA Nadir in palliative, cytoreductive TURP and consecutive PCa ablation with HIFU – without longterm ADT - is unclear. To evaluate therapeutic efficacy and PSA Nadir in advanced PCa we compared 3 Nadir related subgroups.

METHODS: Patients with primary PCa T3–4, N0, M0 without ADT were evaluated. PSA Nadir in week 6–30: Group A (n = 96), Group B (n = 59), Group C (n = 29). Nadir >21–2 ng/ml, Group A (n = 96), Nadir <0.2 ng/ml). Follow-up (FU) months: 3.2/3.3/1.8–3.8, 9/8–5/0, 0.21–2 ng/ml ng/ ml Group C (n = 29). Nadir >2 ng/ml. Endpoint: “onset of salvage therapy, other than HIFU”.

RESULTS: tumor stage at inclusion: T3: 91.5%, T4: 8.5% Baseline unit Median Min Max (n = 96/59/29) A/B/C A/B/C A/B/C Age years: 70/69/71–70/69/70–50/48/ 53–85/83/80 Follow up (FU) months: 3.2/3.3/1.8–3.8, 9/8–5/0, 0.21–2 ng/ml

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CONCLUSIONS: None

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: A real-time ureteroscopic navigation system could be helpful during examination of the upper urinary tract with ureteroscopy, thereby increasing surgical accuracy. This study assessed the use of our experimental model of a ureteroscopic navigation system in a pyelocaliceal phantom.

METHODS: The navigation system uses a magnetic tracking system to detect the position of the ureteroscope and displays it on a three-dimensional image. We recruited 31 urologists from multiple institutions to evaluate its usefulness by performing two tasks. Task 1 consisted of finding three internally marked calyces by ureteroscopy with and without the navigation system. Task 2 consisted of identifying all calyces by ureteroscopy with and without the navigation system. For both tasks, participants performed them without navigation followed by with navigation. Accuracy rates for identification (AR) for Tasks 1 and 2 were compared. The time required for completing each task (T) were recorded.

RESULTS: The AR for both tasks were significantly better with the navigation system than without it (task 1: with navigation 97%, without navigation 89%, p = 0.0029; task 2: with navigation 99%, without navigation 88%, p = 0.0183). The T for task 1 was significantly shorter with the navigation system than without it (with navigation 356 sec, without navigation 191 sec, p < 0.0001) There was marginal significance for T in task 2 (with navigation 394 sec, without navigation 333 sec, p = 0.072).

CONCLUSIONS: Our navigation system, still under development, could be a useful tool for improving the accuracy of ureteroscopic maneuvers. It also appears to reduce fluoroscopy exposure. Further development of this system is needed.

SOURCE OF FUNDING: None
MP19-17 BALL-TIP HOLMIUM LASER FIBER MAY REDUCE FLEXIBLE URETEROSCOPE DAMAGE

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INTRODUCTION AND OBJECTIVES: Holmium laser fiber passage can damage the working channel of a ureteroscope. A recently released ball-tip laser fiber (TracTip - Boston Scientific) is designed to reduce scope trauma. We compared ureteroscope deflection and insertion forces of this ball-tip to a standard laser fiber.

METHODS: Ureteroscope deflection was measured using a 200 micron ball-tip (BT) and standard fiber (SF) (Flexiva - Boston Scientific) in three flexible ureteroscopes (URF-P5, URF-P6, URF-V - Olympus). Deflection angle was measured using AutoCAD software. Fiber insertion force was measured in a ureteroscope sheath model positioned in a 270° curve. The BT and SF fibers were advanced using a stage controller and a strain gauge measured force. ANOVA test was used to compare multiple groups and t-test with Bonferroni correction was used for intergroup comparison. 

RESULTS: Both fibers caused equivalent reduction (10–30°) in ureteroscope deflection without statistical difference. Four virgin fibers and ureteroscope sheaths were used to test insertion force of each fiber. Maximum and mean insertion force for the SF was 998 ± 394 mN and 603 ± 163 mN, respectively. The BT insertion forces were significantly less, at 304 ± 31 mN maximum (p = 0.04) and 213 ± 31 mN mean (p = 0.03). One SF fiber caused significant damage to the sheath and could not be advanced completely.

CONCLUSIONS: The ball-tip fiber has markedly reduced insertion force in a deflected ureteroscope without compromising maneuverability compared to a standard laser fiber. Minimal investment in the ball-tip fiber may result in cost savings by increasing ureteroscope longevity.

SOURCE OF FUNDING: None

MP19-18 PATIENTS PREFER THE USE OF A PATIENT DECISION-MAKING AID WHEN DISCUSSING SURGICAL OPTIONS FOR NEPHROLITHIASIS

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INTRODUCTION AND OBJECTIVES: Patients desire to have an active role in making their own healthcare decisions. The purpose of this study was to evaluate whether a patient decision-making aid (PDMA) would be useful for patients considering surgical treatment for nephrolithiasis.

METHODS: Patients with a history of nephrolithiasis were recruited from our stone clinics and given a hypothetical scenario for which elective surgical intervention with either shock wave litho-

tripsy or ureteroscopy is recommended. A PDMA was developed to educate the patients about the two surgical options. Patients were presented with information, both utilizing the PDMA and without the aid. We assessed patients’ satisfaction with each format and invited comments about improving the PDMA. 

RESULTS: Participants (n = 14; 4 male, 10 female) were 61.3 ± 8.8 years of age. The majority of the participants found the PDMA helpful (85.7%), but identified areas for improvement. There was a preference for utilization of a PDMA (78.6%) because it was felt to help them understand the treatment options more clearly with the visual aid. 8 of 14 participants prefer to decide based on the surgeon’s recommendations but still reported a utility for the PDMA.

CONCLUSIONS: Shared decision-making is increasingly common in medicine and the development of PDMAs require patient input. In our study, the use of a PDMA was preferred by patients to assist in making an informed decision for surgical treatment of nephrolithiasis. Interestingly, most of our patients still preferred to make decisions based on the surgeon’s recommendation. Patients suggested improvements to the PDMA that may enhance its utility in the clinical setting.

SOURCE OF FUNDING: None

MP19-19 THE NEW FLEXIBLE CYSTOSCOPY WITH NAVIGATION SYSTEM EVALUATED BY BLADDER PHANTOMS

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INTRODUCTION AND OBJECTIVES: The flexible cystoscopy (CS) is widely used in the identification and follow-up of bladder tumor (BT). However, it still contains obstacles in identification as well as recording of multiple tumors. We extracted the problems from the phantom study and developed a new cystoscopy with navigation system.

METHODS: The two types of bladder phantoms with eight tumors (various shape and size) was made and 31 urologists (11 beginners, 11 mid-levels and 9 veterans) tested them with prevalent CS (Olympus, Japan) under the clear and hematuria condition. Furthermore, we developed a new CS with a navigation system that can resister the real-time observing lesion, measure the size of tumors and keep pictures with location in digital medical records. We compared the accuracy of the size, numbers and locations of tumors between prevalent CS and new CS under the same condition.

RESULTS: In numbers of BT, both CS were equivalent in clear vision but the new CS had an advantage in hematuria condition. In prevalent CS under clear vision, the accuracy of sizes were 78%, 34% and 23% in 5 mm >, 5–10 mm and 10–30 mm tumors, respectively, and multiple BTs within a same vision developed frequent measurement errors by recognizing the distant tumor smaller and near tumors bigger. In new CS, the accuracy of sizes were significantly improved (total 75%) in clear vision. Furthermore, new CS also had an advantages in recording the location of BT.
CONCLUSIONS: The new CS had advantages in size-measuring and location recording of BT.

SOURCE OF FUNDING: None

MP19-20 SMARTPHONE APPLICATIONS FOR UROLITHIASIS

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INTRODUCTION AND OBJECTIVES: There are an increasing number of healthcare smartphone applications (‘apps’) available. Urolithiasis presents a major healthcare burden. Patients are increasingly keen to educate themselves regarding the diagnosis and management of their condition. There is no formal regulation of healthcare apps, including a large number of apps relating to urolithiasis. This review aims to examine the range of apps available, and the prevalence of healthcare professional input.

METHODS: Four international smartphone app stores were searched: Apple’s App Store, Google Play (Android), BlackBerry App World and the Windows Phone App store. A total of 42 unique apps pertaining to urolithiasis were downloaded and analysed. Recorded data included the cost (£/S), publisher information, number of ratings, average rating and any documentation of medical professional involvement.

RESULTS: Twenty-one (50%) apps required payment for download. The mean cost was £3.58 ($6.04) with range £0.61-£34.90 ($1.03-$58.87). Thirty-three (79%) of the 42 apps were designed to be used by patients. However, only fifteen (36%) of the 42 apps had clear input from health professionals. Twenty-two apps (52%) offered patients medical advice, including dietary information on lowering calcium intake, which is contrary to current evidence based practice.

CONCLUSIONS: We conclude that urolithiasis apps have future potential to inform both patients and healthcare professionals on stone management. However, inaccuracies in the recommendations made by some apps can be misleading or even harmful without specialist involvement. We recommend improving the usefulness of these apps by seeking a ‘quality stamp’ from recognized urological organizations and greater clinician involvement in future app development.

SOURCE OF FUNDING: None

MP19-21 OUTCOMES FOR BILATERAL SIMULTANEOUS URETEROSCOPY (BS-URS) FOR STONE DISEASE: SYSTEMATIC REVIEW OF LITERATURE

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INTRODUCTION AND OBJECTIVES: Bilateral simultaneous ureteroscopy (BS-URS) for management of bilateral ureteric and/or renal and or a combination of these stones can be challenging. We did a systematic review of literature to look at the role of BS-URS for management of stone disease.

METHODS: We searched MEDLINE, PubMed and the Cochrane Library from January 1990 to December 2013 for results of bilateral ureteroscopy and stone treatment. Data was extracted on the outcomes and complications and the results were analyzed.

RESULTS: Nine studies reported on 390 patients (male:female - 2:3). The age range was 11–97 years with the stone size ranging from 6–21 mm and the total stone burden from 6–59 mm. The stone free range (SFR) ranged from 85–98.7% that was higher for stones <1 cm in size. The operative time and hospital stay was 21–137 minutes and 1–7 days respectively. There were 57 (14.5%) minor (Clavien 1 or 2) complications including post-operative fever (n = 16, 4%), haematuria (n = 33, 8.5%) and UTI (n = 8, 2%) with 32 (8%) major (Clavien 3, 4 or 5) complications including ureteric perforation or mucosal injury (n = 24, 6%), ureteric stricture (n = 4, 1%), urosepsis (n = 2, 0.5%) and urinoma and pulmonary embolism (PE) in one patient each. There were two deaths reported (including patient with PE and urosepsis).

CONCLUSIONS: Bilateral simultaneous ureteroscopy for stone disease has a good stone clearance rate but with a complication rate, which is higher than staged ureteroscopy and a small but not insignificant risk of major complications. Surgeons performing these procedures should maintain their outcomes counsel patients appropriately.

SOURCE OF FUNDING: None

MP19-22 NEW APPLICATION OF ECMO FOR RESECTION OF INVASIVE UROTHELIAL CARCINOMA OF RENAL PELVIS EXTENDING INTO THE INFERIOR VENA CAVA

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INTRODUCTION AND OBJECTIVES: Clumping of the IVC and then thrombectomy is the surgical strategy in the patients with renal tumor complicated with tumor thrombus in the inferior vena cava, Neves system level I to II. The possible complications include massive bleeding, intra-abdominal organs congestion, IVC obstruction symptoms and life-threatening pulmonary and systemic embolization of tumor-thrombus.

METHODS: Application of ECMO for resection of renal tumor extending into the inferior vena cava, Neves system level I and II.

RESULTS: 72-year-old female received radical nephrectomy and suprahepatic veins) for reducation of blood loss 5. Resolve or palliate IVC obstruction symptoms.


SOURCE OF FUNDING: Nil
INTRODUCTION AND OBJECTIVES: This work presents an in-vitro study of stone destruction in which laser lithotripsy and nanosecond electropulse lithotripsy (NEPL) were applied jointly. Laser lithotripsy requires considerable time to break stones. Although NEPL is highly effective, its efficiency depends on stone density. Preliminary low energy laser treatment may modify stone properties and produce effects that improve NEPL efficacy.

METHODS: Begostone phantoms (8 x 8 x 5 mm) with a density of about 2500 HU were used. The stone surface was first treated by laser and then nanosecond pulses were applied to the same area. The test was terminated when the phantoms disintegrated into fragments < 2 mm. Pulse parameters and cumulative energy leading to preliminary fracture and final fragmentation were recorded.

RESULTS: The laser-treated surface had a crater-like shape, comprised of molten material and a web of microcracks. NEPL application usually caused the stone to fracture into two pieces and thereafter the pieces broke apart into fragments. The results showed that the expenditure of energy and the time required to complete stone fragmentation were significantly reduced when using the two processes together as compared to the application of each method separately. Also, the cumulative energy expended in preliminary fracture of the stone varied depending on the laser method employed and may reduce almost by an order NEPL treatment time.

CONCLUSIONS: Initial laser treatment on the stone surface prior to NEPL application is a promising method that enables a significant reduction in the expenditure of total cumulative energy and the time required for fragmentation of dense stones.

SOURCE OF FUNDING: None

MP19-24 VOLUMETRIC SURVEILLANCE OF LOW RISK PROSTATE CANCER WITH PROSTATE HISTOSCANNING

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INTRODUCTION AND OBJECTIVES: Prostate HistoScanning (PHS) is an ultrasound-based tissue characterisation technology that shows promise in prediction of prostate cancer. We aimed to determine if serial PHS could track changes in tumour volume (TV) and location, and if this correlated with PSA and PSA density (PSAD) and tumour reclassification on repeat biopsy.

METHODS: From June 2010 and March 2014, 26 men on an active surveillance protocol for Gleason 6 prostate cancer underwent at least 2 serial PHS, along with DRE, PSA and PSAD measurement. Template mapping biopsies were performed after one year of active surveillance. Repeat PHS measured TV and the change in volume between measurements was calculated.

This was compared to change in PSA, PSAD and stage change on repeat biopsy.

RESULTS: Median time between the two PHS was 310 days (range 126–1264). Median initial tumour volume at PHS was 0.5 ml, which was equal to the median at the second scan. The range of change in tumour volume was between a reduction of 0.37 ml and an increase of 0.52 ml. There was also only a small median rise in PSAD of 0.01 (–0.24–0.26). Gleason grade was reclassified to 3+4 in 4 cases, with 3 of these cases revealing an increase in PHS TV of 0.06 ml, 0.12 and 0.13 ml.

CONCLUSIONS: PHS appears to consistently identify TV and quantify changes through serial scanning. A static TV is mirrored in static serial PSAD measurements. More studies are needed to determine if PHS tumour volumetry could in some cases be used to safely avoid protocol driven repeat prostate biopsy.

SOURCE OF FUNDING: Imperial College Healthcare Charity.

MP19-25 EARLY EXPERIENCE WITH THE MIM SYMPHONY SOFTWARE REGISTRATION FOR MRI-TARGETED TRANSPERINEAL PROSTATE BIOPSIES

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INTRODUCTION AND OBJECTIVES: The MIM Symphony software registration system offers novel features unavailable in other MRI/TRUS fusion systems that increase the accuracy of MRI-targeted transperineal biopsies compared to standard visual or software-registration fusion systems. To report the incidence and prostate cancer characteristics of men undergoing MRI targeted biopsies using the MIMS software registration system.

METHODS: Prospective data collection of 13 patients presenting to a specialist urologist. All men underwent multiparametric MRI scanning of the prostate before biopsy. MRI lesions were graded using a Likert scale based on the PI-RADS system by specialist urologists. All histopathology was reported by dedicated specialist uropathologists.

RESULTS: There were 13 patients with characteristics (mean) age 62 years, PSA 6.2 ug/L, prostate volume 43 ml, PSA density 0.17 ng/ml/cm3, 17% free PSA normal: abnormal feel (69%:31%), Caucasian 92%, Asian 8%, 17% family history of prostate cancer. The median Likert risk was 4 and cancer was found in 85% of men with median primary grade 4, secondary grade 3 and median maximum cancer length of 4.5 nm. No cancer or insignificant cancer was found in 30%, equivocal risk cancer in 15% and significant cancer in 55%. Seven patients underwent radical prostatectomy. Rather than upgrading, there was downgrading of 3 of the 7 men from higher to lower Gleason scores (4+3 to 3+4).

CONCLUSIONS: The unique properties of the MIMS Symphony software system that allow accurate fusion of the MRI and ultrasound images in the same plane without deformation result in highly accurate targeting of abnormal MRI lesions and more accurate risk grading.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: Endoureterotomy is a viable option for treating benign ureteral stricture. Recently double stenting was described instead of single stenting. We evaluated the efficacy and safety of double stenting after endoureterotomy.

METHODS: This study included 31 patients, two of them had bilateral disease. All patients underwent retrograde laser endoureterotomy and ureteral stenting simultaneously; single stenting was performed in 17 ureters while double stenting in the remaining 16 ureters and left indwelling for 8 weeks. Ultrasonography was performed one month after stent removal then every 3 months and renal scan or contrast study was done after 3 months. Clinical characteristics, operative results and functional outcomes were compared. Success was defined as radiographic resolution of obstruction and symptomatic improvement.

RESULTS: The mean patients age was 43 (19–63) years and the mean stricture length was 1.89 (1–3) cm. The mean follow-up was 24 (6–38) months. The overall success rate was 70% (23 patients) without radiological evidence of obstruction. Operative results showed symptomatic improvement while 6 cases (18%) underwent surgical reconstruction. The success rate was higher for long strictures (>2 cm (81.2% vs 58.8%) and strictures managed with double stenting (87.5%) compared to single stenting (40%) with P-value 0.04.

CONCLUSIONS: Endoureterotomy has become the preferred initial treatment of benign ureteric strictures. Success is more likely in short length strictures and double stenting seems to be effective in maintaining patency.

SOURCE OF FUNDING: None
According to multivariate analysis, SA was only an independent predictor of SF status (p = 0.001).

**CONCLUSIONS:** SA was a highly indicative of SF status after RIRS. However, SV was not found to be an independent predictor of SF status after RIRS.

**SOURCE OF FUNDING:** None

**MP20-04 ASSESSING THE EFFICACY OF EXTRACORPOREAL SHOCKWAVE LITHOTRIPSY BEFORE RETROGRADE INTRARENAL SURGERY: A PROPENSITY SCORE MATCHED ANALYSIS**

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**INTRODUCTION AND OBJECTIVES:** Performing extracorporeal shockwave lithotripsy (ESWL) before endoscopic lithotomy to reduce stone burden may favor eliminating stones during the surgery. In this study, we analyzed the effect of preoperative ESWL on treatment outcomes after retrograde intrarenal surgery (RIRS).

**METHODS:** We retrospectively reviewed the data of 161 patients with renal stones who underwent RIRS from July 2007 to March 2014. Patients were divided into two groups based on whether the preoperative ESWL was performed (Group 1) or not (Group 2). Two groups’ cohorts were matched 1:1 using propensity score analysis. Age, body mass index (BMI), location, composition, size and number of stone, operative parameters and stone-free rates were compared.

**RESULTS:** Patients in Group 1 and 2 were matched 1:1 with respect to stone size and number, leaving 48 patients in each group. After matching, no differences were identified between the two groups regarding age, BMI, stone location, stone composition. Although it was not statistically significant, patients in Group 1 had shorter operation time (77.2 vs 86.3 min) and less number of procedures performed (1.14 vs 1.23) compared to Group 2 patients. The stone-free rate was significantly higher in Group 1 (81.3% vs 60.4%, p = 0.046). In multivariate analysis, stone size and performing preoperative ESWL was found to be independent factors predicting stone-free state after RIRS.

**CONCLUSIONS:** Performing ESWL before RIRS may decrease the operation time and the number of procedures afterwards, although it was not significant. Furthermore, it may assist enhancing the stone-free rate after RIRS in selected patients.

**SOURCE OF FUNDING:** None

**MP20-05 DOES COMBINATION THERAPY WITH TAMSULOSIN AND TOLTERODINE IMPROVE URETERAL STENT DISCOMFORT COMPARED TO MONOTHERAPY WITH TAMSULOSIN? A RANDOMIZED CONTROLLED TRIAL**

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**INTRODUCTION AND OBJECTIVES:** Ureteral stent discomfort is a significant problem that remains a challenge to treat. Despite the utilization of narcotics and alpha-blockers, patients often experience bothersome lower urinary tract symptoms and pain that may impair daily activities. The purpose of this study was to evaluate the effect of combination therapy with an alpha-blocker and anti-cholinergic on stent discomfort and quality of life.

**METHODS:** A double-blinded randomized controlled trial was completed from December 2012–April 2014. 80 patients were randomized, 44 to the combination group (tamsulosin 0.4 mg and tolterodine ER 4 mg) and 36 to the monotherapy group (tamsulosin 0.4 mg and placebo). The patients filled out the Urinary Stent Symptom Questionnaire prior to stent placement on the day of surgery, the day after stent placement, the morning of stent removal, and the day after stent removal.

**RESULTS:** There were a total of 80 patients (40 males: 40 females) with a mean age of 49.99. Between the two groups, there was no significant difference in urinary symptoms, body pain, and activities of daily living from preoperative to prior to stent removal (p = 0.95, 0.40, 0.95, respectively). Although, both had improvement in urinary symptoms from the time of initial stent insertion to just prior to stent removal (difference – 0.50 for combination, – 0.40 for monotherapy).

**CONCLUSIONS:** Combination tamsulosin and tolterodine does not appear to improve urinary symptoms, bodily pain or quality of life in patients after ureteral stent placement for nephrolithiasis. Both groups experienced worsened symptoms, suggesting that further research is necessary to improve stent discomfort.

**SOURCE OF FUNDING:** None

**MP20-06 DIAGNOSTIC VALUE OF UPPER URINARY TRACT NBI IN 200 CASES – SINGLE CENTER EXPERIENCE**

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**INTRODUCTION AND OBJECTIVES:** Identifying characteristics suggestive for the malignant nature of an upper urothelial lesion could be difficult. The relatively new NBI technology seems to be a promising technique. The aim of our study was to determine the value of digital flexible ureteroscopy combined with NBI in upper urinary tract pathology diagnosis.

**METHODS:** Between January 2010–January 2014, 200 white light and NBI digital flexible ureteroscopic procedures were performed in our department. The patients were divided in two groups. Group I (94 cases) included patients in which, the procedures were performed for upper urinary tract filling defects (36 cases), unilateral hematuria (44 cases), and abnormal urinary cytology (14 cases). The second group (106 procedures) included follow-up cases with conservatively treated upper urinary tract urothelial tumors. An Olympus URF-Vo ureteroscope with NBI capability was used in all cases.

**RESULTS:** In Group I, flexible ureteroscopy identified upper urinary tract lesions in 96%: malignant tumors in 29 cases and benign lesions in 61 cases. The malignant lesions were identified by both white light and NBI in 18 cases. Only NBI detected the tumors in 4 cases, while in 7 cases, it identified supplementary lesions. In Group II, tumoral recurrence was found in 9 cases, 5 of them visible both in white light and NBI and one only in NBI. In 3 cases, NBI identified supplementary lesions.

**CONCLUSIONS:** Flexible retrograde ureteroscopy with NBI is a useful diagnosis method in upper urinary tract pathology, especially when imaging data are equivocal and malignant lesions are suspected.

**SOURCE OF FUNDING:** None
MP20-07 INTRAOPERATIVE INCIDENTS AND COMPLICATIONS AFTER 10001 SEMIRIGID URETEROSCOPIC – SINGLE CENTER EXPERIENCE
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INTRODUCTION AND OBJECTIVES: To evaluate semirigid retrograde ureteroscopy intraoperative incidents and complications on a significant series of patients and to establish the factors associated with the occurrence of intraoperative complications.

METHODS: Between June 1994 and February 2014, 10001 semirigid ureteroscopic procedures for ureteral lithiasis were performed in 9124 patients. We used semirigid ureteroscopes (8/9.8F Wolf, 8 and 10F Storz, Olympus Endoeye digital 8.5/9.9 F). Lithotripsy was done with pneumatic, electrohydraulic or Ho:YAG laser lithotripters.

RESULTS: The stone-free rate after a single ureteroscopic procedure was 90.9%. Intraoperative incidents occurred in 426 cases (4.3%). These were represented by the failure to negotiate de ureteral orifice (68 cases), or to reach the calculi due to narrowed and sinuous ureteral lumen or edema surrounding the calculi (237 cases), fixed stone baskets (69 cases), equipment damages (40 cases) or double J stent malpositioning (12 cases). All the incidents were dealt endoscopically, except one case of fixed basket that imposed open extraction. The overall rate of intraoperative complications was 2.8% (276 cases). These were represented by lesions of the ureteral mucosa (167 cases), perforation (68 cases), bleeding (26 cases), ureteral avulsion (3 cases) and extra-ureteral stone migration (12 cases). All intraoperative complications were identified intraoperatively and treated immediately. Open surgery was necessary in only 5 cases.

CONCLUSIONS: Due to technological advances and increased experience, the semirigid retrograde ureteroscopic treatment of ureteral lithiasis increased the efficacy, while the incidence of intraoperative complications decreased. Most of these complications are minor and can be managed by conservative approach.

SOURCE OF FUNDING: None

MP20-08 PLACE OF URETEROSCOPY IN URETERAL CALCULI TREATMENT DURING PREGNANCY
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INTRODUCTION AND OBJECTIVES: Urolithiasis during pregnancy is not common but remains both a diagnostic and treatment challenge. The aim of the study was to assess the ureteroscopy results as definitive treatment option in pregnant women with obstructive ureteral calculi.

METHODS: Between 2006 and 2013, in our clinical department, 58 pregnant women underwent active treatment for ureteral lithiasis and in 48 of these cases ureteroscopy was applied as definitive therapy. The average patients’ age was 27.2 years (range 20–37 years) and the gestation period varied between 9 to 35 weeks. Flank pain was the common presenting symptom (55/58 cases), 4 women had associated fever, and 16 complained of irritative voiding symptoms. Semirigid ureteroscopy was the first choice alternative for the first 2 trimesters while flexible approach or double J indwelling were preferred for patients in the last trimester of pregnancy.

RESULTS: Semirigid ureteroscopy allowed stone treatment in 30/34 cases. In 18 patients, calculi fragmentation using Ho:YAG laser or ballistic lithotripsy were performed, while in 12 cases, the stone was removed intact. Minor intraoperative complications were encountered in 5 patients. Postoperatively, urinary tract infection developed in 4 patients, renal colic in 2 and prolonged hematuria in one case, while 4 patients complained of stent-induced bladder irritation. Flexible ureteroscopy was successfully completed in 14 patients. There were no complications related to this procedure. All pregnancies were carried out to full term.

CONCLUSIONS: Ureteroscopy may be considered a safe and effective first-line definitive therapeutic option in pregnant patients requiring intervention for ureteral stone.

SOURCE OF FUNDING: None

MP20-09 RETROGRADE RENAL STONES APPROACH: ADJUSTING THE HOLMIUM LASER LITHOTRIPSY MODE
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INTRODUCTION AND OBJECTIVES: Pyelocaliceal calculi flexible ureteroscopic approach raises problems related with operative time, associated morbidity and costs, especially by potential endoscope damage.

METHODS: 5 series, each of 20 patients with single pyelocaliceal lithiasis were analyzed: Group I with calculi < 1 cm fragmented to dust, Group II with calculi < 1 cm with lithotripsy in fragments, Group III with calculi of 1–2 cm fragmented to dust, Group IV with calculi of 1–2 cm with lithotripsy in fragments, Group V with calculi of 1–2 cm fragmented to dust until they reached 1 cm, and lithotripsy in fragments afterwards. In all cases were used a flexible Story Flex-Xc ureteroscope and Ho:YAG lithotripsy.

RESULTS: Ureteral access sheath was used in 70% of the cases. Mean stone volume in groups I and II, and groups II, IV and V were similar. Success rate in all groups was statistically similar. Mean operating time was 39 min in group I, 21 min in Group II, 112 min in group III, 72 min in group IV and 51 min in group V. Minor complications occurred in 7 cases, while a single major complication occurred in group IV.

CONCLUSIONS: The optimal lithotripsy method of calculi < 1 cm seems to be in extractable fragments. Larger calculi should be fragmented to dust until they reach 1 cm and then the lithotripsy should be continued into extractable fragments.

SOURCE OF FUNDING: None

MP20-10 FLEXIBLE URETEROSCOPY – A SINGLE CENTER EXPERIENCE ON 1110 CASES
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INTRODUCTION AND OBJECTIVES: Nowadays flexible ureteroscopy in, in many centers, a routine procedure. The aim of this study was to evaluate the indications, limits and efficacy of flexible ureteroscopy on a significant number of cases.

METHODS: Between January 2002 – February 2014, 1110 diagnosis and treatment retrograde flexible ureteroscopic procedures were performed in “Saint John” Emergency Clinical Hospital. We retrospectively reviewed the indications, endoscopes’ types, procedural efficacy and complications rates.
**INTRODUCTION AND OBJECTIVES:** New digital flexible ureteroscopes offer certain advantages by comparison to their predecessors. We aimed to retrospectively analyze the ureterorenoscopic procedures performed with the Storz Flex-Xc in order to evaluate its particularities.

**METHODS:** Between May 2012–April 2014, all the flexible ureteroscopic procedures performed with Storz Flex-Xc were analyzed. Five ureteroscopes were used: the first and last ones previously used in another center and 3 new ones.

**RESULTS:** 558 procedures were performed on 510 patients: first endoscope used on 62 procedures (55 patients), second one on 96 procedures (90 patients), third one on 151 procedures (139 patients), the fourth on 159 procedures (143 patients) and the last one, still operational on 200 procedures (173 patients). Ureteral access sheath was used in 71% of the cases. The endoscopes were used for 51, 67.1, 107.7, 107.2 and 142.3 hours, respectively. Ureteral access sheath was used and 100 in which the procedure was performed without it. Pre-ureteroscopy stenting necessities, intraprocedural characteristics, stone-free rates and complications were evaluated and compared.

**CONCLUSIONS:** Routine but careful use of ureteral access sheath does not increase the complication rates specific for the flexible ureteroscopic approach. It offers some clear advantages regarding access, visibility and seems to be associated with less septic complications, probably by maintaining a low pressure.

**SOURCE OF FUNDING:** None

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**RESULTS:** A fiberoptic first generation Storz flexible ureteroscope was used in 194 cases, a digital Flex-Xc in 698 cases, a fiberoptic Wolf Cobra in 68 cases and a digital Olympus URF-V in 150 cases. 9.8% of the procedures were diagnostic, 2.4% therapeutic for upper urinary tract tumors and 87.8% for pyelocalical lithiasis (associated or not with other pathologies such as pyelocalical diverticulum or infundibulum stenosis). During the diagnostic procedures inspection of the entire upper urinary tract was possible in 91% of the cases. Stone free rate in lithiasis cases was 92.5% after one procedure, 97.9% after two procedures and 98.8% after three procedures. Complication rate was 19.2%, 16.2% Clavien I and II, 3% Clavien III, 0% Clavien IV and V. Two cases presented renal hematoma and one a subcapsular hematoma, all treated conservatively.

**CONCLUSIONS:** Retrograde flexible ureteroscopic approach is an efficient diagnostic and treatment method for upper urinary tract pathology. Technological progress during the last years modified method’s indications. The safety of this procedure is very good, most of the complications being minor.

**SOURCE OF FUNDING:** None

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**INTRODUCTION AND OBJECTIVES:** Use of ureteral access sheath (UAS) during retrograde flexible ureteroscopy is still an issue of debate. The aim of our study was to evaluate the particularities of routine use of such a device.

**METHODS:** We prospectively evaluated 200 patients treated by retrograde flexible ureteroscopic approach for single pyelocalical stones between 1 and 2 cm in size: 100 in which a Cook Flexor 10/12 F ureteral access sheath was used and 100 in which the procedure was performed without it. Pre-ureteroscopy stenting necessities, intraprocedural characteristics, stone-free rates and complications were evaluated and compared.

**RESULTS:** 7% of the first group and 10% of the second one were already JJ stented. Due to difficulties to ascend the UAS a supplementary 8% of the cases from the study group were also stented, while in the second group impossible ureteral passage of the flexible ureteroscope imposed this maneuver in 2% of the cases. Intraprocedural visibility was better when the UAS was used (mean score 4.5 vs. 3.9). Perioperative complications rate and stone free rate were similar among the two groups (13% vs. 9% and 96% vs. 97% respectively). Septic complications were significantly reduced in the study group (30% vs. 55%). No late ureteral stenosis was encountered.

**CONCLUSIONS:** Routine but careful use of ureteral access sheath does not increase the complication rates specific for the flexible ureteroscopic approach. It offers some clear advantages regarding access, visibility and seems to be associated with less septic complications, probably by maintaining a low pressure.

**SOURCE OF FUNDING:** None

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**INTRODUCTION AND OBJECTIVES:** Preoperative symptomatic urinary tract infection (UTI) usually defer the definite management for upper urinary tract stone, such as ureteroscopic lithotripsy (UL). Meanwhile, whether the chances of postoperative symptomatic UTI will be increased is a main concern. We investigated whether there is an association between preoperative UTI and postoperative UTI for UL by analyzing a nationwide health insurance database.

**METHODS:** A urology dataset including 3,433,230 individuals was selected from the National Health Insurance Research Database of Taiwan for the year 2006 to 2010. We identified 1169 patients (Group A) underwent UL with significant UTI resulted in hospitalization within 2 months prior to the procedure. Another 3507 patients (Group B) accepted the same procedure but without prior significant UTI were randomly selected. The incidence rate of postoperative symptomatic UTI within 2 months after UL were compared. Chi-square test and logistic regression analysis were used for statistics.

**RESULTS:** The incidence rate of postoperative symptomatic UTI was 12.23% and 1.82% for Group A and Group B, respectively (p < 0.0001). Age is a significant factor for postoperative UTI.
in both Group A and B (Odds ratio: Group A 1.025, p=0.0002; Group B 1.058, p<0.0001). PCN insertion is a significant factor for postoperative UTI in Group B but not Group A (Odds ratio: Group A 1.249, p=0.0002). PCN insertion is a significant risk factor for postoperative symptomatic UTI in patients without significant UTI before UL.

**SOURCE OF FUNDING:** None

**MP20-14 SHOULD WE ADD RETROGRADE INTRARENAL SURGERY BY FLEXIBLE URETEROSCOPY FOLLOWING SEMIRIGID URETEROSCOPY FOR SYMPTOMATIC URETERAL STONES?**

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**INTRODUCTION AND OBJECTIVES:** Because residual renal stones may contribute to stone growth, symptoms or additional interventions, the goal of URS is a stone-free kidney and ureter. However, the impact of adding retrograde intrarenal surgery (RIRS) after ureteroscopic management for ureteral stones remains unknown. Therefore, we aimed at clarifying the utility of additional ipsilateral RIRS by flexible URS following semirigid URS for symptomatic ureteral stones.

**METHODS:** From January 2013 to September 2013, all patients with a simple ureteral stone and indication for ureteroscopic lithotripsy underwent additional RIRS. After treating ureteral stone using semirigid URS, ureteral access sheath was placed and RIRS by flexible URS was performed. When intrarenal calculus more than 2 mm existed, those stones were managed by laser lithotripsy and/or nitinol basket. The factors that may affect the presence of intrarenal stones treated by flexible URS were analyzed.

**RESULTS:** 111 patients were enrolled in this single-arm prospective study. Overall stone free rate for ureteral stone were 98% and complication rate was 6.3%. Notably, in 72 patients with renal stones detected on preoperative CT, 62 patients (86%) required managing intrarenal stones. Moreover, 18 (46%) out of 39 patients without renal stone preoperatively required managing intrarenal stones. Age, upper ureteral stone and the presence of renal stone on preoperative CT were factors independently affected the existence of intrarenal calculus during RIRS.

**CONCLUSIONS:** These results indicate that additional ipsilateral RIRS by flexible URS after semirigid URS for ureteral stone may be effective in patients with upper urinary stone or renal stones on preoperative CT.

**SOURCE OF FUNDING:** No conflict of interest

**MP20-15 CAN UPPER TRACT TRANSITIONAL CELL CARCINOMA (UTTCC) BE MANAGED ENDOSCOPICALLY IN CENTRES TREATING A SMALL NUMBER OF PATIENTS?**

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**INTRODUCTION AND OBJECTIVES:** UTTCC is now routinely treated with endoscopic management and surveillance. We aimed to assess the results of patients managed endoscopically in our United Kingdom department to see if small numbers were sufficient to provide a safe and effective service.

**METHODS:** A retrospective single centre study over an 8 year period from January 2005 of all patients diagnosed with UTTCC. 25 patients were diagnosed in our department serving a population of 720,000. 18 had continuous endoscopic management of their tumours with 7 patients eventually requiring nephroureterectomy.

**RESULTS:** In the continuous endoscopic group, average age was 69.7(range 33.7–93.9). 2 patients were ASA1, 6 ASA2, and 11 ASA3. 14 patients had TCC in the lower third, 1 in the upper third, 1 in the upper third/pelvis, 1 in the kidney and 1 in a ureteric stumps. In total 91 ureteroscopies have been carried out (range 1–13 per patient) with 55 interventions. The 7 patients that required nephroureterectomy had an average age of 70.8 (53.8–81.8), 4 being ASA2 and 3 ASA3. 4 had TCC in the renal pelvis, 1 in the kidney and midureter, 1 in middle and lower ureter and 1 in the lower third.

Average time from first presentation to nephroureterectomy was 4.9 months (range 1.3–11.4 months). Histological grade increased in 2 patients. Mortality for all patients is 0%.

**CONCLUSIONS:** UTTCC can be safely managed in centres treating a small number of patients with endoscopic treatment and surveillance and progression to nephroureterectomy on suspicion of increase in size, grade or invasion into deeper layers.

**SOURCE OF FUNDING:** None

**MP20-16 URETEROSCOPIC LITHOTRIPSY IS SAFE AND EFFECTIVE IN MANAGING URETERAL STONES WITH FORNICEAL RUPTURE**

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**INTRODUCTION AND OBJECTIVES:** Consensus on the management for ureteral stone with forniceal rupture is still lacking. For ureteroscopic lithotripsy (URSL), there is a concern that irrigating fluid might aggravate fluid extravasation. This study aims to analyze our experiences to determine the optimal management for this particular clinical situation.

**METHODS:** Patients with renal forniceal rupture secondary to ureteral stone were retrieved from database of Radiology Department. All diagnoses are made based on CT and the images were reviewed and confirmed by a single radiologist.

**RESULTS:** During 2002~2014, 77 patients were found to have forniceal rupture due to ureteral stone. The average stone size was 4.9 mm. Among them 28 patients received conservative treatment, 4 patients received primary ESWL, 34 patients received primary URS, and 11 patients received initial percutaneous nephrostomy (PCN) followed by ESWL or URS. Patients received conservative treatment had smaller stones (mean 3.2 mm, p=0.009), which were more frequently located at lower third ureter (p=0.009). Only one patient receiving conservative treatment needed a further procedure (URS). The stone-free rate of both primary and secondary ESWL were excellent (100%), but poor in primary and secondary ESWL (16.7%). No major complication occurred in patients received therapeutic procedures. The mean hospitalization period is shorter in patients
receiving primary ESWL or URSL than those receiving initial PCN. (4.1 days vs. 8.7 days, p=0.001).

CONCLUSIONS: Ureteroscopic lithotripsy is safe, effective and with a shorter hospital-stay in managing ureteral stone with fornicedal rupture.

SOURCE OF FUNDING: None

MP20-17 PURE TRANSURETHRAL NATURAL ORIFICE TRANSLUMINAL ENDOSCOPIC SURGERY (NOTES) FOR FENESTRATION AND DRAINAGE TREATMENT OF RENAL CYST: REPORT OF EIGHT CASES

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INTRODUCTION AND OBJECTIVES: To describe the initial clinical experience of pure transurethral NOTES for fenestration and drainage treatment of renal cyst, and evaluate its feasibility and safety.

METHODS: Five female patients and three male patient with renal cyst underwent pure transurethral NOTES for fenestration and drainage treatment. The median age was 29.2 (range 22 to 42) years. In this group, 3 renal cysts were on the right side and 5 on the left. All cases were confirmed by B ultrasound, CT scan and IVU. The median diameter of renal cyst was 6.3 (range 5.2 to 7.2) cm. After induction of general anesthesia, flexible ureteroscope was transurethraly introduced into renal collect system. Renal cyst was found by B ultrasound guide when necessary. A crisscross incision was cut by Holmium laser to 1.5 ~ 2.0 cm, and a 7 F double J stent was positioned with the proximal end coiled in the cyst cavity, which was removed after 4 weeks.

RESULTS: All procedures were successfully completed. Three cysts were found by flexible ureter scope and the others were found by B ultrasound guide. The median operation time was 55 (range 30 to 125) min. There were no intraoperative or postoperative complications. The diameter of cyst decreased at least 1/2 during follow-up (3 to 15 months).

CONCLUSIONS: Pure transurethral NOTES for fenestration and drainage treatment of renal cyst is safe, feasible, minimal invasive and cosmetic. It is worth selecting the method to treat endogenous renal cyst.

SOURCE OF FUNDING: None

MP20-18 FLEXIBLE URETEROSCOPY FOR UPPER URINARY TRACT CALCULI IN CHILDREN

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INTRODUCTION AND OBJECTIVES: To evaluate the value of flexible ureteroscopy for the treatment of the upper urinary tract calculi in children.

METHODS: 26 children including 15 males and 11 females in this study. The median age was 7.2 years. 14 had the upper ureteral calculi and 12 had renal calculi. Ipsilateral mild to moderate hydronephrosis was found in all of the cases. Four children had melamine-induced stones. The calculi were found on left side in 15 cases, right side in 8, both sides in 3. The median stone size was 1.0 cm. Retrograde flexible ureteroscopy and anterograde flexible ureteroscopy in MPCNL was performed.

RESULTS: 23 cases were performed retrograde flexible ureteroscopic procedure. One case was conversed to MPCNL because the flexible ureteroscope could not be inserted into the upper ureter. The successful rate of stone search was 100% in 22 cases. 20 cases were successfully performed in one stage. The success rate of stone fragmentation was 90.9%. Three anterograde flexible ureteroscopy with MPCNL were successfully found and fragmented after a single holmium laser lithotripsy. Median operative time was 35 mins. The patients were discharged from hospital after a median of 4.5 days. Double-J stent was removed after 2 to 4 weeks when no residual stones more than 2.0 mm in size were found.

CONCLUSIONS: Flexible ureteroscopy is a safe and feasible method for the treatment of the upper urinary tract calculi in children. It is suitable for the stones in the pelvis and calyceal where the rigid ureteroscopy could not reach.

SOURCE OF FUNDING: None

MP20-19 THE BENEFIT OF URETERAL DILATATION AND MULTIPLE URETERAL STENTS FOR PATIENT WITH URETERAL OBSTRUCTION

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INTRODUCTION AND OBJECTIVES: To investigate the efficacy and safety of ureteral dilatation and placing long-term ureteral stent for patients with various causes of ureteral obstruction.

METHODS: We retrospectively reviewed 39 patients presenting with ureteral obstruction secondary to malignant stricture (n=9) or non-malignant stricture (n=30). The mean age of patients was 55.8±16.1 years (range 13 to 87). All patients underwent retrograde ureteral dilatation and placement of one to three ureteral stents. Stent patency rate and complications including febrile urinary tract infection (UTI), stent encrustation and stent fragmentation were recorded.

RESULTS: A total 117 ureteral stents were indwelled during the 83 procedures. Three stents were placed in 7 patients and two stents in 20 patients. The patency rate was 95.2% with mean 75-day follow-up. 104 and 13 stents had no and grade 1 encrustation, respectively. The patency rate was similar between patients with malignant stricture and non-malignant stricture (100% versus 94.7%, p=0.57). However, three episodes of febrile UTI were noted only in patients with malignant stricture. The improvement of hydronephrosis and complications were also comparable between patients with indwelling ureteral stents more than 90 days and less than 90 days. No stent fragmentation was found in all patients.

CONCLUSIONS: We demonstrated that ureteral dilatation and placing single or multiple ureteral stents were effective and safe for patients with ureteral obstruction.

SOURCE OF FUNDING: Nil

MP20-20 EVIDENCE FOR FLEXIBLE URETERORENOSCOPY (FURS) FOR LARGE RENAL STONES IN THE MODERN ERA: A SYSTEMATIC REVIEW

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INTRODUCTION AND OBJECTIVES: Large renal stones (>2 cm) are managed with percutaneous nephrolithotomy (PCNL), which has a good stone free rate (SFR) but a relatively high incidence of major complications. We reviewed the literature for the use of flexible ureterorenoscopy (FURS) for the management of these stones.

METHODS: A systematic review was done from 1990 to April 2014 for all English language articles reporting on a minimum of 10 patients for stones >2 cm in size (done by 2 reviewers independently).

RESULTS: A total of 378 articles were identified and after screening for the titles (53) and abstracts (28), 13 papers (784 patients) were selected for inclusion. The male to female ratio was 3:2, with a mean age of 54 years (16–86 years). With a mean stone size of 2.8 cm and the mean operating time of 93 minutes the SFR was 84% (1.7 procedures/patient). Access sheath was used in a majority of studies. The overall complication rate was 7.5% (n = 59) of which 2.8% (n = 22) were major complications (subcapsular haematoma-6; sepsis/pyelonephritis-5; perforation-5; steinstrasse-5). Minor complications included fever (n = 17), UTI (n = 5) and haematuria (n = 8).

CONCLUSIONS: Flexible ureterorenoscopy for large renal stones in the modern era has good SFR and small risk of major and minor complications, which is lower than the alternative treatment (PCNL) for these stones.

SOURCE OF FUNDING: Nil

MP20-21 CAN DAY-CASE URETEROSCOPY (URS) RATES FOR RENAL OR URETERIC STONES INCREASE WITH THE USE OF A PRE-OPERATIVE/ANESTHETIC PROTOCOL AND FOLLOWING WHO (WORLD HEALTH ORGANIZATION) CHECKLIST? RESULTS FROM A UNIVERSITY TEACHING HOSPITAL

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INTRODUCTION AND OBJECTIVES: With an increase in the number of URS there is a general need of more day-case procedures. We look at our day-case rates for all URS done over a 2-year period.

METHODS: All patients having elective URS without pre-existing sepsis were included from March 2012-Feb 2014. A pre-operative/anaesthetic protocol was used with paracetamol (1 gm) along with ibuprofen (400 mg) orally given pre-operatively. General anaesthetic using a spontaneous breathing technique and laryngeal mask airway was used. Intraoperative analgesia was provided with intravenous (iv) fentanyl and morphine (for longer more stimulating procedures). Antibiotic prophylaxis as per team briefing, and WHO checklist was followed. All patients received 500–1000 ml of intravenous crystalloid, single dose of ondansetron and active patient warming. Intraoperative analgesia was given as required with iv morphine/oramorph or tramadol. Fluid/diet intake was encouraged and patients were advised to take regular paracetamol and ibuprofen for 3 days post-operatively.

RESULTS: 237 procedures were done in this period with 79% (187) patients discharged within 24 hours and overall mean hospital stay of 0.5 days (0–20 days). The mean and overall stone size was 8.5 mm and 12 mm respectively, mean operative time of 55 minutes and a stone free rate (SFR) of 94%. Ten percent (n = 25) had a positive pre-operative urine culture. The overall complication rate was 5% (n = 13) of which there were 4 patients each with UTI, urosepsis and stent related pain with one urinary retention.

CONCLUSIONS: Our protocol can be successfully used to increase the day-case rates and reduce hospital stay for URS procedures with good clinical outcome.

SOURCE OF FUNDING: Nil

MP20-22 THE EFFECT OF SOLIFENACIN IN IMPROVING PAIN AND LOWER URINARY TRACT SYMPTOMS BY IN-DWELLING URETERAL STENT: A RANDOMIZED CONTROLLED STUDY

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INTRODUCTION AND OBJECTIVES: Ureteral stents after Ureteroscopic surgery are often necessary to provide adequate urine passage and for other purposes. Unfortunately, pain and lower urinary tract symptoms are often associated with stents. Our goal is to determine whether solifenacin can relieve such symptoms.

METHODS: A total of 70 patients scheduled for unilateral retrograde ureteroscopy with stent placement. Patients were randomized between placebo and solifenacin 5 mg medication group, and investigators and patients were blinded to the randomization scheme. To evaluate pain and lower urinary symptoms, patients were asked to complete Visual analogue scale for pain, OABSS, IPSS and voiding diary on 7 days and 14 days after the procedure. To minimize the impact of LUTS caused by ureter stone, Patients were asked to completed OABSS and IPSS by their memory of 1 month ago for baseline status.

RESULTS: Of 70 patients who provided consent, 69 successfully completed the study. One patient was excluded from study after obtaining consent due to severe dry mouth. There were no significant differences between the placebo and vescicare arms regarding stent type, procedure complications and baseline questionnaire results. When comparing post-procedure questionnaire results, patients in the solifenacin arm reported less overall pain (2.0735 vs 3.6447, p = 0.0017 in 1 week, 2.3143 vs 3.2237 p = 0.0488 in 2 weeks). There was no significant difference in change of OABSS, number of micturition, IPSS score, narcotics use, as reported in patient medication logs.

CONCLUSIONS: Although Solifenacin did not improve objective parameters for LUTS, it improved the patient’s subjective pain associated with ureteral stents.

SOURCE OF FUNDING: Astellas Pharma Korea. Inc.

MP20-23 THE ASSOCIATED FACTORS FOR URETERAL-STENT-RELATED SYMPTOMS AFTER URETEROSCOPIC LITHOTRIPSY– A PROSPECTIVE STUDY

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INTRODUCTION AND OBJECTIVES: Many patients experience ureteral-stent-related symptoms after ureteral stent indwelling. Factors other than stent length were seldom identified.
In the present study, we prospectively identified the associated factors for ureteral-stent-related symptoms.

METHODS: Patients receiving unilateral ureteral stent indwelling after ureteroscopic lithotripsy were prospectively included. Patients with perioperative complications, pregnancy, pelvic tumors, urological anatomic abnormalities, or history of pelvic radiation were excluded. International Prostate Symptoms Score (IPSS) and Overactive Bladder Symptoms Score (OABSS) were obtained before surgery and before cystostoscopic removal of stents. >20% increase in scores was defined as deterioration. Hematuria or pain was considered frequent when it occurred more than half of the voiding times. Pearson’s chi square test and logistic regression test were used for statistic analysis.

RESULTS: From 2013/7/1 to 2014/4/28, a total of 100 patients were included. 67% were males. Mean age was 60.0 ± 12.6 years. 57.1% and 54.3% experienced deterioration in total IPSS and storage subscore respectively. Severe OABSS (>11) was reported in 16.1% patients. Univariate and multivariate analysis showed that age younger than 60 years was associated with deterioration in total IPSS (p=0.009) and storage subscore (p=0.015). Right side stent indwelling was related to poorer quality of life (p=0.008). Overweighed patients reported severe OABSS (p=0.022) and hematuria (p=0.005) more frequently. Significant pyuria on postoperative urinalysis was associated with frequent hematuria (p=0.01) and flank pain (p=0.043).

CONCLUSIONS: Patients who are younger than 60 years old, overweighed, or undergoing right side indwelling may be prone to ureteral-stent-related symptoms. Pyuria may also play a role in development of hematuria and flank pain.

SOURCE OF FUNDING: nil

MP20-24 URETERAL STONES: CORRELATION BETWEEN LOCATION SHAPE AND OUTCOME

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INTRODUCTION AND OBJECTIVES: Purpose: To view ureteral stones in 3 planes of measurement and look for a trend in stone size shape location and outcome.

METHODS: Materials and Methods: From 2007 to 2010, we collected all patients with ureterolithiasis diagnosis on non-contrast CT (NCCT). The proximal vs. distal stone location, delineated by iliac vessels, was noted and stone dimensions were measured in 3 planes (axial, coronal and sagittal). The shape of the stone, as expressed by the maximal difference in dimension, was recorded as both an absolute value and as a relative change (percentage).

RESULTS: Results: There were 137 patients average age 55 years □ 13.7 SD. Seventy two stones were proximal and 65 distal. Comparing proximal stones vs. distal, no significant difference was found in age or side of impaction. Proximal stones were larger than distal for each plane (axial, P=0.01; coronal, p=0.0001; sagittal, p=0.00002). Increasing age correlated with larger stones for all planes (axial, r=0.23, p=0.006; coronal, r=0.22, p=0.008; sagittal, r=0.26, p=0.002). Multivariate analysis found both location and age independently correlated with increased size (p=0.0001 and p=0.003, respectively). Elongated stone shape was associated with proximal stones, as compared to distal stones (p=0.004 and p=0.004, respectively), and correlated with increasing age (r=0.18, p=0.04). Outcome update will be provided.

CONCLUSIONS: Conclusion: Proximal stones are more likely to be larger and elongated compared to distal stones. Size of stone tends to increase with patient age. These observations are independent of each other.

SOURCE OF FUNDING: None

MP20-25 THE USE OF A NOVEL REVERSE THERMOSENSITIVE POLYMER TO PREVENT URETERAL STONE RETROPULSION DURING INTRACORPOREAL LITHOTRIPSY: AN INITIAL EXPERIENCE.

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INTRODUCTION AND OBJECTIVES: Use of “BackStop” was evaluated in 12 patients between March 2013-April 2014. Eligible subjects were consenting adults with a single, radiopaque stone in the proximal ureter (defined as the upper two-thirds, above the iliac vessels crossing) for which ureteroscopic lithotripsy was indicated.

METHODS: The primary efficacy end point was the presence or absence of retropulsion. A secondary efficacy end point was the stone-free rate at follow-up. An additional secondary efficacy end point was the need for additional procedures to treat any residual stones resulting from migration. The ease of deployment and any specific difficulty encountered in the use of Backstop gel was observed and documented etc.

RESULTS: In all the patients after gel deployment, stone fragmentation with holmium laser was easy with no added difficulty. None of the patients required any additional instrumentation such as basket deployment or graspers for stone retrieval intra-op. No difficulty encountered in dissolution of gel after the laser lithotripsy and intra-op retrograde pyelogram (RPG) did not show any evidence of extravasation. None of the patients were stented post-op.

CONCLUSIONS: Backstop appears to be feasible, safe and easy to deploy and use and definitely aids in ureteroscopy for proximal ureteric stones. The gel does not interfere with any energy modality as it has no mechanical elements. Larger series with longer follow-up are required to truly understand the nuances of this useful device. An area of research is to see if it’s possible to better delineate the column of contrast intra-op and delay its disintegration to allow longer operative times.

SOURCE OF FUNDING: Nil

MP20-26 WILL THE RISKS OF POSTOPERATIVE INFECTION BE INCREASED AFTER URETEROSCOPIC LITHOTRIPSY FOR PATIENTS WITH MILD PYURIA BEFORE THE OPERATION?

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INTRODUCTION AND OBJECTIVES: We evaluated whether the risks of postoperative infection will be increased in patients with mild pyuria before the operation in a prospective study.
METHODS: We prospectively enrolled patients receiving URS from 2011/5 to 2014/1. The patients with normal urine routine (sediment WBC ≤ 5/HPF) before URS were assigned as control, and those with mild pyuria (sediment 5/HPF < WBC ≤ 50/HPF) as experimental group. Febrile UTI, patients < 18 years, pregnant, and urine sediment WBC > 50/HPF were excluded. All patients received same protocol of preoperative and postoperative antibiotics. Pre-, intra-operative, and post-operative urine routine and culture were collected. Peri-operative data were compared. Post-operative pyuria, febrile episodes, and percentage of emergency room visits were also compared.

RESULTS: 121 patients were enrolled (experimental: 45; control: 76). Mean age: 56.3 and 55.2 years, respectively. Patient BMI, stone laterality, stone location, and percentage of male patients were similar. The mean stone size: 0.84 cm vs. 0.73 cm (p = 0.231). The operation time: 58 vs. 50 min (p = 0.013). Stone free rate was 90.8% vs. 92.6% (p = 0.334). Five out of 20 patients had positive pre-operative urine culture, two were E Coli, one was coagulase negative staphylococcus group, and two Gram positive coccus. Two out of 66 patients had positive intra-operative urine culture: one pseudomonas, the other enterococcus species. Two patients (4.4%) in the experiment group and none in control group had post-operative fever but didn’t reach statistical significance (p = 0.064).

CONCLUSIONS: The incidence of postoperative fever increased in patients with mild pyuria before URS but didn’t reach significance compared to patients with sterile urine.

SOURCE OF FUNDING: Nil

MP20-27 CLINICAL FACTORS PROLONGING THE OPERATIVE TIME OF FLEXIBLE URETEROSCOPY FOR RENAL STONES: A SINGLE-CENTER ANALYSIS

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INTRODUCTION AND OBJECTIVES: The operative time is an important perioperative factor associated with postoperative complications. Few studies, however, have investigated factors that affect the operative time of flexible ureteroscopy (fURS). In the present study, clinical factors influencing the operative time were analyzed.

METHODS: Patients with renal stones treated successfully with fURS and holmium laser lithotripsy between January 2010 and December 2013 at a single institute were retrospectively evaluated. The stone-free (SF) status was determined three months after surgery using non-contrast computed tomography (NCCT). Correlations between possible factors and the operative time were analyzed using a multivariate logistic regression model with backward selection.

RESULTS: There were 233 eligible procedures to show a SF status after fURS. The mean operative time was 73.96 ± 31.99 minutes. In addition, there were significant differences between the procedures with an operative time of less and more than 90 minutes in terms of the following clinical factors: sex, body height, stone volume, Hounsfield units (HU), size of the ureteral access sheath and experience of the surgeon. A multivariate assessment revealed four independent factors influencing the operative time of fURS (P < 0.05): the stone volume (P < 0.001), experience of the surgeon (P < 0.001), HU (P = 0.014) and presence of a preoperative stent (P = 0.027).

CONCLUSIONS: A larger stone volume, lower level of experience of the surgeon, larger HU and lack of preoperative stent placement were identified as parameters prolonging the duration of surgery. To our knowledge, this is the first report to identify independent factors that influence the operative time of fURS.

SOURCE OF FUNDING: None

MP20-28 EXPERIENCE OF PREVENTING FORGOTTEN DOUBLE J URETERAL STENT IN A HIGH-VOLUME-SERVICE MEDICAL CENTER–AN AUTO-REGISTRATION MONITOR SYSTEM

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INTRODUCTION AND OBJECTIVES: Double J ureteral stent is frequently used in urological practice. The traditional monitoring on stent removal relies on manual registration (MR). However, MR is prone to have inevitable mistakes due to human nature. Furthermore, MR is very difficult to cover all stent placements in a big busy medical center, like ours, with high volume service in multiple operation rooms locating in several areas of the hospital. Hence, we developed a computerized auto-registration monitor system (ARMS) to track the placement and removal of ureteral stents.

METHODS: The system is designed to tie closely with the billing system, allowing maximal automation. Once a stent is utilized and charged, a stent “episode” is created in the ARMS. When the stent is removed and the charge for the procedure is issued, the stent episode for that stent is removed automatically. We assess the value of ARMS and further analyze the causes of forgotten ureteral stents.

RESULTS: A total of 4378 patients were registered in the ARMS between March 2010 and January 2014. In 4378 patients registered in ARMS, 3853 (88.0%) were automatically detected to have their stents removed by ARMS at 3 months following stent placement. We contacted 525 (12.0%) patients whose stents were not registered being removed at 3 months. We found that 48 (1.1%) patients underwent stent removal at other hospitals; 178 (4.1%) patients did; 278 (6.3%) patients knew that they had ureteral stents inserted and were urged to come back for stent removal. 21 patients (0.5%) did not know the existence of the stents. All these 21 patients were non-urological patients having stent placed during urological consultation in operating room.

CONCLUSIONS: Our study has shown the ARMS is very valuable in: (1) thorough registration of stent placement; (2) saving 87.8% manpower for tracking stent removal; (3) detecting and preventing forgotten stents. The results also prompt us to re-examine and re-structure the working algorithm for stent placement and removal, especially for the non-urological patients.

SOURCE OF FUNDING: None

MP20-29 FLUORO-LESS RETROGRADE INTRARENAL SURGERY WITH A URETERAL ACCESS SHEATH MODIFIED WITH A SCALE MARKER: A RANDOMIZED AND FEASIBILITY TRIAL

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MP21 ENDOUROLOGY: PCNL 3

INTRODUCTION AND OBJECTIVES: To evaluate the feasibility of the ureteral access sheath modified with a scale marker (sUAS) in reducing fluoroscopy guidance time during retrograde intrarenal surgery (RIRS).

METHODS: A technique was devised to allow sUAS placement with less fluoroscopy guidance. In a clinical trial, 100 consecutive patients undergoing RIRS were randomly assigned into two groups to compare the feasibility of the sUAS (group 1, n = 50) with the traditional nonscale UAS (tUAS) (group 2, n = 50), with respect to the X-ray exposure time as well as the outcome of RIRS.

RESULTS: There was no significant difference in age, gender, stone locations and stone size (16.4 ± 6.2 vs. 15.3 ± 6.3 mm), as well as the initial stone free rate (74% vs. 78%) and complication rate (10% vs. 8%) between the two groups. All 50 sUAS placements were performed successfully without the use of all-the-way tracking of fluoroscopy. The mean placement time and fluoroscopic time for UAS placement in group 1 and group 2 were 65.5 ± 7.2 seconds vs. 54.6 ± 4.4 seconds, and 4.9 ± 1.0 seconds vs. 31.9 ± 3.3 seconds, respectively (p < 0.001), respectively.

CONCLUSIONS: Compared to the use of tUAS, the sUAS placement with less fluoroscopic guidance is feasible and maintains a similar stone-free and complication rates during RIRS. It allows reduced X-ray radiation exposure for patients and surgeons when patients require an UAS placement.

SOURCE OF FUNDING: None

MP20-30 CONTEMPORARY TRENDS IN HOSPITALIZATION RATES DUE TO STONE DISEASE IN A DEVELOPING COUNTRY: INFLUENCE OF AGE, GENDER, OBESITY AND INCOME

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INTRODUCTION AND OBJECTIVES: To assess the population characteristics and rates of hospitalization for upper urinary tract calculi in Brazil over the past 15 years.

METHODS: we performed a retrospective database analysis of hospitalization rates in the Brazilian public health system between 1998–2012 (primary diagnosis code of renal/ureteral calculus at admission). Patients managed in an outpatient basis or those from private care were not considered. After adjustment for total number of habitants, data was stratified by gender and age. All 5 regions of the country were analyzed separately. Correlations between hospitalization, obesity and total income were accessed.

RESULTS: the number of stone-related hospitalizations increased 15.7% but when adjusted for the Brazilian population it remained constant: 0.03% (1998), 0.04% (2012) (fig.1A). Male:female proportion was also stable: 50:50% (fig.2A). There was a significant growth in the 40–59 (+20.8%) and 60–79 years-old populations (+13.1%), a significant decrease I the ≥80 (−29.5%) and 20–39 years-old cohorts (−4.2%) (fig.2B). The Midwest region had the highest hospitalization prevalence (0.046%-0.049%) and the highest growth rate (+6.2%; fig.1F). The Northeast region showed the lowest hospitalization rates (0.022% in 1998 and 2012), which remained stable (−2.5%; fig.1C). The correlation of hospitalization rate with income and obesity rate was not significant; conversely, a positive significant correlation was found between income and obesity.

CONCLUSIONS: The prevalence of stone disease requiring hospitalization in Brazil remains stable, with a balanced proportion between males and females. There is a tendency towards increased hospitalization in individuals with 60–80 years old. Obesity and income have a more pronounced correlation with each other than with stone disease.

SOURCE OF FUNDING: None

MP21 ENDOUROLOGY: PCNL 3

MP21-01 PEDIATRIC PCNL IN MALROATED KIDNEY

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INTRODUCTION AND OBJECTIVES: Percutaneous nephrolithotomy (PCNL) in malrotation kidney is challenging. We report pediatric PCNL in 7 kidneys with congenital malrotation.

METHODS: A total of 7 children (5 boys and 2 girls) with mean age of 4.7 years (range 2–9 years) with malrotated kidney were offered PCNL from April 2010 to June 2013. The stones were single stone pelvis in 6 cases and associated with lower calyceal stone in one cases. The mean stone size was 2.8 cm (range 2–4). A sheathless 19 fr. (Richard wolf rigid nephroscope) was used in all cases. The tract is dilated for 24 fr. in all cases using the amplatz dilators set. Any intraoperative or postoperative complications were recorded.

RESULTS: Complete clearance was achieved in all renal units in a single session by a single lower calyceal tract. One child underwent tubeless PCNL. The mean operating time for PCNL was 51.5 minutes (range 32–76) and the mean hospital stay was 2.1 days (range 1–3). No intraoperative complications were recorded in the form of perforation or bleeding. The average decrease in hemoglobin was 0.8 g/dL (range 0.2–1.5). No postoperative complications were recorded in the form of bleeding or colonic injury apart from one child who developed post-PCNL fever that respond to medical treatment with 48 hours.

CONCLUSIONS: Although PCNL in pediatric malrotated kidneys is difficult situation, it gives excellent results, if performed carefully by an experienced endourologist.

SOURCE OF FUNDING: None
**INTRODUCTION AND OBJECTIVES:** PCNL for solitary kidneys may lead to significant morbidity because of potential bleeding, incomplete stone clearance, or deterioration in renal function. We report our experience of PCNL in solitary kidneys.

**METHODS:** From January 2009 to December 2013, 31 patients with solitary kidneys were subjected to PCNL. The solitary status was congenital in 7 (22%); due to opposite nephrectomy in 15 (48%); and nonfunctional contralateral kidneys in 9 (29%). The mean creatinine was 1.9 ± 1.2 (0.4–6.7) mg/dL. Stones and complications were classified using the Guy Stone Score and Clavien-Dindo Grading system, respectively. The stone-free status was determined with a postoperative CT scan. The serum creatinine and hemoglobin were monitored at regular intervals. The mean follow-up in was 21.3 ± 12.26 (4–48) months.

**RESULTS:** Mean age was 54 ± 14 (22–74) years. Male to female ratio was 1:2.1. Stones were classified as Grade 1 in 54.8% (17/31), Grade 2 in 16.1% (5/31), Grade 3 in 6.4% (2/31) and Grade 4 in 22.5%. Mean operative time was 151 ± 36.7 (90–230) minutes. Nineteen (59.3%) had no complications, 4 (12.9%) Grade 1 (fever), 6 (19%) Grade 2 (blood transfusion) and 1 (3%) Grade 3 (dialysis, sepsis and death) complications, while 30/31 (96%) had stable or improved renal function. The mean change in creatinine was 0.6 ± 1.0 (0.1–3.5) mg/dL. Mean drop in hemoglobin was 1.6 ± 0.89 (0.5–3.8) g/dL. Complete stone clearance was 90.3% (28/31).

**CONCLUSIONS:** PCNL is effective and safe for solitary kidneys. This minimally invasive procedure achieves a high stone clearance rate with acceptable low morbidity and mortality.

**SOURCE OF FUNDING:** None

**INTRODUCTION AND OBJECTIVES:** The aim of this work is to evaluate the utility of Guy’s Stone Score (GS) and Nephrolithometric Nomogram of CROES (NNC) based on CT scan findings for predicting PCNL outcomes.

**METHODS:** Retrospective analysis of all cases of PCNL performed in our center. Using CT scan results, all cases were classified according GS and the NNC. Outcomes and complications were analysed.

**RESULTS:** Since September 2008 to June 2013, were performed 81 PCNL. Of them, 24.7% were classified as GS1, 4.9% as GS2, 44.4% as GS3 and 25.9% as GS4. The authors found differences in mean length of calculus (GS1 = 22.8 mm; GS2 = 29.4 mm; GS3 = 36.7; GS4 = 47.1 mm, p < 0.0001), and in the mean of operative time (GS1 = 159.4 min.; GS2 = 126 min.; GS3 = 139.5 min.; GS4 = 174.7 min. p = 0.013). The success rate after first PCNL was 50% in GS1, 100% in GS2, 52.8% in GS3 and 47.6% in GS4, p = 0.169. The global success rate after adjuvant therapies was 85% in GS1, 100% in GS2, 91.7% in GS3 and 76.2% in GS4, p = 0.359. The rate of relevant complications was 5% in GS1, 0% in GS2, 8.3% in GS3 and 19% in GS4. Using the NNC, the cases were divided into two groups (A: < 60% vs. B: ≥ 60% chance of treatment success). Only calculus length had statistically significant difference (A: 48.8 mm vs. B: 26.9 mm, p = 0.0001). Complications rate was A = 16.5% vs. B = 4.5%, p = 0.084. Success rate after first PCNL was A = 48.6% vs. B = 56.8%, p = 0.508. The global success rate after adjuvant therapies was 75.7% in Group A vs. 95.5% in Group B, p = 0.011.

**CONCLUSIONS:** The GS and NNC are good instruments for predicting PCNL outcomes. The GS4 and the Group of

**SOURCE OF FUNDING:** None
INTRODUCTION AND OBJECTIVES: Standard PCNL has undergone many variations from tubeless to totally tubeless. Each variation promises certain advantages and is hindered by some limitations. We assessed tubeless versus stentless PCNL and compared their advantages and limitations.

METHODS: 257 patients underwent single stage PCNL in the last 3 years. They were divided into either tubeless (Group 1 = 145) or stentless (Group 2 = 112). Groups were compared for stone load, location, site and number of punctures, tract size and clearance. Group 1 patients had D-J stent kept but no PCN tube and in Group 2 PCN tube was placed but no D-J stent. Post operatively they were assessed for morbidity due to either stent (D-J stent or PCN tube) like pain, soakage at PCN site.

RESULTS: Patients with staghorn or complex calculus, pus on puncture, bleeding or pelvic perforation and deranged renal function were excluded. In Group 1–139/145 (95.8%) and in Group 2 – 105/112 (93.7%) had stone clearance on post-operative x-ray. There was no difference in the stone burden, location, number of punctures, tract size and hemoglobin drop among the two groups. The duration of stay was more in patients with PCN in situ by around 8 hours along with analgesic need. D-J stent related discomfort was seen in 45/145 patient with spontaneous stent expulsion in 3 patients. Prolonged soakage from the PCN site was seen in 21 patients in Group 2.

CONCLUSIONS:

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: To evaluate the complications in percutaneous nephrolithotomy (PCNL) using Clavien-Dindo Grading System (CDGS) and to analyze the risk factors for complications in PCNL.

METHODS: From January 2003 to April 2012, 2254 cases with calculus of upper urinary tract underwent PCNL in our center. The complications in PCNL were evaluated by the CDGS, and the risk factors for complications in PCNL were analyzed using multiple logistic regression analysis.

RESULTS: Among 591 (26.22%) cases with complications evaluated using the CDGS, grades I, II, IIIa, IIIb, IVa, IVb and V were 8.07%, 14.77%, 1.86%, 0.40%, 0.75%, 0.22% and 0.13%, respectively. Hemorrhage was the most common complication, and followed by post-operative fever. Multiple logistic regression analysis showed that the relevant risk factors of grade II and higher complications mainly included body mass index (BMI), pre-operative hemoglobin levels, diabetes mellitus, degrees of renal insufficiency and hydronephrosis, staghorn calculi, calculi surface area, intra-operative amounts of channels, staging operation, operation time and styles of lithotripsy. There were 454 cases with staghorn calculi in a total of 2254 cases. The rank sum test showed that complications incidence of PCNL for the staghorn calculi was obvious higher than that of the others (Z = -4.23, P = 0.000).

CONCLUSIONS: CDGS may objectively evaluate complications of PCNL. BMI, Pre-operative hemoglobin levels, diabetes mellitus, degrees of renal insufficiency and hydronephrosis, staghorn calculi, calculi surface area, intra-operative amounts of channels, staging operation, operation time and styles of lithotripsy are the risk factors for grade II and higher complications of PCNL. Complications incidence of PCNL for the staghorn calculi is obvious higher than that of the others.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: The most common complication of percutaneous nephrolithotomy (PCNL) is bleeding which amount predicted by presumption only. This study was aimed to identify predictive factors of PCNL blood loss and evaluate currently transfusion practice.

METHODS: We conducted prospective study in our hospital during October 2012-October 2013. PCNL was randomly performed by two endourology consultant. Adult patients with stone at pyelum sized >20 mm, inferior calyx >10 mm, or staghorn were included; those with coagulopathy, under anti-coagulant treatment or open conversion were excluded. Complete blood count were taken at baseline and during 12, 24, 36, 72-hour post-operatively. Total blood loss (TBL) was calculated considering body surface area, sex-adjusted estimated blood volume, and hematocrit level shifting. Linear regression was used to identify predictive factors of TBL.

RESULTS: Eighty-five patients were enrolled (statistical power of 0.8). Mean TBL was 560.92 ± 428.43 ml. There was no TBL difference between the two surgeons. Stone burden was the most influencing predictive factors (p < 0.05) for TBL. We formulated TBL (ml) = 153.379 + 0.229 stone burden (mm2) + 0.203 baseline serum hematocrit (%). Amount of 87.1% patients did not receive peri-operative transfusion, 3.5% received intra-operative transfusion, 7.1% post-operative, 2.3% received both intra and post-operative thus giving cross-matched transfusion ratio of 7.72. Mean peri-operative blood unit transfused was 356.00 ± 145.88 ml.

CONCLUSIONS: Stone burden was the most influence predictive factors for PCNL blood loss. Amount of blood requested and cross-matched is much greater than actual blood loss. An appropriate blood order would reduce costs and useless consumption.

SOURCE OF FUNDING: Cipto Mangunkusumo Hospital Operational Research Grant 2013.
INTRODUCTION AND OBJECTIVES: Recently, Endoscopic Combined Intrarenal Surgery (ECIRS) has been reported as a useful approach for treating large renal stone. There is, however, no previous study to predict the outcome of the ECIRS preoperatively. In the present study, we aimed to identify the preoperative predictors of the ECIRS outcome for the treatment of renal stone.

METHODS: We retrospectively analyzed 275 single-session ECIRS procedures in modified Valdivia position for the treatment of renal stones, performed between April 2010 and March 2014 in Ohguchi Higashi General Hospital. The successful outcome of ECIRS was defined as the absence of stones or residual fragments less than 4 mm. The success rate was 67.3%. Preoperative factors analyzed included preoperative stone status obtained from NCCT and patients characteristics. Multivariate logistic regression model with backward selection was used to evaluate the relationship between preoperative factors and successful outcome following ECIRS.

RESULTS: Multivariate assessment revealed eight independent predictors of the ECIRS outcome (P < 0.05); stone burden (P < 0.001), number of renal calyx with the stone (P = 0.022), stone position (P = 0.001), presence of staghorn stone (P = 0.016), hydronephrosis (P = 0.049), spinal injury (P = 0.044), presence of stone in both upper and middle calyx (P = 0.014), and the vertical distance between the tip of twelfth thoracic rib to anterior superior iliac spine (P = 0.044).

CONCLUSIONS: To our knowledge, this is the first report to identify the independent predictors of the ECIRS outcome.

SOURCE OF FUNDING: None

MP21-09 COMPLICATIONS OF PERCUTANEOUS NEPHROLITHOTOMY CLASSIFIED BY THE CLAVIEN GRADING SYSTEM
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INTRODUCTION AND OBJECTIVES: Although percutaneous renal surgery is less invasive than an open procedure, complications may occur. In this current study, we will evaluate major and minor complications of percutaneous nephrolithotomy (PCNL) and their management in our consecutive cases.

METHODS: We reviewed medical records of 638 patients who had undergone PCNL in our center from January 2009 to August 2013. The demographic data, stone parameters and PCNL complications were evaluated. Multiple parameters were evaluated for their association with PCNL complications.

RESULTS: The study consisted of 638 patients, including 390 (61.1%) men and 428 (38.9%) women, with the mean age of 56 years (range: 10 months to 90 years). The mean duration of the operation was 110 minutes (range: 44 mins to 409 mins) and the median postoperative hospital stay was 4.45 day (range: 1 to 266 days). Complications classify in Clavien score system:Grade 1:22(3.44%), Grade 2:24(3.76%), Grade 3:7(1.09%), Grade 4:25(3.91%), Grade 5:4(0.62%).

CONCLUSIONS: PCNL complications varied, but most are not serious. The longer operation time and higher ASA score prompted greater risk of serious postoperative complications. Percutaneous nephrolithotomy has low complication rate in experienced hands. Proper management may reduce subsequent morbidity.

SOURCE OF FUNDING: None

MP21-10 IN VITRO COMPARISON OF DIFFERENT LITHOTRITES REGARDING THEIR EFFICACY OF STONE CLEARANCE
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INTRODUCTION AND OBJECTIVES: Several ultrasonic, pneumatic or electro-mechanical lithotrites are used during PCNL for fragmentation and removal of renal calculi. In an in vitro setup we compared different lithotrites or combinations (CyberWand/Olympus, Lithoclast Master/EMS, LUS2/Olympus, Lithobreaker/EMS) regarding their efficacy of lithotripsy and stone removal.

METHODS: Bego stone phantoms (14 x 14 mm) were placed in a plastic funnel. The funnel was fixed in a 0.9% NaCl-filled basin. Now lithotripsy (n=5) was performed through a 26 CH nephroscope (Storz) with different lithotrites. Time of lithotripsy until total stone removal was determined. Balanced irrigation/suction flow (400 ml/min) was guaranteed. Using Lithoclast Master, after initial pneumatical lithotripsy pneumatic probe was disconnected and fragments removed only with ultrasonic probe (Vario). In another setup 2:30 min disintegration was performed with Lithobreaker, following stone removal was performed with LUS2. Additionally Lithotripsy was performed with LUS 2 only and CyberWand. Mean and standard deviations were computed and statistical analysis was performed.

RESULTS: Mean time until total removal of fragments was 217 sec for Lithoclast, 335 sec for CyberWand and 390 sec for LUS2. The initial disintegration with Lithobreaker did not advantage the results of the LUS2. The outer probe of CyberWand did brake often, probes of Lithoclast and LUS2 did not show any wear.

CONCLUSIONS: In this in vitro setup Lithoclast and CyberWand performed the fastest stone removal. Disadvantage of Cyberwand is the low probe durability. Additional disintegration with Lithobreaker does not advantage the efficacy of LUS2.

SOURCE OF FUNDING: EMS - Electro Medical Systems.

MP21-11 THE LOACH GUIDE WIRE COMBINED WITH UROSkop ACCESS: SUCCESSFUL GUARANTEE OF AVOIDING SEVERE BLEEDING DURING PERCUTANEOUS NEPHROLITHOTOMY
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INTRODUCTION AND OBJECTIVES: To identify the contribution of loach guide wire combined with UROSkop Access in percutaneous nephrolithotomy (PCNL).
METHODS: We retrospectively analyzed 168 patients who underwent PCNL surgery under the guide of ultrasound combined with X-ray. We clarified the success rate of loach guide wire placed into renal collecting system after successful puncture confirmed by UROSkop Access. The reasons why guide wire failed to enter the renal collecting system were discussed.

RESULTS: No severe bleeding appeared in all 168 patients during operation or three days after surgery. Of 168 patients, the rate of correct placement of loach wire after successful puncture was 88.7% (149/168). 19 patients encountered failure. The reason of failure in four patients was the guide wire straying into the blood vessels. The failure reason of other 15 patients (in three patients twice the failure occurred) was the guide wire placed around the kidney. All cases which encountered failed placement undertook repeated puncture which avoided blind dilation resulting in kidney damage and severe bleeding.

CONCLUSIONS: The loach guide wire and UROSkop Access played important roles in PCNL and they were successful guarantee of avoiding severe bleeding during PCNL.

SOURCE OF FUNDING: No
stone located in kidney ureter or bladder. We will introduce an innovation usage of laser lithotripsy in canalization of PCN tube.

METHODS: Under local anesthesia or infusion anesthesia, patient was put a lateral decubitus position. Pulse laser with 200 u or 500 u fiber and the energy of 0.8 J was used to drilling a hole under fluorescent guidance. When the new tract is created and guide-wire is inserted into renal pelvis successfully. The old pigtail can be remove and a new one is inserted along the guide-wire.

RESULTS: We have two cases with obstructed pigtail tube which is difficult changing. The guide-wire can not insert into renal pelvis due to stone obstruction or steep angulation. The problem is resolved after last lithotripsy to create a patent tract and make a now hole in the pigtail. The procedure prevents to inset a new pigtail by puncture a new tract.

CONCLUSIONS: Laser lithotriptors can be used to create a new side hole or split the stone in lumen of obstructed pigtail tube. The old obstructed pigtail tube can be removed after insertion a guide-wire into renal pelvis, then changing a new one is feasible as usual procedure without puncture a new tract to insert pigtail tube.

SOURCE OF FUNDING: Nil

MP21-16 THE EFFICACY OF PERITUBAL ANALGESIC INFILTRATION IN POSTOPERATIVE PAIN FOLLOWING PERCUTANEOUS NEPHROLITHOTOMY – A PROSPECTIVE RANDOMIZED CONTROLLED STUDY

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INTRODUCTION AND OBJECTIVES: To study the efficacy and safety of peritubal infiltration of 0.25% bupivacaine in postoperative pain following percutaneous nephrolithotomy with percutaneous nephrostomy tube in general PCNL patients and PCNL patients with supracostal renal access.

METHODS: The 105 patients who underwent PCNL were randomized into two groups, 53 patients receiving peritubal analgesic infiltration (study group) and 52 patients as the control group. Of the study group, 0.25% Bupivacaine was infiltrated into the nephrostomy tract 10 ml each at 6 and 12 o’clock. Postoperative pain as the primary outcome was assessed by using 0–10 point visual analogue scale at 1, 4, 12, 24 and 48 hours postoperatively. The secondary outcomes were the total postoperative morphine usage in 24 hours, time of the first analgesic demand and adverse effects.

RESULTS: The average VAS pain at 1 and 4 hours after the operation in the study group were 4.64 + 2.73 and 3.41 + 2.28 compared with 7.11 + 2.33 and 4.40 + 2.21 in the control group (P = < 0.001 and 0.026), respectively. Of supracostal access; the average VAS pain at 1 hour after operation in the study group was 5.36 + 2.87 compared with 7.22 + 2.15 in the control group (P = 0.018). Doses of morphine usage for controlling postoperative pain was 4.92 + 2.96 mg in study group and 8.81 + 6.36 in control group (P = 0.012).

CONCLUSIONS: The peritubal local anesthetic infiltration with 0.25% bupivacaine is effective in alleviating immediate postoperative pain after percutaneous nephrolithotomy. This effect leads to less early postoperative pain (Less VAS score), less number of morphine usage and longer time of first analgesic requirement.

SOURCE OF FUNDING: None

MP21-17 UPPER URETERIC STONE’S ENDOSCOPIC TREATMENT WITH COMBINED PERCUTANEOUS NEPHROLITHOTOMY (PNL) AND RETROGRADE URETERORENOSCOPY (URS)

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INTRODUCTION AND OBJECTIVES: We herein reported upper ureteric stone treatment procedure which performed with combined percutaneous nephrolithotomy (PNL) and retrograde ureterorenoscopy (URS).

METHODS: A 64-year-old woman presented with long-standing right flank pain and fever. A plain abdominal radiography, ultrasonographic examination and non-contrast computerized tomography scan revealed a grade 3 hydroureteronephrosis on the right kidney, 25 mm stone which was localized at right upper ureter also demonstrated. Because of her increased creatinin level (2.49 mg/dl) firstly nephrostomy tube was performed to her right kidney via percutaneous approach. She was kept on appropriate anti-infection, anticoagulation and best supportive care for a while before the surgical procedure. Then PNL and retrograde URS procedures were performed simultaneously for the management of her stone which was localized at right upper ureter. While her endoscopic upper ureteric stone treatment intracorporeal combined ultrasonic and pneumatic lithotripters and Holmium:YAG laser were used at the same time. Intraoperatively D-J catheter and nephrostomy tube were performed to her right ureter and right kidney. Operation was took 70 minutes, percutaneous nephrostomy removed fourth day of surgery and the patient discharged, D-J stent was removed at 4 th weeks of surgery. Patient followed for 6 months, all symptoms were resolved and normocreatininemia was found in her blood results.

RESULTS: PNL and URS can perform simultaneously for the upper ureteric stone’s endoscopic treatment without any complication. According to our oppinion this application may also provides shorter hospital stays and convalescence.

CONCLUSIONS: Combined PNL and URS are safe treatment alternative for upper ureteric stones.

SOURCE OF FUNDING: None

MP21-18 HOW USEFUL IS A NEGATIVE PREOPERATIVE URINE DIPSTICK ANALYSIS IN PREDICTING SEPSIS AFTER PERCUTANEOUS NEPHROLITHOTOMY?

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INTRODUCTION AND OBJECTIVES: A urine culture (UC) should be obtained before percutaneous nephrolithotomy (PCNL) and treated if positive. However, a number of preoperative UC may be contaminated or incorrectly stored/processed. We sought to determine if a completely negative urine dipstick analysis (UDA), negative UA or almost negative UA was sufficient to predict a low chance of postoperative systemic inflammatory response syndrome (SIRS).

METHODS: Preoperative UDA and UA were available in 291 patients. Parameters on UDA analyzed included the presence of blood, nitrites and leukocyte esterase (LE). Urine analysis included all parameters on UDA in addition to the amount of
bacteria, squamous epithelial cells, red blood cells (rbc) and white blood cells. Postoperative fevers, SIRS and intensive care unit (ICU) admission were determined. Almost negative UDA was defined as negative/trace blood, negative/nitrites, and negative/trace LE. Almost negative UA was defined as negative/trace blood, negative/nitrites, negative/trace LE, and <5 rbc. We defined postoperative SIRS as having postoperative blood cultures drawn.

RESULTS: Of negative and almost negative UDA, a single patient developed SIRS by our inclusion criteria, however on further review this patient had a negative blood culture and did not have SIRS. Ten patients (3.4%) had completely negative UA and 35 (12%) had almost negative UA. None of these patients developed SIRS, fevers or ICU admission.

CONCLUSIONS: Preoperative UDA and UA are rarely negative in patients undergoing PCNL. It appears that a completely negative UDA or UA is not associated with postoperative SIRS and may be sufficient as a preoperative screening technique for percutaneous renal surgery.

SOURCE OF FUNDING: None

MP21-19 CONTINUING ASPIRIN THERAPY DURING PERCUTANEOUS NEPHROLITHOTOMY: UNSAFE OR UN-DER-UTILIZED?

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INTRODUCTION AND OBJECTIVES: Aspirin, as an inhibitor of platelets, is traditionally discontinued prior to percutaneous nephrolithotomy (PCNL) given the concern for increased surgical hemorrhage. However, this practice is based on expert opinion only, and mounting evidence suggests holding aspirin perioperatively can be more harmful than once thought. We sought to compared PCNL outcomes and complications in patients continuing aspirin to those stopping aspirin perioperatively.

METHODS: A retrospective review was performed of 321 consecutive PCNLs done between July 2012 and March 2014. Patients were separated into two groups. The on-aspirin group consisted of patients continuing aspirin throughout the perioperative period. The off-aspirin group had aspirin held temporarily pre- and post-operatively. Surgical outcomes and complications were compared between groups.

RESULTS: Of the 321 PCNLs, 60 (18.7%) occurred in patients chronically taking aspirin. The on-aspirin group included 17 PCNLs (5.2%), while the off-aspirin group included 43 PCNLs (13.4%). There were no differences between groups in terms of operative time (77 vs 74 min, p=0.212), hemoglobin change (p=0.522), stone size (21 mm vs 22 mm, p=1.0), stone-free rate (p=0.314), median length of hospitalization (p=0.642), transfusion rate (p=0.703), or total complications (p=1.0). No patient experienced a thromboembolic event.

CONCLUSIONS: PCNL is safe in patients continuing aspirin perioperatively and does not result in more blood transfusions, angioembolization procedures, or complications. Patients with large stone burdens who are at high risk for thromboembolic events appear to be able to safely undergo PCNL without discontinuing aspirin.

SOURCE OF FUNDING: None

MP21-20 X-RAY FREE DOPPLER ULTRASOUND GUIDED PERCUTANEOUS NEPHROLITHOTOMY: A LARGE SAMPLE CASES EXPERIENCE FROM CHINA (9-YEAR MULTI-CENTER)

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INTRODUCTION AND OBJECTIVES: Introduce the 9-year experience of percutaneous nephrolithotomy (PCNL) under totally ultrasound-guided in multi-center of China performed by the same surgeon, investigate the feasibility and security of this technique.

METHODS: From September 2004 to August 2013, 8025 renal units underwent PCNL for upper urinary tract stones. Puncture site selection and channel dilation all guided only by doppler ultrasound. 1356 cases of single stone, 2817 cases of multi stones and 3852 cases of staghorn calculi. The pre- and postoperative imaging data and perioperative complications were collected to evaluate the efficacy and feasibility.

RESULTS: All patients recovered well and discharged from hospital successfully. None of the patient death. Operative time was 42 minitutus (range, 10–168), 4 patients converted to open surgery, and 2 patients lost the diseased kidney. 94(1.2%)patients received blood transfusion, 20 patients needed highly selective renal artery embolization. 15(0.19%) patients had a pleural injury. 5457(68%)cases completed by single tract, 2568(32%) cases added more tracts. The mean stone size (longest diameter) was 2.8 cm (range, 1.2–26.5). The final stone-free rate was 85.5%. Residual stones occurred mainly in patients with renal dysfunction, medullary sponge kidney and complete staghorn calculi with slim calyceal neck.

CONCLUSIONS: X-ray free doppler ultrasound guided percutaneous nephrolithotomy is feasible and safe in all cases of renal and/or upper ureteral stones. It should have a wider applicative space compared with fluroscopy in patients with abnormal kidney position and infants.

SOURCE OF FUNDING: None

MP21-21 PERCUTANEOUS NEPHROLITHOTOMY (PCNL) IN CHILDREN UNDER AGE 15

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INTRODUCTION AND OBJECTIVES: Nowadays, Renal calculi is common problem in children. ESWL is the first choice in this age group, but sometimes other interventions may indicated. In such cases PCNL seems the less invasive and more safe option than open surgery. We evaluated the results and complications of the pediatric PCNL in our referral training center.

METHODS: Between September 2002 to September 2013, 148 children, who had failure or their parents refuse SWL underwent PCNL. Procedure was done under general anesthsia, in prone position, with ureteral catheter 3 or F, diluted contrast injection and fluoroscopic or ultrasonographic guided nephrostomy by Chiba needle 18 G. Tract dilation performed with Alken telescopic dilators. Nephroscopy were done with adult size 24 Fr.
Nephroscope in 83, pediatric in 34 and semirigid ureteroscope in 31 cases. Lithotripsy were done with pneumatic lithoclast and saline solution used as irrigation. Nephrostomy tube inserted in 18 with ureteral stent, tubeless (No nephrostomy) in 106 and totally tubeless in 24. Ureteral stent and Foley catheter removed 12–24 hours after operation.

RESULTS: Of total 148 patients, 87 were boys, 61 girls, with mean age 8.5 years (9 mo–15 y) with renal stone > 20 mm. Mean operation time was 75 min (40–100) and radiation 0.6 min (0.3–1.9). Three patients had residual fragment less than 5 mm, passed spontaneously in 2 weeks after operation, 6 underwent second look nephroscopy, and 2 ureteroscopy for migrated stone fragments to distal ureter. Postoperatively, 14 patients developed fever, 2 sepsis, 6 transfusion, and 4 raising of normal creatinine which improved with conservative management.

CONCLUSIONS: PCNL seems the best treatment option for nephrolithiasis in children.

SOURCE OF FUNDING: None

MP21-22 PERCUTANEOUS NephrolithotOMY (PCNL): WHAT WE LEARNED AFTER 10,000 PROCEDURE

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INTRODUCTION AND OBJECTIVES: Currently, PCNL is the modality of choice for treatment of large, complex renal stones, however, such as open surgery has complication. We evaluated the results and complications of PCNL in our high volume, training, referral center.

METHODS: Between September 2002 and November 2013, total 10,112 PCNL procedure were done in our center, 6327 men, 3785 women, mean age 38.5 year (19–82) and mean stone size 28.5 mm (17–71) underwent PCNL by experienced, training urologist (Fellowships), and residents. PCNL was done in standard, no nephrostomy and totally tubeless methods. Fluoroscopy and ultrasound were used for access. General, epidural, and spinal were the methods of the anesthesias. We recorded the results and complications of our patients.

RESULTS: Early stone-free rate was 88.4% and after 3 weeks with ancillary procedures (URS, SWL), 94.6%. Complications according to Clavien classification: -Grade I (739): Fever > 38.3°C 234, Bleeding 269, Hyponatremia (PCNL Sx.)118, PCS perforation 153, Pnumo/hydro/hemothorax 46, Renal failure 19. -Grade II (327): Transfusion 241, UTI 28, ileus 45, pneumonia 13, -Grade III (567): Access failure 94, Clot retention 37, late hematuria 106, Conversion to open 28, Visceral injury 15, Perinephric collection 32, Chest tube 17, Scapular fracture 1, Re-PCNL 237, -Grade IV (149): Renal failure requiring dialysis (16), Kidney exploration and repair (18), Heart failure (24), Arrhythmia requiring ICU (27), Sepsis (9), Myocardial infarction (51); -Grade V (15): sepsis 4, MI 10, unknown 1 Although, some of the minor and major complications were managed by referring physicians which did not report to us.

CONCLUSIONS: PCNL seems the best treatment option for large renal stones and is a less invasive method. We should consider minor and major complications such as open surgery and manage them properly.

SOURCE OF FUNDING: None

MP21-23 DETERMINANTS OF FLUOROSCOPY TIME DURING PERCUTANEOUS NEPHROLITHOTOMY (PCNL)

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INTRODUCTION AND OBJECTIVES: To assess factors affecting Fluoroscopy Time (FT) during PCNL.

METHODS: Patients who underwent PCNL from 2010 to 2013 at McGill University Health Centre were included. These cases were performed by 10 Post-Graduate Trainees (PGTs) from Post-Graduate Years (PGY) 4 and 5 under direct supervision of a single endourologist (SA). Patient demographics, personnel variations, stone characteristics including S.T.O.N.E nephrolithometry score and procedural factors were compared to Fluoroscopy time.

RESULTS: Out of 185 cases, 103 met our inclusion criteria. The mean age was 55.2 ± 1.5 with mean BMI of 26.4 ± 0.5 kg/m2 and 60 (58.3%) males. There were 37 (35.9%) cases performed by PGTs from PGY 4 and 66 (64.1%) by PGY 5 PGTs. The mean S.T.O.N.E nephrolithometry score was 7.7 ± 0.1, with mean stone volume of 621.7 ± 57.6 mm2, mean number of punctures of 2.1 ± 0.1, mean number of tracts of 1.2 ± 0.04, with tubeless PCNL in 53 (51.5%) cases. The mean FT was 120 ± 5 sec, with mean operative time of 102 ± 3.5 min and mean length of hospital stay (LOS) of 4.2 ± 0.34 days. The overall stone free rate after the primary procedure was 72.8%. PGY level significantly affected FT, where PGY 5 trainees utilized significantly less fluoroscopy than PGY 4 trainees (p = 0.04). In addition, there was a significant correlation between FT and the number of punctures (r = 0.6, p = 0.01), number of tracts (r = 0.4; p = 0.01), number of involved calyces (r = 0.24, p = 0.02) and operative time (r = 0.4, p = 0.01).

CONCLUSIONS: Number of involved calyces, PGY level, operative time, number of punctures and tracts had a significant effect on fluoroscopy time during percutaneous nephrolithotomy (PCNL).

SOURCE OF FUNDING: Fonds de la Recherche en Santé du Québec (FRSQ).

MP21-24 CONTRIBUTING FACTORS FOR URINARY TRACT INFECTION AFTER TUBELESS PERCUTANEOUS NEPHROLITHOTOMY

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INTRODUCTION AND OBJECTIVES: To evaluate the contributing factors for the development of urinary tract infection (UTI) after tubeless percutaneous nephrolithotomy.

METHODS: Between January 2009 and December 2013, 461 tubeless PCNLs were performed at our hospital. After the completion of stone extraction the bleeding points were cauterized. In patients with troublesome bleeding, oxidized regenerated cellulose (Surgicel®) strips were used to tamponade the access tract to facilitate hemostasis.

RESULTS: Fifty-four (11.7%) patients developed UTI after tubeless PCNL; analysis was made according to the occurrence of UTI (UTI-group and non-UTI group). There is no difference in...
gender, age ad body mass index in developing UTI in both groups. Episode preoperative UTI occurred in 35 patients, after treatment of UTI the incidence of postoperative UTI is not significant higher in these patients. Complete staghorn stones were noted in 40 patients, the UTI rate is not significant higher than patient without staghorn stone. There is no significant difference in the stone size in both groups. The average operation time in both groups is not statistically significant. Patients with UTI had a high incidence of residual stone than the remains (38.9% versus 20.4%). There is no significant difference in incidence of postoperative UTI in patients with struvite stone than patients with non-struvite stones. In patients received Surgicel® packing, the incidence of UTI is not significantly higher.

CONCLUSIONS: Incomplete stone extraction is the contributing factor for developing UTI after tubeless PCNL.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: The safety, efficacy and benefits of tubeless percutaneous nephrostomy has been well confirmed by several reports for several years. Herein we report the clinical experiences and technical innovations of nearly 1000 tubeless PCNL in our hospital.

METHODS: Since January 2001 to October 2013, 976 tubeless PCNL was performed at our hospital. All patients received one stage procedure we self designed metal dilator. Access tract cauterization was performed for better hemostasis in all patients. Access tract packing with oxidized regenerated cellulose (Surgicel®) strips was used for patients with uncontrolled bleeding. Recently we invent balloon-aid access tract Surgicel® pressure tamponade troublesome bleeding.

RESULTS: The age of these patients ranged from 20 to 89 (54.3±12.6) years old with 642 male patients. The stone sized from 5–12 (3.5±2) cm. Among them 478 were kidney stones, 213 were ureteral stone, 117 were kidney–ureteral stones and 168 were complete staghorn stones and the stone free rates were 79.5%, 100%, 86.4% and 44.6% respectively with an overall stone free rate of 78.6%. The postoperative blood transfusion rate was 2.4% with 1 patient underwent angiographic embolization and 1 patient underwent nephrectomy due to severe bleeding. Postoperative urinary tract infection rate was 10.4%; sepsis was noted in 1.3% patients. Pulmonary injuries were noted in 9 patients (0.9%).

CONCLUSIONS: With adequate hemostasis, tubeless is a safe modification for urinar tract stone surgery.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Operative time is an important factor which may affect surgical outcomes and anesthesia-related complications. Presence of hydronephrosis may affect success rates and operation time of PNL. Although a few clinical trials focusing this issue have been proposed for standard PNL, no clinical study is avaliable for microperc nephrolithotomy yet. We aimed to evaluate the effects of the presence of hydronephrosis on microperc nephrolithotomy.

METHODS: We reviewed the patients who underwent microperc surgery between December 2012 and September 2013 retrospectively. Patients were divided into two groups according to whether presence of hydronephrosis. Patients were evaluated in terms of stone size and number, fluoroscopy and operation time, stone-free rates and patient-related parameters.

RESULTS: A total of 65 patients were enrolled into study including group 1 (n: 30) with hydronephrosis and group 2 (n:35) with no hydronephrosis. There was no statistical difference in terms of sizes and numbers of stones and BMI in comparison of groups (149.2±93.06 mm² vs 140.8±70.77 mm², p: 0.957), (1.45±0.78 vs 1.20±0.48, p:0.149), (26.7±3.2 kg/m² vs 25.8±4.2 kg/m²). CSRF was seen only in one patient in group 1 while all patients were stone-free in group 2. While mean operation and fluoroscopy time in Group 1 was 43.00±23.52 minutes and 101.3±57 seconds, it was 37.8±25.4 minutes and 118.53±74.3 seconds in group 2, there was no statistical difference in comparison of groups.

CONCLUSIONS: The presence of hydronephrosis does not affect success rates and operation time in microperc nephrolithotomy procedures. Micropercuteaneous nephrolithotomy is technically feasible, safe and efficacious even in non-hydronephrotic kidneys.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Robotic systems have been introduced to decrease the difficulty of complex laparoscopic surgeries. The aim of our study was to comprehensively review the complications of various robot-assisted urological surgeries.

METHODS: We retrospectively reviewed the medical records of patients undergoing robot-assisted urological surgeries in a tertiary referral center in Taiwan from February 2012 to March 2014. Complications were collected and reported according to the Clavien system.

RESULTS: A total of 168 robot-assisted urological surgeries were performed. They were grouped as follows: radical prostatectomy (n = 97), simple prostatectomy (n = 2), radical cystectomy (n = 9), partial cystectomy (n = 3), partial nephrectomy (n = 26), nephroureterectomy (n = 11), distal ureterectomy (n = 3), ureteroureterostomy (n = 3), pyeloplasty (n = 5), anatrophic nephrolithotomy (n = 2), pyelolithotomy (n = 3), ureterolithotomy (n = 2), vaginal vesical fistula repair (n = 1), sacrocolpopexy (n = 1). Conversion to open surgery was necessary in 2 cases, including one case of arterial injury during partial nephrectomy and another case of difficult urethrovaginal anastomosis during radical prostatectomy. Thirty-nine complications were observed, including 23 grade I, 8 grade II, and 8 grade III complications. Prolonged lymphatic leakage (3%), pelvic hematoma (2.4%), atelectasis (2.4%), and poor healing of urethrovaginal anastomosis...
(2.4%) were the most common complications. In addition, there were 3 complications requiring secondary operation. Namely, there were one case of sigmoid colon perforation and another case of ureteral injury during radical prostatectomy. Incarcerated incisional hernia occurred in the other case after radical cystectomy.

CONCLUSIONS: Robotic systems can be applied to most urological surgeries. Randomized clinical trials are needed to evaluate long-term outcomes of these procedures.

SOURCE OF FUNDING: None

MP21-28 SHOULD WE PLACE URETERAL STENT IN RETROPERITONEAL LAPAROSCOPIC URETEROLITHOTOMY? CONSIDERATION OF SURGICAL TECHNIQUES AND COMPLICATIONS

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INTRODUCTION AND OBJECTIVES: There was some debate the necessity of ureteral stenting after laparoscopic ureterolithotomy. We evaluate the need of ureteral stent after retroperitoneal laparoscopic ureterolithotomy (RU).

METHODS: Between January 2009 and January 2013, 41 patients underwent RU to remove upper ureteral stones. Retroperitoneal approach was used in all patients by single surgeon. A double J stent was placed in any of the first 17 patients, after that it was not placed for each of 24 remaining patients after the procedure.

RESULTS: The mean age of the patients, BMI, and stone size were not differ between two groups. The stone-free rate was 100%. The mean operative time was significantly shorter in stentless group than stent group (59.48 vs 77.88 minutes, p < 0.001). The blood loss, drain removal day and hospital stay were not differ between two groups. And no other significant complications were occurred during and after operation in all patients.

CONCLUSIONS: RU is a safe and effective treatment modality for large impacted ureteral stones. In this study, D-J stent placement was not necessary after RU. In the future, large-scale studies on RU without D-J stent, especially on the frequency of the development of complications according to the surgical technique, may be needed.

SOURCE OF FUNDING: None

MP21-29 A ROLE OF ENDOUROLOGY IN A TREATMENT OF UROTHELIAL CANCER OF UPPER URINARY TRACT (UC-UUT)

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INTRODUCTION AND OBJECTIVES: A standard treatment for UC-UUT is/her open nephroureterectomy (NUE). Modern endourology gives many options to replace this approach. We assess a role of endourology in this topic.

METHODS: We treat at our institution all patients with UC UUT from region with 571 thousand of inhabitants. Between 1/2007 and 4/2014, 147 surgeries were performed for UC-UUT.

RESULTS: Organ sparing surgeries were accomplished in 15.0%/22 cases. In this subgroup: 19/86.4% ureteroscopic ablation (14 with Ho:YAG laser with semirigid of flexible ureteroscope and 5 operating ureteroscope with resection loop; in 2/9.1% open resection of ureter and in 1/4.5% percutaneous resection of pelvis tumour with resectoscope. NUE was indicated in 85.0% (125 cases). In 86 of them (58.5%) was used laparoscopy (55/64.0% complete laparoscopic NUE (CLNUE), 31/36.0% laparoscopic nephrectomy with open ureterectomy). In CLNUE, in the last 37 cases, technique of endoscopic excision of ureteral orifice with Collin’s knife and application of Hem-o-lok® ML clips followed with CLNUE was used. Formerly was employed technic of really CLNUE with excision of ureterovesical junction laparoscopically with Ligasure® Atlas (abandoned due to incomplete resection of intramural ureter in some cases). In rest 39 of 147 surgeries (26.5%), open NUE was carried (mainly for locally advanced tumour or N+ tumours).

CONCLUSIONS: Endourology plays crucial role in treatment of UC-UUT. In nephron sparing methods (taking 15%), ureteroscopic Ho:YAG ablation dominates. In NUE, the most frequent method is CLNUE with clip. Open surgery is applied only in open ureterectomy in distal ureter tumour or in nephrectomy phase in advanced tumours.

SOURCE OF FUNDING: MH CZ - DRO (Faculty Hospital in Plíšen - FNPl, 00669806), the Charles University Research Fund (project number P36), grant IGA NT 12010-5.

MP21-30 LONG TERM COMPARISON BETWEEN WHITAKER TEST VS MAG3 RENOGRAM IN DILATED UPPER TRACTS

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INTRODUCTION AND OBJECTIVES: Hydroureteronephrosis does not necessarily means obstruction. Prediction of obstruction is important for planning intervention & preserving renal function. The aim of this study was to determine whether Whitaker test is better than MAG3 in demonstrating upper renal tract obstruction.

METHODS: We retrospectively reviewed the case notes of 69 patients with suspected obstruction. All patients had both Whitaker test & MAG3 Renogram done during their diagnostic work up. 21 of 69(30%) patients where clinically obstructed. The tests where done when patients where admitted with clinical features of obstruction. All the 21 patients who were obstructed are managed surgically, the remaining 48 managed conservatively. The sensitivity & specificity of the tests determined by 2 by 2 contingency table.

RESULTS: Out of ones clinically obstructed, Whitaker test showed true positive 10, false positive 6, true negative 42, false negative 11, positive predictive value 62%, negative predictive value 79%, whereas MAG3 Renogram showed true positive 6 & false positive 4, true negative 44, false negative 15, positive predictive value 60%, negative predictive value 74%. Sensitivity of Whitaker test was 47% higher than MAG3 28%, specificity 87% lower than MAG3 91% in predicting obstruction. The diagnostic odds ratio is 6.42 by Whitaker test and 4.4 by MAG3.

CONCLUSIONS: Neither test is highly sensitive at determining obstruction, Whitaker test provides more information than MAG3 in as revealed by its more sensitivity, positive predictive value and diagnostic odds ratio. The negative predictive value is high in both tests, we recommend both tests are complementary to each other.

SOURCE OF FUNDING: N/A
MP21-31 URETERAL STRICTURE AFTER LASER LITHOTRIpsy FOR IMPACTED CALCuli: outcomes after open/VIDEOLAPARoscopic surgery and ENDoureterotOMY

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INTRODUCTION AND OBJECTIVES: To evaluate the occurrence of ureteral stricture after laser ureterolithotripsy (URS) for impacted ureteral stone treatment and to compare the outcomes between the open/VIDEOLAPARoscopic (VLP) approach and endoureterotomy.

METHODS: A retrospective search on the institution stone database was performed for patients who treated ureteral stenosis after Holmium laser ureterolithotripsy 2003–2013. Analyzed parameters comprised demographic, stone burden and ureteral stricture characteristics. Treatment modality was categorized as laser endoureterotomy or open/VLP repair; outcomes and complications were assessed. Success was considered if the patient had symptoms relief and improvement of hydronephrosis on imaging follow-up.

RESULTS: Twenty-two patients were included and 2 patients with proximal stones had stricture in the distal ureter attributed to the URS procedure. Eight (36%) patients had endourological stricture correction for stenosis <1 cm; 10 (45%) had ureteral reimplantation and 1 VLP uretero-ureteral anastomosis (longer strictures); 2 had VLP nephrectomy due to renal exclusion/pain; 1 underwent continuous double J stenting due to a metastatic neuroendocrine tumor. After a mean follow-up of 18.5 months (range 3–70), the success rate for the endoureterotomy and open/VLP stricture repair group were 50% and 82% respectively (p = 0.11). Hospitalization was significantly shorter for patients submitted to endoureterotomy (2.7 ± 1.4 vs 4.8 ± 1.4 days; p = 0.003). Only minor complications occurred in both groups.

CONCLUSIONS: Endoureterotomy is a good treatment option for stenosis shorter than 1 cm working in half of the cases and with a short hospitalization time. Open/VIDEOLAPARoscopic approach is an effective option for longer stenosis.

SOURCE OF FUNDING: None

MP22 LAPAROSCOPIC SURGERY UPPER TRACT 3

MP22-01 RETROPERITONEAL LAPAROSCOPIC REIMPLANTATION OF THE LEFT RENAL VEIN FOR NUTCRacker SYndrome

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INTRODUCTION AND OBJECTIVES: To describe the feasibility of retroperitoneal laparoscopic reimplantation of the left renal vein for nutcracker syndrome.

METHODS: Two patients with nutcracker syndrome underwent the surgery. Both patients complained of gross hematuria and flank discomfort that could not be relieved by resting. The patients were place in a supine position and five ports were placed in the right abdominal wall. The procedures were performed through retroperitoneal approach. The left renal vein was transected and then reimplanted into the distal inferior vena cava.

RESULTS: The procedures were performed successfully without any major complications. The total operation time was 105 min and 120 min, respectively. The estimated blood loss was 50 mL and 120 mL. Hematuria and flank discomfort were resolved after the surgery. No recurrence occurred during the follow-up period. Ultrasonography revealed a patent lumen without compression.

CONCLUSIONS: Retroperitoneal laparoscopic reimplantation of the left renal vein appears to be a feasible procedure with satisfactory short-term outcomes.

SOURCE OF FUNDING: None

MP22-02 STANDARDIZED ANALYSIS OF LAPARoscopic and Robot-assisted PARTIAL NEPHrectomy COMPLICATIONS WITH ClAVIEN CLASSIFICATION

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INTRODUCTION AND OBJECTIVES: To analyze the complications according to the Clavien classification after laparoscopic partial nephrectomy (LPN) and Robotic-assisted partial nephrectomy (RPN).

METHODS: We analyzed consecutive LPN (n=85) and RPN (n=93) cases at our institution between April 1994 and December 2012. The data were retrospectively reviewed from a prospectively collected database. All complications that occurred within 3 months postoperatively were recorded and classified according to the modified Clavien classification system.

RESULTS: The mean tumor size was 3.90 ± 1.77 cm. The mean operative time was 255.0 ± 83.5 min, and the mean warm ischemia time was 31.6 ± 22.0 min. The overall complication rate was 18.5%. Clavien grades 1, 2, 3a, and 3b complications accounted for 3.93%, 11.2%, 2.81%, and 1.69% patients, respectively. The most common complication was perioperative hemorrhage, which required blood transfusion. Delayed bleeding occurred in 7 patients and 4 patients underwent angiographic embolization. The
INTRODUCTION AND OBJECTIVES: To investigate the clinical value of laparoscopic nephron-sparing partial nephrectomy with temporary blocking-up of the segmental branch of the renal artery (SRPN) for small renal carcinoma treatment.

METHODS: Data from 84 patients with renal tumors between September 2006 and March 2012 were retrospectively analyzed according to surgical procedures. Group A: SRPN (n = 19), Group B: laparoscopic partial nephrectomy with temporary blocking-up of the renal artery (n = 28). Group C: open partial nephrectomy with temporary blocking-up of the renal artery (n = 37). Patients were followed up for 6 to 24 months.

RESULTS: Sex, age, tumor size, and operation time were similar (P > 0.05). Intraoperative blood loss (64.5 ± 23.6 vs. 60.6 ± 25.8 vs. 88.7 ± 26.4 ml), time to recover gastrointestinal function (19.0 ± 3.6 vs. 21.2 ± 4.5 vs. 46 ± 16.8 h), postoperative analgesic use (10.5% vs. 10.7% vs. 46.0%), positive surgical margins (0% vs. 0% vs. 7.9%), and complications (5.3% vs. 3.8% vs. 21.6%) were significantly different between group A and C (p < 0.05), B and C (p < 0.05). Warm ischemia time (0 vs. 40.4 vs. 41.1 min) was significantly different between group A and B or C (P < 0.05). 6-month postoperation significantly fewer patients in group A had decreased glomerular filtration rates of the involved kidneys than in B and C (0% vs. 42.9% vs. 37.8% P < 0.001). No tumor relapse was observed.

CONCLUSIONS: SRPN showed less trauma, intraoperative blood loss, and analgesic use, faster gastrointestinal function recovery, fewer complications, shorter hospital stay, 3 decreased positive surgical margin rates, and maximized renal function retention. This method is effective and safe in treating small renal carcinomas.

SOURCE OF FUNDING: None
CONCLUSIONS: The R.E.N.A.L. nephrometry score is a critical factor affecting operative time of ischemic LPN. It will be a one indicator of operative time of ischemic LPN in patients with localized RCC.

SOURCE OF FUNDING: None

MP22-06 TRACKING NEPHRON SPARING SURGERY: THE 50 MOST REFERENCED ARTICLES IN PARTIAL NEPHRECTOMY

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INTRODUCTION AND OBJECTIVES: Nephron sparing surgery is the gold standard in the treatment of small renal masses. We sought to identify and evaluate the most influential papers within the scientific literature that have contributed to our current understanding of partial nephrectomy.

METHODS: The Science Citation Index Expanded was queried from the years 1985 to 2012 for papers pertaining to partial nephrectomy. Search terms “Partial Nephrectomy” and “Nephron Sparing Surgery” were utilized to identify articles. The 50 most highly cited journal articles were then selected and further analyzed.

RESULTS: Articles were obtained from a total of 9 different journals. The two journals with the highest number of articles were the Journal of Urology (35; 70%) and Urology (5; 10%). The year of publication ranged from 1991 to 2009 and the number of citations ranged from 519 to 84 per article (mean 167). 34 (68%) of the articles were published in the 21st century. Study designs included prospective cohort studies (n = 2), prospective case series (n = 13), retrospective studies (n = 31), case reports (n = 1), and review papers (n = 3).

CONCLUSIONS: Extirpative therapy for RCC has seen immense growth over the last 3 decades. There is, however, a paucity of well-designed prospective research within the field. The vast majority of the literature represents retrospective data and no randomized studies exist within the 50 most cited articles.

SOURCE OF FUNDING: None

MP22-07 COMPARISON OF THREE LAPAROSCOPIC PYELOLITHOTOMIES/URETEROLITHOTOMIES FOR UPPER URINARY TRACT STONES IN PATIENTS WITH SOLITARY KIDNEY

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INTRODUCTION AND OBJECTIVES: To compare surgical outcomes of retroperitoneal laparoscopic pyelolithotomy/ureterolithotomy (RPL), transumbilical laparoendoscopic single-site surgery (U-LESS) and suprapubic-assisted laparoendoscopic single-site surgery (SA-LESS) for upper urinary tract stones in patients with solitary kidney.

METHODS: A total of 32 patients with solitary kidney, including 11 females and 21 males, underwent laparoscopic pyelolithotomies/ureterolithotomies on 32 sides. The mean age was 46 (range 36 to 62) years. According to the experience of the surgeons and the patient’s wishes, they were divided into three groups (RPL, n = 12; U-LESS, n = 10; SA-LESS, n = 10).

RESULTS: All the 32 procedures were successfully completed without serious complications such as urinary fistula and abdominal infection. The operative time for SA-LESS and RPL group were shorter than that for U-LESS (P < 0.05). The postoperative patient scar assessment questionnaire (PSAQ) scores for SA-LESS and U-LESS were lower than that for RPL (P < 0.01). There was no statistically significant difference in intraoperative estimated blood loss, postoperative drainage time, postoperative intestinal function recovery time, postoperative visual analog pain scores (VAPS), and complication rates among the three groups (P > 0.05). A mean (range) follow-up of 18.6 (4–36) months showed decreased hydronephrosis, improved renal function, and no stones recurrence and ureter stenosis in all cases.

CONCLUSIONS: Laparoscopic pyelolithotomy/ureterolithotomy for upper urinary tract stones in patients with solitary kidney is a safe, feasible and effective procedure. It may be the first line choice for treatment of calculi in pelvic and upper-middle ureter in patients with solitary kidney. SA-LESS seems to be worthy of applying for its good cosmetic results and simple operation.

SOURCE OF FUNDING: None

MP22-08 APPLICATION OF INSTRUMENT FOR DOUBLE-J STENT PLACEMENT IN LAPAROSCOPIC PYELOLITHOTOMY/URETEROLITHOTOMY FOR UPPER URINARY TRACT CALCULI

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INTRODUCTION AND OBJECTIVES: To evaluate the self-developed instrument for Double-J stent placement in laparoscopic pyelolithotomy/ureterolithotomy for upper urinary tract calculi.

METHODS: A total of 30 patients (Group A), including 18 females and 12 males, underwent laparoscopic pyelolithotomies/ureterolithotomies on 30 sides with the help of the self-developed instrument for Double-J stent placement. The mean age was 38.6 (range 18 to 51) years. Another 30 patients (Group B), including 10 females and 20 males, underwent laparoscopic pyelolithotomies/ureterolithotomies on 30 sides (16 right, 14 left) without using the self-developed instrument for Double-J stent placement. The mean age of these patients was 36.8 (range 21 to 56) years. There were 3 patients with stones in the renal pelvis, 23 in the upper ureter and 4 in the middle ureter in Group B. To compare the time for D-J stent placement between Group A and Group B.

RESULTS: All the procedures were successfully performed without serious complications such as ureter disruption, abdominal injury, bleeding and leakage of urine. The mean time for D-J placement in Group A was 3.4 (range 2 to 8) mins, which was shorter than that of Group B (11.4 (range 6 to 22) mins) (P < 0.05). A mean (range) follow-up of 18.6 (4–36) months showed decreased hydronephrosis, improved renal function, and no stones recurrence and ureter stenosis in all cases. There was no statistically significant difference in intraoperative estimated blood loss, postoperative drainage time, postoperative intestinal function recovery time, postoperative visual analog pain scores (VAPS), and complication rates among the three groups (P > 0.05).

CONCLUSIONS: The self-developed instrument for Double-J stent placement is safe and convenient, which could decrease the difficulty of the Double-J stent placement and shorten the operative time, especially for the learners.

SOURCE OF FUNDING: None

MP22-09 TOTAL ENDOSCOPIC NEPHROURETERECTOMY WITH BLADDER CUFF EXCISION FOR NATIVE KIDNEY IPSILATERAL TO TRANSPLANTED KIDNEY: A SINGLE-CENTER PRELIMINARY EXPERIENCE IN CHINA

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MP22 LAPAROSCOPIC SURGERY UPPER TRACT 3

INTRODUCTION AND OBJECTIVES: For limited exposure with management of the native distal ureter ipsilateral to the transplanted kidney, we usually choose open nephroureterectomy (NU) or laparoscopic NU combined with an open approach in renal transplant (RTx) recipients. We herein describe our preliminary experience with and evaluate the feasibility of total endoscopic NU with bladder cuff (BC) excision for RTx recipients.

METHODS: From August 2008 to June 2011, 8 RTx recipients underwent total endoscopic NU with BC excision for clinically presumed native upper urinary tract urothelial carcinoma (UUT-UC) ipsilateral to the transplanted kidney. Cystoscopic circumferential excision of the ipsilateral ureteral orifice with BC was followed by retroperitoneal laparoscopic NU using early ureteral ligation without primary BC closure. The intact specimen was removed through a 3-cm flank incision (an enlarged trocar site). Perioperative and pathological data and oncological outcomes were collected and analyzed.

RESULTS: All endoscopic procedures were successfully completed without major complications and open conversion. The mean estimated blood loss was 100.0 mL with no blood transfusion. The mean operating room time was 238.8 minutes, mean time to ambulation 2.6 days, and mean hospital stay 9.6 days. Pathologic findings confirmed UUT-UC in seven recipients, two with bladder UC. During the mean 25.2-month follow-up, none of the recipients developed recurrence, while two developed contralateral UUT-UC after the first NU.

CONCLUSIONS: In our experience, total endoscopic NU with BC excision is technically feasible and safe for RTx recipients. A longer follow-up is required to demonstrate the oncological efficacy of this minimally invasive procedure.

SOURCE OF FUNDING: None

MP22-10 FEASIBILITY OF ADRENALECTOMIES IN A UNITED KINGDOM NON-SPECIALIST CENTRE?

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INTRODUCTION AND OBJECTIVES: The technique of laparoscopic adrenalectomy was first described in 1992. Subsequently, the operation has been performed with increasing frequency in specialist endocrine surgical units worldwide. More recently, general surgeons and urologists have taken on these procedures. We aimed to assess how effectively adrenalectomies were being performed in our district general hospital urological unit.

METHODS: A retrospective single centre study of all adrenalectomies performed by a single consultant urologist over a 3 year period between February 2011 and February 2014.

RESULTS: 17 patients with an average age of 63 (45–79) had an adrenalectomy. 70% of cases were performed laparoscopically with a transperitoneal approach used. One case required conversion to an open procedure. The mean operating time was 108 minutes (50–180), with an average blood loss of 227 mls (50–100). 2 patients had a significant complication (one splenic injury and one infarcted kidney requiring nephrectomy). 59% of patients required an ITU stay with the median length of stay in hospital 6 days (2–83 days). Histology revealed 3 phaeochromocytomas, 5 adenocarcinomas, 3 adenosomas and 6 metastases from renal cell carcinomas. The 30 and 90 day mortalities were 0%.

CONCLUSIONS: Review of the literature reveals comparative operating time, blood loss, length of stay and complication rates with other centres, including specialist units performing a far greater number of adrenalectomies. Our study supports both laparoscopic and open adrenalectomy being a safe, effective and well tolerated procedure to be performed by a consultant urologist with laparoscopic experience in a non-specialist unit.

SOURCE OF FUNDING: None

MP22-11 TWO CASES OF RETROPERITONEAL TUMOR LOCATED DORSAL TO THE INFERIOR VENA CAVA: SUCCESSFUL EXCISION USING THE RETROPERITONEOSCOPIC APPROACH

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INTRODUCTION AND OBJECTIVES: Laparoscopic resection of a retroperitoneal tumor located dorsal to the inferior vena cava (IVC) is challenging. Here, we report two patients whose retrocaval tumors were successfully excised using the retroperitoneoscopic approach.

METHODS: RESULTS: Patient #1: A 43-year-old woman was referred to our hospital for repeated hypertensive episodes and an elevated serum noradrenalin level of 3,177 pg/mL. MRI demonstrated a 35 × 20 × 35-mm tumor dorsal to the IVC at the level of the upper right kidney. MIBG scintigraphy showed increased uptake in the tumor. Under the diagnosis of retroperitoneal paraganglioma, retroperitoneoscopic tumorectomy was performed. The operating time was 168 min and the estimated blood loss was 30 mL. The patient’s postoperative course was eventful and her blood pressure decreased to the normal range without antihypertensive drugs. The pathological diagnosis was paraganglioma. Patient #2: A 53-year-old woman was referred to our hospital for a 42 × 30 × 37-mm retroperitoneal mass dorsal to the IVC at the level of the superior mesenteric artery. Endocrinological examination showed no abnormalities and no MIBG uptake in the tumor. The tumor was removed using the retroperitoneoscopic approach. The operating time was 137 min and the blood loss was minimal. The patient’s postoperative course was uneventful and the pathological diagnosis was a retroperitoneal schwannoma.

CONCLUSIONS: The relatively large tumor located dorsal to IVC can be successfully excised by the retroperitoneoscopic approach as shown herein. The retroperitoneoscopic approach is feasible and safe for such retrocaval tumors because it provides sufficient surgical view and space to operate without interference by intra-abdominal organs.

SOURCE OF FUNDING: None

MP22-12 SIMULTANEOUS BILATERAL RETROPERITONEOSCOPIC NEPHROURETERECTOMY IN RENAL RECIPIENTS: A SINGLE-CENTER EXPERIENCE

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INTRODUCTION AND OBJECTIVES: To present the procedure and outcome of simultaneous bilateral retroperitoneoscopic nephroureterectomy combined with transurethral resection of bilateral bladder cuffs in renal recipients.

METHODS: 12 renal recipients underwent simultaneous retroperitoneoscopic bilateral nephroureterectomy from April 2006 to November 2012. Three-port retroperitoneoscopic radical
nephrectomy was performed firstly with the patient in lateral decubitus position. The ureter was dissected down to the iliac vessels and clipped by a metallic clip distally. Contralateral retroperitoneoscopic nephrectomy was performed similarly. Transurethral resection of bilateral bladder cuffs was performed with resection of concomitant bladder tumors. A midline lower abdominal incision was made to dissect the bilateral distal ureters and remove the specimens.

RESULTS: The mean operation time and estimated blood loss was 281 minutes and 177.5 mL. 2 suffered from Grade II complications. No major complication was encountered. All of them resumed oral intake of immunosuppressant on the first postoperative day. With the mean follow-up of 58.6 months, no patient developed local recurrence or distant metastases, and 2 patients had bladder tumors.

CONCLUSIONS: Our simultaneous bilateral retroperitoneoscopic nephroureterectomy and transurethral resection of bilateral bladder cuffs with manual removal of specimens via a midline lower abdominal incision is feasible and minimally invasive for bilateral upper tract urothelial malignancy in select renal recipients with satisfactory oncologic outcomes.

SOURCE OF FUNDING: None

MP22-13 COMPARATIVE STUDY FOR EVALUATING THE COSMETIC OUTCOME OF SMALL-INCISION ACCESS RETROPERITONEOTECNIQUE (SMART) WITH STANDARD RETROPERITONEOSCOPY USING OBSERVER SCAR ASSESSMENT SCALE (OSAS). ARE SMALL INCIIONS A BIG DEAL?

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INTRODUCTION AND OBJECTIVES: To compare the scars and cosmetic results of trocar incisions of 3, 5 and 10 mm in cases by small-incision access retroperitoneoscopic technique pyeloplasty (SMARTp) and standard laparoscopy pyeloplasty (SLp).

METHODS: Between January 2012 and October 2013, 20 pyeloplasties were performed with SMARTp and 8 with SLp techniques. In SMARTp, 3 and 5 mm trocars and in SLp, 5 and 10 mm trocars were used. The study included a total of 72 trocar-site scars; 3-mm (24 scars), 5-mm (24 scars) and 10 mm (24 scars).

Cosmetic outcome was assessed at the 3rd, 12th and 24th month of site scars; 3-mm (24 scars), 5-mm (24 scars) and 10 mm (24 scars). 10 mm trocars were used. The study included a total of 72 trocar-techniques. In SMARTp, 3 and 5 mm trocars and in SLp, 5 and 10 mm port sites.

RESULTS: Mean follow-up was 18.7 ± 9.2 months. Fifteen patients (75%) underwent Y-V plasty and 5(25%) Anderson-Hynes pyeloplasty. Mean operative time was 128 ± 28.7 minutes. There was only minimal blood loss, no need for conversion to SLp or open pyeloplasty, no intraoperative complications. 2 recorded postoperative complications (hemorrhage and wound infection) were treated conservatively. There were significant differences between objective questions of "vascularization" in 3 mm trocar, and "thickness" in 10 mm trocar. 24 months after surgery, the cosmetic data assessed by OSAS showed statistically significant in favor of the 3 mm trocar sites versus 10 mm (OSAS: 13.8 ± 3.9 vs. 24.6 ± 1.7; P = 0.006) with no statistical significant difference between 3-mm and 5-mm port sites.

CONCLUSIONS: The SMARTp using 3 and 5 mm trocars is an efficacious procedure with better cosmetic results comparing to SLp and can be used in suited patients. We believe that this technique is likely to become an established procedure.

SOURCE OF FUNDING: None

MP22-14 NEPHRON-SPARING SURGERY FOR RENAL ANGIOMYOLIPOMA - A SINGLE CENTER EXPERIENCE

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INTRODUCTION AND OBJECTIVES: Renal angiomyolipoma (AML) is a benign tumor composed of varying amounts of mature adipose tissue, smooth muscle and blood vessels. AML is an appropriate tumor for organ preservation surgery. We evaluated our experience with nephron-sparing surgery (NSS) for renal AML.

METHODS: We reviewed our institutional nephrectomy registry to identify patients treated with nephrectomy for sporadic renal angiomyolipoma between 2009 and June 2013. Patients underwent unilateral radical nephrectomy or with concurrent malignancy was excluded. Patient demographics, perioperative complications, perioperative renal function, and postoperative outcomes were recorded.

RESULTS: We identified 121 patients treated with unilateral nephron-sparing surgery for renal angiomyolipoma. Sixty-eight patients underwent open NSS, 19 underwent laparoscopic partial nephrectomy, and 34 underwent robotic-assisted partial nephrectomy. The median tumor size was 5.9 cm (range 1.4–38 cm). The overall early complication rate was 6%. The median blood loss was 200 ml (range 20–5500 ml) and the average ischemia time was 34.8 ± 16.0 minutes. The median hospital stay was 7 days (range 5–18 days). The average preoperative effective renal plasma flow (ERP) of the lesion kidney was 236.4 ± 59.3 ml/min preoperatively, and 192.5 ± 57.7 ml/min after operation (p < 0.001). There was a overall 10% decrease in renal function after NSS for renal AML. Data analysis revealed no significant difference in operation time, blood loss, and complication rate among different operative methods. None of the clinical parameters could predict post-operative renal function loss.

CONCLUSIONS: All surgical approaches were associated with high success rate, acceptable complication rates and renal functional loss. Nephron-sparing surgery is a feasible and valid treatment for renal angiomyolipoma.

SOURCE OF FUNDING: None

MP22-15 MANAGEMENT OF URETERAL ENDOMETRIOSIS WITH MODIFIED LAPAROSCOPIC PSOAS HITCH

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INTRODUCTION AND OBJECTIVES: To explore the feasibility of modified laparoscopic Psoas Hitch to treat ureteral endometriosis and evaluate its safety.
MP22-16 LAPAROSCOPIC ADRENALECTOMY FOR METACHRONOUS IPSILATERAL METASTASIS FOLLOWING NEPHRECTOMY FOR RENAL CELL CARCINOMA

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INTRODUCTION AND OBJECTIVES: Although laparoscopic adrenalectomy (LA) is considered as a gold standard approach for adrenalectomy, there are minimal data describing options and outcomes of LA after previous ipsilateral nephrectomy (PIN). We present our results in a group of patients who underwent LA after PIN.

METHODS: From August 2004 to April 2014 we performed at our institution 103 LA. Of this amount we performed 7 LA for metachronous metastasis of renal cell carcinoma (RCC) after PIN. This group was compared to a group of LA without previous nephrectomy.

RESULTS: The group of 7 LA after PIN comprised 5 men (71%) and 2 women (29%); the mean age at the time of surgery was 63 years (range: 50–78); the mean period between nephrectomy and adrenalectomy was 5,1 years (range: 50–78); the mean period between nephrectomy and surgery was 49 months (range: 1–143). Comparison of the group of LA after PIN and the group of LA without previous ipsilateral renal surgery; the operating time was longer in patients after PIN for 5 min (72 vs. 67 min); the mean blood loss was lower in this group (39 vs. 45,4 ml); duration of hospitalization was similar in both groups (6,6 vs. 6,1 days). There was no need for conversion to open surgery and we did not observe any other complications.

CONCLUSIONS: Laparoscopic adrenalectomy for metastasis of RCC after PIN is a technically feasible method in selected patients and it is associated with no significant differences in perioperative data in comparison with the group without prior nephrectomy. The patients benefit from minimally invasive surgery. The performance has required an experienced laparoscopic surgeon.

SOURCE OF FUNDING: None

MP22-17 ASSOCIATION OF R.E.N.A.L NEPHROMETRY SCORING SYSTEM AND CENTRALITY INDEX SCORE WITH THE OUTCOME OF LAPAROSCOPIC PARTIAL NEPHRECTOMY

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INTRODUCTION AND OBJECTIVES: Laparoscopic partial nephrectomy is recommended for small renal cancer patients to preserve their renal function. To investigate the clinical significance of preoperative aspects and dimensions used for radius, exophytic/endophytic, nearness to collecting system or sinus, anterior/posterior, location (R.E.N.A.L) nephrometry scoring system and Centrality Index score for renal neoplasms in patients undergoing laparoscopic partial nephrectomy (LPN) and to evaluate which system can expect a postoperative renal function.

METHODS: From April 2010 to January 2014, 50 patients with renal tumor underwent LPN was evaluated. R.E.N.A.L nephrometry scoring system and Centrality Index score were assigned according to the described protocols for their systems. We investigated the relation between Age, Sex, Body mass Index (BMI), tumor size, tumor size, estimated Glomerular Filtration rate (e-GFR) before surgery, warm ischemia time (WIT), duration of surgery, bleeding, e-GFR 3 months after operation, postoperative complications.

RESULTS: A total of 50 patients were identified with a median tumor size of 3,1 cm (±0,18). Median ischemia time, duration of surgery, bleeding were 29 minutes (±2,2), 197 minutes (±9,1), and 223 ml (±50, respectively. 16 people was low, 25 people was middle, 9 people was high risk in R.E.N.A.L nephrometry scoring system. 22 people was low, 28 people was high in Centrality Index score. Both scoring system was found to have a statistically significant correlation with ischemia time and duration of surgery. But Centrality Index score system only had a statistically significant correlation with bleeding and renal function.

CONCLUSIONS: Centrality Index score system may be more useful than R.E.N.A.L nephrometry scoring system when describing the surgical complexity and postoperative renal function of renal tumors treated with laparoscopic partial nephrectomy.

SOURCE OF FUNDING: None

MP22-18 TUMOR MULTIFOCALITY WAS ASSOCIATED WITH POOR PROGNOSIS IN PATIENTS WITH UPPER URINARY TRACT UROTHELIAL CARCINOMA AFTER RADICAL NEPHROURETERECTOMY, IRRESPECTIVE OF SURGICAL PROCEDURE

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INTRODUCTION AND OBJECTIVES: Upper urinary tract urothelial carcinoma (UTUC) accounts for approximately 5% in all urothelial tumors. While several independent risk factors have been reported, a potential prognostic variable would be the multifocality within the upper urinary tract. The aim of this study was to assess the impact of tumor multifocality for clinical outcomes in patients treated with RNU for UTUC.

METHODS: This study included the 196 patients who had been diagnosed with UTUC based on pathological examination. From January 1975 to April 2014, we retrospectively reviewed the

SOURCE OF FUNDING: None

MP22-22 TUMOR METASTASIS FOLLOWING NEPHRECTOMY FOR METASTASIS OF RENAL ADENOCARCINOMA WITH POOR PROGNOSIS IN PATIENTS WITH UPPER URINARY TRACT UROTHELIAL CARCINOMA AFTER RADI-

SOURCE OF FUNDING: None
association of tumor location with clinical outcomes in the consecutive patients treated with RNU.

RESULTS: Overall, 111 tumors were located in the renal pelvis and 49 in the ureter. Thirty-six tumors were classified as multifocality, involving both renal pelvis and ureter. Fifty-eight patients were treated with laparoscopic RNU and 138 patients underwent open RNU. Lymphadenectomy was performed in 105 patients. The Kaplan-Meier method showed that tumor multifocality was associated with worse cancer-specific survival (CSS) (p=0.04). On multivariate analysis, tumor multifocality (HR 4.6, p=0.03), grade (HR 5.3, p=0.03) and lymph node status (HR 8.3, p<0.01) were independent prognostic factors for CSS. However, surgical procedure, including laparoscopic procedure and open one, was not prognostic factor in the same analysis (HR 0.5, p=0.4).

CONCLUSIONS: Tumor multifocality was an independent prognostic factor for CSS. In addition, surgical procedure was not associated with CSS. Patients with multifocal disease would be candidates for requiring adjuvant therapy and may need to be close follow-up.

SOURCE OF FUNDING: None

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MP22-19 RIGHT-SIDED TRANSPERITONEAL HAND-ASSISTED LAPAROSCOPIC DONOR NEPHRECTOMY: HYBRID TECHNIQUE USING A SATINSKY CLAMP TO MAXIMIZE THE LENGTH OF THE RENAL VEIN

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INTRODUCTION AND OBJECTIVES: Laparoscopic harvesting of the right kidney is technically more challenging than that of the left kidney. The aim of this study is to report our experiences of right hand-assisted laparoscopic live donor nephrectomies (HALDN) with hybrid technique using a Satinsky clamp.

METHODS: We retrospectively analyzed a total of 253 patients, who underwent HALDN (51 right and 202 left) from January 2003 to December 2012. Perioperative outcomes including operative time, estimated blood loss, warm ischemic time, hospital stay, conversion to open surgery, complications and renal function recovery in recipients were collected and compared between right HALDN and left HALDN groups.

RESULTS: The procedure was performed successfully in all 253 patients. The mean operation time (224.3±35.3 vs. 217.5±40.9 minutes), estimated blood loss (128.1±29.4 vs. 123.6±36.1 mL) and warm ischemic time (3.3±0.9 vs. 3.1±0.9 minutes) were not statistically different between the two groups (p=0.05). The average time to oral intake (2.4 vs. 2.1 days) and mean hospital stay (4.9 vs. 5.5 days) were similar between two groups. There were 5 complications (2 intraoperative, 3 postoperative, 9.8%) including 1 open conversion in right HALDN group and 28 complications (6 intraoperative, 22 postoperative, 13.9%) occurred in left HALDN group (p=0.05). The mean serum creatinine level and glomerular filtration rate in the recipients were not significantly different from postoperative day 1 to 1 year between two groups.

CONCLUSIONS: Right HALDN with hybrid technique using a Satinsky clamp can be technically feasible, safe and a visible option for minimally invasive organ donation when left kidney donation is not desired.

SOURCE OF FUNDING: None

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MP22-20 A NOVEL TECHNIQUES OF RETROPERITONEAL LAPAROSCOPIC NEPHRON-SPARING SURGERY WITHOUT SUTURE (WITH VIDEO)

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INTRODUCTION AND OBJECTIVES: To evaluate a novel techniques of retroperitoneal laparoscopic nephron-sparing surgery for kidney tumors without suture.

METHODS: 6 selected patients with kidney mass most of which were out of kidney surface underwent nephron-sparing operation through retroperitoneal laparoscopic approach without suture in our hospital from December, 2010 to April, 2014. There were 4 men and 2 woman with the mean age 58 year old. The mean tumor size was 2.0 cm in diameter (range from 1.5 to 3.0 cm). The clamp of renal artery without suture were performed during the laparoscopic operations.

RESULTS: All the procedures were technically successful without any conversion to open and without no blood transfusion. There were no any haemorrhage, urine leakage complications occurred after operations. The average warm ischemia time is 5 mins (4–7 mins), with average blood loss 50 ml (30–80 ml). Pathological examination confirmed renal clear cell carcinoma in 6 patients. All of the mass margins were negative.

CONCLUSIONS: Retroperitoneal laparoscopic partial nephrectomy without suture is safe and effective for the small tumor less than 0.5 cm deep in the kidney with a shorter warm ischemia time which is beneficial to kidney function.

SOURCE OF FUNDING: No

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MP22-21 UNUSUAL ADULT ADRENAL GANGLIONEUROBLASTOMA

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INTRODUCTION AND OBJECTIVES: Ganglioneuroblastoma is an uncommon malignant tumor and is extremely rare in adults.

METHODS: Here we report the case of a 27-year-old woman with adrenal ganglioneuroblastoma. We also reviewed the other eleven adult adrenal ganglioneuroblastoma.

RESULTS: Mean age at diagnosis of the reported cases was 37.6, range from 20 to 59. Male were predominantly affected (8:4). In all 12 cases, 5 showed increased urine catechols or its metabolites. However, they could not distinguish ganglioneuroblastoma from pheochromocytoma. In our case, we found the obvious increasing of NSE. It may become a promising method to diagnose adult adrenal ganglioneuroblastoma.

CONCLUSIONS: Male patients were likely to suffer from this disorder. There was no specific performance on radiologic imaging. The diagnostic function of urine catechols was limited. Neuron-specific enolase (NSE) may become a promising method to diagnose adult adrenal ganglioneuroblastoma.

SOURCE OF FUNDING: No

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MP22-22 AN UNUSUAL CASE OF TREMENDOUS NON-PROGRESSED CHROMOPHOBE RENAL CELL CARCINOMA FOR 8 YEARS PERFORMED BY LAPAROSCOPE

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INTRODUCTION AND OBJECTIVES: It was a miracle that a patient lived with tremendous non-progressed renal malignant tumor for 8 years.

METHODS: Here we present such a case. A 32-year-old male patient, presented with no symptoms associated with the renal tumor, and no remarkable past medical history. He did not have obvious loss of weight and appetite. CT scanning showed a diameter 12 cm tumor at the upper pole of the right kidney.

RESULTS: We performed trans-abdominal laparoscopic right radical nephrectomy. The surgery was successful and no any complications occurred. Operation time was 95 minutes. Macroscopic cut surface of the resected specimen was shown. Length of incision was only about 7 cm. Histopathological examination confirmed this tumor to be a chromophobe renal cell carcinoma.

CONCLUSIONS: Preoperative diagnosis of chromophobe renal cell carcinoma is difficult and laparoscopy surgery for larger chromophobe renal cell carcinoma is effective and safe.

SOURCE OF FUNDING: No

MP22-23 LAPAROSCOPIC ADRENALECTOMY FOR PHEOCHROMOCYTOMA: HEMODYNAMIC AND OUTCOME COMPARISON BETWEEN SMALL AND LARGE TUMORS

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INTRODUCTION AND OBJECTIVES: Surgical difficulty in laparoscopic adrenalectomy for pheochromocytoma increases with tumor size. Large tumors may also be associated with more perioperative hemodynamic events. We compared hemodynamic and surgical outcomes of laparoscopic adrenalectomy for pheochromocytomas in patients with tumors smaller or greater than 4 cm.

METHODS: A retrospective review was performed of laparoscopic adrenalectomies for pheochromocytoma by a single surgeon over a 3 year period. All patients underwent lateral transperitoneal surgery. Hemodynamic and operative data was retrieved and compared for tumors >4 cm versus smaller tumors.

RESULTS: We performed 28 laparoscopic adrenalectomies on 24 patients including 4 simultaneous bilateral surgeries. 15 tumors were greater than 4 cm in size (mean 6.3 cm) while 13 were smaller (mean 2.9 cm). Both groups had similar operating time (138 min vs. 116 mins; p=0.2) and blood loss (181 mL vs. 143 mL; p=0.41) but large tumors had more episodes of intraoperative systolic hypertension (8.7 vs 3.1) and need for postoperative inotropic support (45% vs 28%). The small tumor group had 4 Clavien-Dindo grade 1 and 1 grade 3a complications while the large tumor group had 3 grade 1 complications. There were no conversions to open surgery. 18 patients (75%) did not require any anti-hypertensive medications at discharge while 6 of 24 required lower doses.

CONCLUSIONS: Laparoscopic adrenalectomy can be safely performed for patients with pheochromocytomas greater than 4 cm in size. Larger tumors are associated with similar operative time, blood loss and complications but more hemodynamic events.

SOURCE OF FUNDING: None

MP22-24 COMPLETE LAPAROSCOPIC NEPHROURETERECTOMY WITH INTRAVESICAL LOCKABLE CLIP FOR UROTHELIAL CARCINOMA OF UPPER URINARY TRACT

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INTRODUCTION AND OBJECTIVES: We present complete laparoscopic nephroureterectomy (CLNUE) with intravesical lockable clip (WILC).

METHODS: From 1/2010 to 4/2014, 37 patients were indicated to CLNUE-WILC. First step is transurethral excision of ureterovesical junction with Collin’s knife deeply to the paravesical fat tissue. From the suprapubic region, 5 mm port is introduced in the urinary bladder. Stump of the ureter is grasped with biopsy forceps and on the end of ureter Hem-o-lok® clip size ML (applicator is 5 mm) is applied. Patient is rotated to the flank position and standard laparoscopic nephrectomy is performed. Only ureter is not divided and it is liberated completely. Clip on the distal ureter if proof of completion of ureterectomy.

RESULTS: CLNUE was performed by 5 surgeons. The mean time was 164.5 (115–200) min, blood loss 201.4 (0–1200) mL. In four cases (10.5%) among first 8 cases application of clip failed and CLNUE were finished with non-occluded ureter. In 8 cases, laparoscopy was combined with open surgery (4x conversion of nephrectomy phase, 4x open liberation of distal ureter). Four complications by Clavien: II (wound infection), 2xIIIb (bleeding from prostate/nephrectomy bed) and V (heart failure in day of operation). The mean hospital stay was 9.8 (6–18) days. Follow-up is known in all patients - mean 25.0 (0–51.5) months.

CONCLUSIONS: CLNUE is fast, reproducible and safe surgery. Need of conversion doesn’t disrupt oncological safety. Disadvantages are following: need of changing of position, two method (endoscopy and laparoscopy), risk of inability to apply clip, unclosed defect of urinary bladder. It isn’t appropriate for tumour of distal ureter.

SOURCE OF FUNDING: MH CZ - DRO (Faculty Hospital in Pilsen - FNPl, 00669806), the Charles University Research Fund (project number P36), grant IGA NT 12010-5.

MP22-25 SAFETY OF HEM-O-LOCK CLIPS FOR VASCULAR CONTROL DURING LAPAROSCOPIC NEPHRECTOMY IN KOREAN PEOPLE: A MULTICENTER CASE CONTROL STUDY

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INTRODUCTION AND OBJECTIVES: We compared laparoscopic procedure to open nephrectomy for evaluating the the safety of HL clips in achieving vascular control.

METHODS: 4 tertiary hospitals performed 211 laparoscopic (group 1) and 106 open nephrectomies (group 2) from February 1999 to May 2011. We used HL clips to control the renal artery
and vein in group 1 except some cases the renal vein. No HL clip was used for controlling renal vasculature in group 2.

RESULTS: Age, pathologic stage, previous abdominal surgery, side of surgery, types of surgery for kidney disease, and body mass index didn’t differ statistically in both group. Laparoscopic nephrectomies consisted of 144 radical nephrectomies, 36 simple nephrectomies, 22 radical nephroureterectomies, and 9 donor nephrectomies. Three major vessel injuries occurred in group 1 (one IVC tearing and 2 renal vein injuries) which were managed by laparoscopic techniques and two in group 2 (one IVC tearing and 1 renal artery injury), respectively. 3 reoperations were performed in group 1 (2 cases due to port site bleeding and 1 duodenal injury), and 4 in group 2 (2 postoperative bleeding due to unknown origin, 1 adrenal bleeding, and 1 spleen injury). None of peri-operative complications was attributable to clip dislodgement in group 1 and to renal vascular control in group 2 (Table 1). Number of HL clips placed on the patients side of renal vasculature was 2.08 (2–3).

CONCLUSIONS: Properly applied HL clips to control the renal vasculature were safe option compared to open procedure.

SOURCE OF FUNDING: None

MP22-26 LAPAROSCOPIC EXCISION OF SYMPTOMATIC SIMPLE RENAL CYST: REPORT OF 127 CASES
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INTRODUCTION AND OBJECTIVES: Simple renal cyst is a benign diseases that may needs intervention when become symptomatic. Treatment options include aspiration or excision. We evaluated the outcome of the laparoscopic excision in management of the symptomatic simple renal cyst.

METHODS: Between September 2007 and March 2013, a total of 127 patients, 78 women, 49 men, underwent laparoscopic excision symptomatic simple renal cyst. Mean patient age was 49.5 years (26 to 73), and mean cyst diameter was 73 mm (53–110). All patient were operated under general anesthesia, and were followed for postoperative pain, analgesic requirement, fever, infection, and recurrence.

RESULTS: After procedure patients followed 3 days for early complications (fever, pain requiring narcotics, and infection), and then followed on 6, 12, 24, and 36 weeks after operation with ultrasound for recurrence of diseases. Early complications were recorded in 22.8%, and recurrence in 6 cases (0.5%).

CONCLUSIONS: Laparoscopic excision seems a better alternative than aspiration alone for symptomatic simple renal cyst, however, it requires hospitalization, anesthesia and more early post-op complication.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Complex renal stones which ESWL is not indicated should undergo other modalities, which PCNL is the gold standard. Laparoscopy seems a good alternative for staghorn stones. We evaluated the feasibility, safety and efficacy of laparoscopic pyelolithotomy in our center.

METHODS: Between September, 2010 to December, 2013, 46 cases of staghorn renal stone underwent laparoscopic removal. Procedure was performed in flank position, under general anesthesia, colon mobilized, pedicle and renal pelvis explored intrapronely. Stone extracted through a pyelotomy incision and ureteral stent put. Pyelotomy incision repaired and hemovac drain inserted.

RESULTS: Our patients ineled 32 men and 14 women, mean age 42(26–71). Mean operation time was 115 minutes (95–160), and mean hospital stay 2.5 days (2–4). 4 patient received blood transfusion. 3 patients had residual stone in calices who underwent ESWL. Fever was seen in 6 patients and well controlled with antipyretics.

CONCLUSIONS: Laparoscopic pyelolithotomy is a good alternative method in selected cases.

SOURCE OF FUNDING: None

MP22-27 LAPAROSCOPIC PYELOLITHOTOMY: A GOOD ALTERNATIVE FOR PCNL AND OPEN SURGERY
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INTRODUCTION AND OBJECTIVES: To assess risk factors for failure of laparoscopic pyeloplasty in long-term follow-up results of a single surgeon.

METHODS: 121 patients underwent laparoscopic pyeloplasty including robot-assisted and single-site operations between December 2001 and December 2013. Of these patients, 65 patients who underwent standard laparoscopic pyeloplasty with transperitoneal approaches and followed-up more than 12 months were enrolled into this study. Chief complaints were flank pain (n = 57) patients and incidental detection (n = 8). Mean length of stricture was 1.1 cm (range, 0.2 – 3.7 cm) in radiologic studies. Degree of hydronephrosis was grade 1/4 (n = 5), grade 2/4 (n = 10), grade 3/4 (n = 36), and grade 4/4 (n = 14). Obstructive pattern (more than 20 minutes of T1/2) in 99mTc-mercaptoacetyltriglycine (MAG)3 renal scan was present in 53 patients (81.5%).

RESULTS: Fifty-seven patients were treated with dismembered Anderson-Hynes pyeloplasty and eight patients with Fenger pyeloplasty. During the operation, crossing vessels were found in 27 patients (41.5%). Although there was no open conversion, two patients with colon and spleen injuries were detected postoperatively. Mean follow-up period was 36.5 months. Follow-up intravenous pyelography and renal scan showed improvements in 59 patients, and radiologic success rate was 90.8%. Eight patients showed failure on radiologic or symptomatic evaluation, and overall success rate was 87.7%. There was no risk factor relating the radiological and overall failures of laparoscopic pyeloplasty.

CONCLUSIONS: Long-term follow-up results support laparoscopic pyeloplasty as the standard treatment for UPJO. It
MP23 ENDOUROLOGY: IMAGING 1

MP22-29 RETROPERITONEOSCOPIC LEFT LIVING DONOR NEPHRECTOMY: EXPERIENCES OF 14 CASES

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INTRODUCTION AND OBJECTIVES: To presents our initial experiences of retroperitoneoscopic living donor left nephrectomy and explore its safety and probability.

METHODS: A total of 14 related living donor underwent left retroperitoneoscopic nephrectomy from Sep 2012 to Dec 2013. Four Trocars were used in our operation. The renal vessels were dissected and freed completely first, followed by mobilization of the kidney with Harmonic scalpel, the ureter was cut with 10 cm long preservation. A 6–7 cm long Gibson incision was perform in the left lower abdomen and left hand was put inside the retroperitoneal space to hold the kidney and the renal artery and renal vein were managed with Hemolock respectively. The kidney was taken out quickly, put into the ice water and infused immediately.

RESULTS: All the 14 operations were successfully finished without any conversion. All the kidney had single renal artery and renal vein as preoperation CTA imaging. The operation time was 90–215 min and the warm time is 60–90 sec. The estimated blood loss was 15–50 ml. The length of the renal artery is from 2.2–3.4 cm and renal vein is from 2.0–3.0 cm. No intra- and peri-operation complication happened. The patients were discharged at 4–5 days postoperatively. The donor kidney function was normal during 3–12 months followup. The donor kidney in recipient functioned very well during the followup.

CONCLUSIONS: Retroperitoneoscopic living donor left nephrectomy is a safe procedure and could replace traditional open procedure in some cases.

SOURCE OF FUNDING: None

MP22-30 COMPLICATION OF LAPAROSCOPIC AND OPEN NEPHRECTOMY IN SOUTHERN CHINA: COMPARISON USING THE MODIFIED CLAVIEN CLASSIFICATION SYSTEM

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INTRODUCTION AND OBJECTIVES: To compare complication rates of laparoscopic nephrectomy and open nephrectomy using standardized classification method.

METHODS: We retrospective included 843 patients from March 2006 to November 2012, of whom 88 had laparoscopic radical nephrectomy (LRN), 526 had open-RN, and 42 had laparoscopic partial nephrectomy (LPN), and 187 had open-PN. Modified Clavien classification system was applied to quantify complications of nephrectomy. Fisher’s exact or chi-square test was used to compare complication rates between laparoscopic and open approaches.

RESULTS: The overall complication rate was 19.31%, 30.04%, 35.71%, and 36.36% in LRN, open-RN, LPN, and open-PN respectively. Low grade complication rate in open-RN was moderately higher than that in LRN (27.19% and 18.18%, P=0.074). More Grade II complications (OR = 2.593, 95% CI 1.172–5.737, P=0.010) and longer post-operation hospital stay (9.2 days and 7.6 days, P<0.001) were observed in open-RN compared with LRN. In multivariable analysis, surgical approach (LRN/open-RN) (P=0.036), age (P=0.044), height (P=0.020), systolic pressure (P=0.012), fast blood glucose level (P=0.032), and blood loss during operation (P=0.011) were significant predictors for grade II complications in RN. LPN had similar complication rate compared with open-PN.

CONCLUSIONS: In conclusion, LRN had advantages of less grade II complications and shorter post-operation hospital stay than open-RN. There was no significant difference of complication rate in LPN and open-PN. Older age and more blood loss during operation would also contribute to more grade II complications in RN.

SOURCE OF FUNDING: None

MP23-01 THE SAFETY AND EFFICACY OF RETROGRADE INTRARENAL SURGERY (RIRS) FOR THE TREATMENT OF RENAL STONES OVER 2-4 CM IN DIAMETER: COMPARISON WITH PERCUTANEOUS NEPHROLITHOTOMY (PCNL)

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INTRODUCTION AND OBJECTIVES: Although percutaneous nephrolithotomy (PCNL) has been accepted as a standard method for the management of renal stones over 2 cm in diameter, retrograde intrarenal surgery (RIRS) is becoming another option with the improvement of technique with flexible ureteroscopes. We evaluated the results of our series of RIRS for renal calculi with the size between 2 and 4 cm and compared with those of PCNL.

METHODS: Between January 2011 and May 2013, a total of 128 patients underwent endoscopic surgeries for renal calculi with the size between 2 and 4 cm. Of these patients, 30 patients underwent RIRS and 98 patients underwent PCNL. We compared surgical outcomes including blood loss, operation time, hospital stay, complications and success rate between two groups. We defined success as the absence of any residual stones in the kidney or stone fragments less than 2 mm that were too small to be extracted during follow-up.
RESULTS: The mean estimated blood loss was significantly lower in RIRS group. Operation time and hospital stay were significantly shorter in RIRS group. There was no significant difference in complication rate between two groups. Success rate was higher in second group at 1-month follow up, however it was not significantly different at 3-month follow up.

CONCLUSIONS: RIRS showed favorable results in regard of blood loss, operation time and hospital stay and comparable success and complication rates compared with PCNL. It can be a good alternative for PCNL for the treatment of renal stones with the size between 2 and 4 cm.

SOURCE OF FUNDING: None

MP23-02 THE BEST CHOICE AND USE OF GUIDE WIRES WHEN BUTTRESSED DURING STENTING OR URETEROSCOPY
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INTRODUCTION AND OBJECTIVES: To overcome a large impacted stone that impedes passage of the guide wire we sometimes use a ureteric catheter to support the flexible tip of the wire. We compared four guide wires with regard to their tip bending force when buttressed at various distances from the tip.

METHODS: Using an Imada digital force gauge DS2 we measured the tip bending force of four guide wires at different distances from the tip [the Nitinol Biwire, the Fixed core polytetrafluoroethylene (PTFE), the Amplatz Extra stiff (Cook Medical Inc) and the Nitinol straight tip Sensor (Boston Scientific Microvasive)].

RESULTS: The PTFE and the Amplatz wires had a more rigid tip and required high forces to bend the tip when supported closer at 3 and 2 cm from the tip (1.51 ± 0.6 vs 0.1 ± 0.009 N, P < 0.001) and (6.86 ± 5.5 vs 0.27 ± 0.03 N, P = 0.001) respectively. The two Nitinol Hydrophilic tip wires required the least amount of force to bend the flexible tip at all distances measured, but this force increased dramatically to forces capable of perforating the ureter when supported at a distance less than 1 cm from the tip (2.85 ± 0.34 vs 1.86 ± 0.26 N, P < 0.001 @ 0.5 cm from the tip) for the Biwire and Sensor wire respectively.

CONCLUSIONS: It is safer to use Hydrophilic wires when using a ureteric catheter to buttress and support the wire, but the ureteric catheter should remain at least 1 cm proximal to the tip of the hydrophilic wire to minimize the risk of ureteric perforation when the wire exits the ureteric catheter.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Staged RIRS is safe and effective treatment for renal calculi up to 3 cm. It is important to adopt stone volume

is the golden standard of treatment in patients with normal renal function and contralateral kidney. Nephrectomy can significantly impair a patient’s renal function, which can lead chronic renal disease and eventually permanent hemodialysis. Endourological laser ablation of UUT-UC has been suggested in guideline and textbooks as a viable option for solitary kidney and bilateral disease. Here, we present our clinical experience with endourological laser ablation of UUT-UC in patients with solitary kidney or impaired renal function.

METHODS: In a retrospective study, a total of 9 endourological laser ablations were done from January 2009 to March 2013. We search our surgical database reviewed charts for patients whom underwent either nephroscopy or ureteroscopy procedures.

RESULTS: There was not a noticeable deviation from post-operative and pre-operative creatinine level (2.49 vs 3.01). Two patients passed away while the remaining seven patients are currently under rigorous follow-up with no evidence of recurrence. The high mortality rate (22%) is partially due to the fact the endourological approach was suggested for these patients due to multiple underlying disease (solitary kidney, poor renal function, palliative care).

CONCLUSIONS: For UUT-UC, nephroureterectomy offers good cancer control with low local recurrence rate but has shown to impair renal function. In selected patients, endourological laser ablation of UUT-UC is an adequate option (solitary kidney, impaired renal function, etc). Due to high local recurrence rate, we recommend reserving endourological approach for carefully selected patients and rigorous follow-up per guideline protocol after the procedure.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: RIRS is becoming a viable and attractive alternative for the treatment of renal stones up to 3 cm. The aim of this study was to assess the efficacy and safety of RIRS for the treatment of renal stones > 2 and < 3 cm.

METHODS: From September 2012 to September 2013 we have prospectively enrolled all patients with stones between 2 and 3 cm who had undergone RIRS. They underwent plain abdominal CT scan, preoperatively and 1-month after the procedure. Primary endpoint was the detection of stone free rate (SFR). Secondary endpoints were to evaluate relationships between stone volume and diameter with SFR, operating time (OR), staged procedures, hospital stay and complications.

RESULTS: 42 patients were enrolled; mean age was 56.6 ± 12.3 years; mean maximum stone diameter was 23.7 ± 4.3 mm; mean stone volume 3654 ± 2053 mm³. OR time per procedure was 76.5 ± 21.6 min; hospital stay per procedure was 1.3 ± 0.9 days; primary SFR was 80.9%; overall SFR was 92.8%. Mean number of procedures per patient was 1.28. Complications were Grade I in 7 patients (16.6%) and Grade II in 3 (7%). Stone volume was statistically correlated to SFR (p < 0.01), to longer OR time (p < 0.05) and to staged procedures (p < 0.01). No statistically significant association was found between maximum stone diameter and other variables considered.

CONCLUSIONS: Staged RIRS is safe and effective treatment for renal calculi up to 3 cm. It is important to adopt stone volume
as a marker of stone burden because allows appropriate treat-
ments planning after adequate patients’ counseling about the
chances of a stage procedures.
SOURCE OF FUNDING: None

MP23-05 A SINGLE DOSE OF INTRAOPERATIVE ANTI-
BIOTICS IS SUFFICIENT TO PREVENT URINARY TRACT
INFECTION DURING URETEROSCOPY
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INTRODUCTION AND OBJECTIVES: AUA Best Practice
Guidelines for ureteroscopic stone treatment recommend anti-
biotics coverage for less than 24 hours after the procedure. The
purpose of this study was to evaluate if the rate of post-operative
urinary tract infection (UTI) differed in patients receiving a
single dose of antibiotics pre-operatively compared to those
patients who also received post-operative antibiotics.
METHODS: A retrospective review was performed of consec-
utive patients at two institutions, University of British Columbia
and Massachusetts General Hospital, Harvard. All patients were
given a single dose of antibiotics prior to ureteroscopic stone
treatment. A subset of patients were also given postoperative
antibiotics ranging in time and selection of antibiotic. Patients
who displayed symptoms of infection had a urine culture per-
fomed for speciation and antibiotic sensitivity.
RESULTS: Eighty one patients underwent ureteroscopy for
renal calculi. Patients with pre and post operative antibiotics
were compared to those receiving only pre-operative antibiotics.
Eight (9.9%) patients in total (2 from pre-operative antibiotic and
6 from the pre and post-operative antibiotic group, P = 0.219)
developed UTIs in the post-operative period. Surgical factors
such as ureteral access sheath, bilateral procedures, use of basket
or laser was not associated with rates of infection or whether the
surgeon prescribed post-operative antibiotics. Risk factors such
as pre-operative stenting, nephrostomy tubes, and foley catheters
did not differ between groups or predispose patients to post op-
erative infections.
CONCLUSIONS: Our data suggests that post-operative anti-
biotics do not decrease infection rates following ureteroscopic
stone treatment, even among patients with risk factors for in-
fecction. A single pre operative dose is sufficient.
SOURCE OF FUNDING: None

MP23-06 URETERORENOSCOPY FOR UPPER TRACT
UROTHELIAL CARCINOMA: HOW OFTEN ARE WE MISS-
INGS LESIONS?
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INTRODUCTION AND OBJECTIVES: To determine the
ability of ureteroscopy to identify the precise number and
location of all lesions, as compared to pathologic review of ne-
phroureterectomy specimens, which has not previously been
determined. Upper tract urothelial carcinoma (UTUC) comprises
5% of all urothelial malignancies in the United States. With
advances in endoscopic equipment, there has been a move to-
ward using flexible ureteroscopes to perform ureteroscopy
(URS) as part of the diagnostic evaluation and management.
METHODS: We identified patients who had undergone URS
with biopsy prior to radical nephroureterectomy for UTUC.
Operative reports for each procedure were reviewed and com-
pared to the surgical pathology reports.
RESULTS: URS correctly identified the number and location of
lesions in 57/76 patients (75%). The most common locations for
missed lesions were in the ureter (9 patients) and renal pelvis (8
patients). Carcinoma in situ was missed on the initial biopsy for 9
patients. 3/11 patients (27%) with a solitary lesion in the distal
ureter visualized by URS had a missed lesion in the renal pelvis.
URS with biopsy accurately predicted the grade of UTUC lesions
in 79% of cases, while 65% of patients were upstaged on final
pathology.
CONCLUSIONS: Ureteroscopy with biopsy can accurately
map UTUC in the majority of patients. However, about 25% of
patients will have missed lesions, and nearly 50% of these pa-
tients will have a missed CIS lesion. Under-grading and under-
staging of UTUC lesions remain shortcomings with potentially
severe consequences.
SOURCE OF FUNDING: None

MP23-07 ELLIPSOID STONE VOLUME MEASURED ON
COMPUTED TOMOGRAPHY IMAGING CORRELATES
WITH COMPUTER GENERATED 3D VOLUMES
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INTRODUCTION AND OBJECTIVES: Numerous CT-based
parameters describing stone size have been reported to predict
shockwave lithotripsy (SWL) success. Amongst these, stone
volume has greatest predictive value. Widespread use of this
metric is limited by the specialized software and expertise re-
quired for its determination. The majority of stones considered
for SWL are ellipsoid in shape. Therefore, we hypothesize that
the manually measured ellipsoid stone volume (ESV) can closely
approximate the computer-generated stone volume (CSV).
METHODS: CT scans for 24 patients with urinary stones
greater than 4 mm were reviewed by a radiologist. CSV was
generated utilizing the TeraRecon® 3D volume rendering soft-
ware. To determine ESV, the anteroposterior (AP), horizontal
(H) and craniocaudal (CC) stone dimensions were measured.
ESV was calculated based upon the ellipsoid volume formula,
volume = (π/6) × (AP × H × CC). Correlation was assessed uti-
lizing the Pearson product-moment correlation coefficient.
RESULTS: Twenty-eight stones were analyzed. 25/28 (89.2%)
stones were ellipsoid in shape. For all stones analyzed, the cor-
relation coefficient between CSV and ESV was 0.9778. When
non-ellipsoid stones were excluded from the analysis, the cor-
relation coefficient between CSV and ESV was 0.9893.
CONCLUSIONS: We describe a novel method for estimating
stone volume that is accurate and easy to rapidly determine.
Incorporation of the ellipsoid stone volume into preoperative
planning can facilitate better preoperative patient selection for
SWL.
SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: Several scoring systems have been developed to determine the complexity of renal tumors; however, many make it difficult to determine component scores. We sought to perform an external validation of the Zonal Nephro Scoring System to determine its ability to predict the complexity of a renal lesion.

METHODS: Patients undergoing partial nephrectomy were prospectively enrolled. Both RENAL Nephrometry and Zonal Nephro scores were calculated based on preoperative axial imaging. The Zonal Nephro Scoring System anatomically characterizes renal tumors based on: nearness to the collecting system, physical location, radius, and organization of the tumor. Logistic regression analyses were performed to determine if a difference exists between the two scoring systems in predicting operative outcomes.

RESULTS: 73 patients underwent evaluation. The mean tumor size was 3.26 cm (range 1.10 – 9.20), warm ischemia time (WIT) was 16.8 minutes (8 – 27), operative time (OT) was 159 minutes (86 – 306), and EBL was 92 cc (25 – 500). There were zero intraoperative and four (5%) postoperative complications. On univariate analysis, the Zonal Nephro score significantly predicted EBL (p=0.05), while the Nephrometry score did not (p=0.352). On multivariate analysis, both scores were independent predictors for WIT (Zonal p<0.001, Nephrometry p=0.003) and OT (Zonal p=0.005, Nephrometry p=0.015).

CONCLUSIONS: Both the Zonal Nephro and Nephrometry scoring systems are capable of predicting renal tumor complexity. Moreover, the Zonal Nephro score may more accurately predict EBL and may also be easier for determining component scores.

SOURCE OF FUNDING: None
MP23 INTRODUCTION AND OBJECTIVES: Fluoroscopy is widely used during endourologic procedures and is associated with significant radiation exposure. Our objective was to estimate patient radiation exposure during fluoroscopy with either a fixed table or portable C-arm during simulated ureteroscopy.

METHODS: Materials and Methods: A validated male anthropomorphic model was placed supine on both a cystoscopy operating table and a fixed fluoroscopy table unit. A GE 9900 C-arm was used to perform fluoroscopy with the cystoscopy table. Metal oxide semiconductor field effect transistor dosimeters were placed at 20 organ-specific locations in the model to measure organ-specific dosages. Continuous fluoroscopy was performed for three separate 5–6 minute runs. Measured organ dose rates (mGy/sec) were multiplied by their tissue weighting factor (International Commission on Radiological Protection) and summed to determine effective dose rate (EDR, mSv/sec).

RESULTS: Most organs, including: bone marrow, liver, stomach, spleen, pancreas and gallbladder were all exposed to significantly greater doses with the fixed table compared to the C-arm. The total EDR was significantly higher by an order of magnitude during fixed-table compared with portable C-arm fluoroscopy at 0.0240 ± 0.0019 mSv/sec and 0.0029 ± 0.0005 mSv/sec, respectively (p = 0.0024).

CONCLUSIONS: Estimated organ doses and EDR are significantly higher during fluoroscopy using fixed-table compared with portable C-arm fluoroscopy. The majority of organs, including the most radio-sensitive organs, are exposed to more radiation using the fixed table. Urologists should be aware of this difference when considering operating room design and purchasing fluoroscopy equipment to perform ureteroscopy or percutaneous nephrolithotomy.

SOURCE OF FUNDING: None

MP23-12 INTRODUCTION AND OBJECTIVES: The use of unenhanced CT-KUB as the initial imaging modality in the assessment of suspected ureteric-colic has become widespread, and is the ‘gold-standard’. It has been shown to influence outcomes of PCNL. However, the SD and range of HU measurement which is thought to represent structural heterogeneity has yet to be evaluated. Our objective was to identify the predictive value of mean, SD and range of HU on incidence of residual stone and secondary procedure after PCNL.

METHODS: We identified 309 PCNLs, from a consecutive series (January 2006 to December 2013) for which CT was available for stone density assessment. Mean, SD and range of HU were measured by drawing an elliptical region of interest within the largest stone diameter in axial plane. Logistic regression and ROC curve analysis were performed to evaluate the predictive value of HU measurements.

RESULTS: Our population had an overall stone free rate (SFR) at 3 months of 78.3% and 7.8% had a second look nephroscopy. Contrary to our hypothesis, mean and SD of HU was not found to predict SFR at 3 months. On secondary analysis, mean and range of HU predicted incidence of second look nephroscopy OR 2.74 (1.21, 6.20), P = 0.016, and OR 1.159 (1.03, 1.30), P = 0.015 respectively. Mean, SD and range of HU showed similar predictive value by ROC analysis (AUC’s 0.597, 0.601 and 0.619 respectively).

CONCLUSIONS: According to our data, stone density has no predictive value on residual stone after treatment. Higher mean HU however does predict a higher chance of needing a second look nephroscopy. This pre-operative assessment can be used for surgical planning.

SOURCE OF FUNDING: None

MP23-13 INTRODUCTION AND OBJECTIVES: Stone density has been shown to influence outcomes of PCNL. However, the SD and range of HU measurement which is thought to represent structural heterogeneity has yet to be evaluated. Our objective was to identify the predictive value of mean, SD and range of HU on incidence of residual stone and secondary procedure after PCNL.

METHODS: We identified 309 PCNLs, from a consecutive series (January 2006 to December 2013) for which CT was available for stone density assessment. Mean, SD and range of HU were measured by drawing an elliptical region of interest within the largest stone diameter in axial plane. Logistic regression and ROC curve analysis were performed to evaluate the predictive value of HU measurements.

RESULTS: Our population had an overall stone free rate (SFR) at 3 months of 78.3% and 7.8% had a second look nephroscopy. Contrary to our hypothesis, mean and SD of HU was not found to predict SFR at 3 months. On secondary analysis, mean and range of HU predicted incidence of second look nephroscopy OR 2.74 (1.21, 6.20), P = 0.016, and OR 1.159 (1.03, 1.30), P = 0.015 respectively. Mean, SD and range of HU showed similar predictive value by ROC analysis (AUC’s 0.597, 0.601 and 0.619 respectively).

CONCLUSIONS: According to our data, stone density has no predictive value on residual stone after treatment. Higher mean HU however does predict a higher chance of needing a second look nephroscopy. This pre-operative assessment can be used for surgical planning.

SOURCE OF FUNDING: None

MP23-14 INTRODUCTION AND OBJECTIVES: Stone burden has been reported as an independent predictor of post-operative outcomes of percutaneous nephrolithotomy (PCNL). We aimed to identify the optimal method of measurement of stone burden to predict residual stone at 3 months post percutaneous nephrolithotomy (PCNL).

METHODS: We evaluated the use of CT-KUB within 3 busy Emergency-Departments within the trust from 27/02/14–31/03/14, the diagnostic yield in terms of urolothiasis and other diagnoses. Information examined included demographics, presence of ureteric and/or renal calculi, and the presence of other diagnoses accounting for symptoms.

RESULTS: Most organs, including: bone marrow, liver, stomach, spleen, pancreas and gallbladder were all exposed to significantly greater doses with the fixed table compared to the C-arm. The total EDR was significantly higher by an order of magnitude during fixed-table compared with portable C-arm fluoroscopy at 0.0240 ± 0.0019 mSv/sec and 0.0029 ± 0.0005 mSv/sec, respectively (p = 0.0024).

CONCLUSIONS: Estimated organ doses and EDR are significantly higher during fluoroscopy using fixed-table compared with portable C-arm fluoroscopy. The majority of organs, including the most radio-sensitive organs, are exposed to more radiation using the fixed table. Urologists should be aware of this difference when considering operating room design and purchasing fluoroscopy equipment to perform ureteroscopy or percutaneous nephrolithotomy.

SOURCE OF FUNDING: None
METHODS: We identified 246 PCNL’s from a prospective database from January 2006 to December 2013 that had a pre-operative CT and post-operative follow-up data at 3 months available. Stone burden was assessed 3 different ways on reformatted coronal CT images: 1) elliptical surface area (SA) calculated as longest perpendicular diameter * π/4; 2) manual outline of stone and computer SA calculation; 3) automatic 3D volume rendering and calculation using specific CT software. SA’s were reported in increments of 500 mm². Logistic regression, receiver operative characteristics (ROC) curve analysis and area under the curve (AUC) were used to evaluate the predictive value of each method.

RESULTS: Our cohort had a mean age of 55.7 years, was 42.3% female and had an incidence of residual stone of 11.9%. All measurement methods predicted residual stone stone; OR1: 1.50, CI 1.20–1.87; OR2: 1.56, CI 1.12–2.08, OR3: 1.241, CI: 1.078–1.427 respectively. AUC’s of ROC analysis were 0.680, 0.665 and 0.666 respectively, demonstrating almost equivalent predictive value of each measurement method.

CONCLUSIONS: We demonstrated that measuring the stone burden by manual outline or 3D volume assessment on reformatted NCCT images has no added value compared to orthogonal measurement with elliptical assumption.

SOURCE OF FUNDING: None

MP23-15 SKIN TO STONE DISTANCE: CAN ONE MEASUREMENT SUBSTITUTE FOR THE AVERAGE OF THREE?

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INTRODUCTION AND OBJECTIVES: Skin to stone distance (SSD), a commonly used CT measurement for predicting shock-wave lithotripsy stone clearance, is the average of three distances from the center of a renal stone to skin at 0, 45 and 90 degree angles. We hypothesized that one measurement, either at 30 or 45 degree angles, could substitute for the SSD average, providing more practical and clinically useful information.

METHODS: Patients from three different IRB-approved hospital databases were identified to have pre-operative CT scans and renal stones. In addition to patient age, gender, and BMI, four pre-operative CT based measurements (0, 30, 45, and 90 degrees) were obtained. Traditional SSD was calculated. Mean patient age and BMI, as well as mean and median SSD differences were compared to either 30 or 45 degree angles using rank-order correlation, and Spearman’s Rho (r) was generated (−1 = negative correlation; 0 = no correlation; +1 = positive correlation). A p-value < 0.05 was considered significant.

RESULTS: Of 151 patients identified, average age was 54 years, mean BMI was 29.5, and half (n = 74) were male gender. Due to non-Gaussian data distribution, a non-parametric model was used for analysis. Patient BMI was moderately correlated to SSD (r = 0.29, p < 0.001). Both angles 30 and 45 degrees highly correlated to SSD (r = 0.977, p < 0.001; r = 0.973, p < 0.001), respectively.

CONCLUSIONS: The angles of 30 and 45 degrees highly correlate to standard computed SSD value and have potential to be convenient and practical alternative measurement for assessing SSD. Further validation in larger patient subsets and correlation to stone free rates are warranted.

SOURCE OF FUNDING: None

MP23-16 DETERMINATION OF URINARY CALCULI COMPOSITION WITH DUAL-ENERGY CT: INITIAL EXPERIENCE

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INTRODUCTION AND OBJECTIVES: Determination of urinary calculi composition is important to select the appropriate treatment, i.e. surgical option or medication for recurrence prevention. In this study, we evaluate the efficacy and accuracy of the latest dual energy computed tomography (DECT) system using various parameters for analysis of the stone ingredient.

METHODS: A total of 28 patients diagnosed as urolithiasis were enrolled in this study. The patients were scanned on DECT (GE Healthcare, Oslo, Norway). The tube potentials were 80 and 140 kV and effective atomic number (Z-eff) was calculated in DECT. The diagnostic efficacy of the DECT system was investigated compared with FTIR (Fourier Transform Infra-Red) spectroscopy (KBr wafer method) of the stone analysis from surgical procedure.

RESULTS: The mean age of the patients was 54 ± 19 years and 7 patients were male. FTIR spectroscopy showed the ingredients of the 28 stones; 23 were calcium-based (18 calcium oxalate, 5 calcium phosphate), 1 struvite, 4 cystine stones. According to the DECT system, The Z-effs on calcium-based, struvite and cystine were 13.1±0.1, 9.8±0.1, and 11.5±0.2, respectively. There was a significant difference between calcium-based stones and the other stone formation, and the Z-eff of struvite stones was significantly (p < 0.05) lower than cystine stones.

CONCLUSIONS: Our data suggest the efficacy of DECT for differentiation of the calcium-based or non-calcium-based stones. DECT has the potential to be a new option to select the treatment for complicated patient with urolithiasis.

SOURCE OF FUNDING: None

MP23-17 ROUTINE HAL-FLUORESCENCE CYSTOSCOPY IMPROVES DETECTION RATE OF CARCINOMA IN SITU IN TRANSCUTANEOUS BLADDER TUMOR RESECTION

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INTRODUCTION AND OBJECTIVES: Carcinoma in situ (CIS) shows highest recurrence and progression rates. Timely detection and consecutive intravesical chemotherapy could at least decelerate the course of CIS. Fluorescence cystoscopy (PDD) was shown to improve CIS detection. However, the selection criteria of patients for PDD remain under discussion. Aim of our prospective study was to evaluate the routine use of PDD for all patients undergoing transurethral bladder tumor resection (TURB) and to correlate intraoperative findings with the pathological grading.
RESULTS: 1,279 bladder tumors were detected. CIS was most common (20%), followed by pTa high grade and pTa low grade tumors (17% and 15%, respectively). Because of the unexpected high rate of CIS 25 consecutive CIS tumors were re-evaluated by a reference pathologist who confirmed all findings. In 31% CIS were only detected by HAL cystoscopy (p < 0.001).

CONCLUSIONS: We could demonstrate that routine fluorescence largely increases the rate of CIS. This underlines that CIS may be present even in non-risk patients. As timely detection and intravesical chemotherapy (i.e., with BCG) were shown to reduce recurrence-free survival we recommend routine PDD for all patients undergoing TURB.

SOURCE OF FUNDING: None

MP23-18 MRI FOR USE IN CYSTIC RENAL MASSES - DOES IT AID THE SURGICAL DECISION MAKING PROCESS?

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INTRODUCTION AND OBJECTIVES: CT has long been the gold-standard for imaging of renal masses, but MRI has benefits in some patients and has been shown to be sensitive at distinguishing between malignant and benign cystic renal disease.

METHODS: All MRI scans of the abdomen from Jan 2007-April 2014 were retrospectively reviewed. Those undertaken for evaluation of renal masses in patients over 16 were included. Those done purely to assess venous involvement of tumours were excluded. There were 37 patients, with median age of 55.

RESULTS: The MRI diagnoses revealed: 15 tumours, 12 complex cysts, 8 simple cysts, 1 AML and 1 normal scan. CT was undertaken before MRI in 24 patients. MRI diagnosis matched CT in 13/24(57%) patients, upgraded the diagnosis in 6/24(25%) and downgraded in 5/24(22%). Where MRI upgraded the working diagnosis of CT(6/24) – these patients all had surgery with malignant histology. In patients where MRI diagnosed a tumour or a complex cyst; 19/27(70%) went on to surgical intervention(14 RCC, 2 oncocytema and one benign cyst), one had a malignant biopsy (small cell) and one is awaiting surgery. Six patients who had complex cysts with low suspicion of malignancy and one atypical appearing solid lesion went onto surveillance.

CONCLUSIONS: MRI has the propensity to change working diagnoses of renal lesions and subsequently alter treatment strategies. A robust scoring system similar to those proposed by Bosniak for CT may assist in clinical evaluation. We believe MRI has the potential to play a significant role in assisting decision making for complex renal cysts.

SOURCE OF FUNDING: None
additional CT imaging between initial diagnosis and stone passage or intervention to determine if their management is altered by the additional imaging study.

METHODS: Retrospective chart review of all urinary stone patients between January 2009 and January 2012 identified at our institution who had repeat CT imaging performed within 6 weeks of the initial urinary stone diagnosis for the same indication. Charts were examined to discover if additional information was gained with repeat CT imaging and/or if repeat CT scan changed stone management.

RESULTS: 1119 patients were identified. 128 patients met inclusion criteria with repeat CT scan. Repeat CT scan (within 6 weeks of initial diagnosis) resulted in a change in planned management in 9/128 patients (7%). Average additional radiation dose per patient was 36.9 mSv. Thirty-six patients underwent CT imaging for flank pain after a ureteral stent had previously been placed.

CONCLUSIONS: Our study showed only 7% of patients who underwent repeat CT imaging had an alteration in the previously planned management for known kidney stones. Repeat imaging with CT is rarely necessary. Once a diagnosis of kidney stone has been made, additional follow-up information and progress can be acquired through physical exam and laboratory values and/or ultrasound examination. Many patients undergo unnecessary repeat CT imaging for kidney stones.

SOURCE OF FUNDING: None

MP23-21 FIRST EVALUATION OF THE IPAD GUIDED RENAL SURGERY USING A NEW TRAINING MODEL

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INTRODUCTION AND OBJECTIVES: The most challenging part of a percutaneous nephrolithotomy (PCNL) is the perfect puncture of the planned calyx. A new tablet computer based mobile augmented reality system has been described as a helpful tool assisting the percutaneous puncture of the kidney. In order to evaluate the benefit of the iPad guided puncture of the kidney we used a new developed ex vivo training model and compared the standard puncturing techniques fluoroscopy and ultrasound with the iPad guided puncture.

METHODS: We used an ex vivo training model made of ballistic gel to puncture the collecting system. Five trainees and three experts punctured different calyces 12 times per technique with a maximum of 18 punctures per training model. The puncture time was measured and the retries were counted until a successful puncture was obtained. For the iPad guided puncture radiopaque markers were placed on the model and a CT scan with a retrograde filling of the ureter catheter with contrast medium was performed. The kidney and the collecting system can be superimposed semi-transparently on the video image.

RESULTS: The in-vitro study showed significantly longer times for experts to puncture the collecting system compared to ultrasound or fluoroscopy, whereas trainees significantly benefited from use of iPad with reduction of radiation exposure. The median puncture time for ultrasound, X-ray, and iPad was 0.45 min, 0.79 min, and 1.16 min respectively.

CONCLUSIONS: The iPad guided puncture can be compared to the standard puncturing techniques and is a feasible method for planning a puncture for patients with complicated nephrolithiasis.

SOURCE OF FUNDING: None

MP23-22 USE OF NOVEL TECHNIQUE TO ESTIMATE URETER LENGTH USING PREOPERATIVE CT

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INTRODUCTION AND OBJECTIVES: Optimal ureteral stent placement depends upon accurate estimation of ureteral length. Conventionally, CT measurements of ureteral length measure a single dimension. In this study, we compare ureteroscopically measured ureteral length to the CT+20% method and a novel method base on the Pythagorean theorem that considers the ureteral length in all three dimensions.

METHODS: Preoperative CT scans were reviewed for 55 patients undergoing flexible ureteroscopy. The ureteral length was estimated on the axial (a), sagittal (s) and coronal (c) views. Using the Pythagorean theorem, the ureteral length (U) was determined using the derived equation: \( U = \sqrt{a^2 + s^2 + c^2} \). Ureter length was also calculated by adding 20% to the measurement in axial length. These two methods were then compared to the direct measurement of ureteral length measured by noting the location of the UPJ and UVJ on the external surface of the ureteroscope at the meatus. The distance between the two points on the endoscope was the ureteroscopically measured ureteral length. Pearson correlation coefficient was used for statistical comparison, with \( p < 0.05 \) considered significant.

RESULTS: The Pearson correlation coefficient of actual length with axial measurement +20% was 0.239 (\( p = 0.079 \)). There was a better correlation using the novel Pythagorean theorem method that significantly correlated with the actual length 0.325 (\( p = 0.016 \)).

CONCLUSIONS: We report a novel Pythagorean based mathematical model to predict ureteral length based upon preoperative CT imaging. This technique provides higher correlation to actual ureteral length compared to conventional methods. Use of this model may improve outcomes of stent placement.

SOURCE OF FUNDING: None

MP23-23 ACOUSTIC PROPERTY OF PROSTATE CANCER TISSUE MEASURED USING ULTRASONIC MICROSCOPE

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INTRODUCTION AND OBJECTIVES: Concept of focal therapy for prostate cancer had been widely discussed. Detection of small lesion by some imaging apparatuses is no doubt a clue for its promotion. Purpose of the study is to differentiate prostate cancer tissue in pathological specimen by acoustic property to establish future algorithm equipped to ultrasonograph.
MP23 ENDOUROLOGY: IMAGING 1

A219

MP23-24 COMPARISON OF RADIATION DOSE FROM CONVENTIONAL AND TRIPLE BOLUS CT UROGRAPHY PROTOCOLS IN THE DIAGNOSIS AND MANAGEMENT OF RENAL CORTICAL NEOPLASMS

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INTRODUCTION AND OBJECTIVES: Triple bolus computed tomography (TBCT) is a recently introduced low radiation dose protocol that allows arterial, venous and urographic phases to be captured in a single acquisition. We compared the radiation dose of TBCT and conventional CT (CCT) urography protocols, analyzed the effects of body mass index (BMI) on radiation dose in each group and assessed image quality.

METHODS: We retrospectively reviewed the images of patients who underwent CCT or TBCT imaging in the management of renal cortical neoplasms (RCN). We used standard volumetric CT dose index (CTDIvol) and dose length product (DLP) to estimate radiation exposure. Additionally, two urologists rated the quality of 20 CT images from each group using a survey on a five point Likert scale. The survey consisted of 10 questions relating to the ability of the scan to identify relevant renal anatomy.

RESULTS: A total of 120 patients were included in the study. CTDIvol and DLP were 28.7% and 40.4% lower in the TBCT protocol respectively (p < 0.001, p < 0.001). Increased BMI was associated with a higher DLP for the CCT group when compared to the TBCT group (p < 0.001). There was no difference between CCT and TBCT groups with regards to effect of BMI on CTDIvol. There was no difference in urologist’s assessment of CT image quality.

CONCLUSIONS: In patients with RCN, TBCT provides comparable image quality to CCT with lower ionizing radiation exposure without compromising image quality. Obese patients may benefit more from TBCT scans.

SOURCE OF FUNDING: None

MP23-25 THREE-DIMENSIONAL VOLUME EVALUATION OF PERIRENAL ADIPOSE TISSUE VOLUME PREDICTS RENAL CORTICAL NEOPLASM HISTOPATHOLOGY

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INTRODUCTION AND OBJECTIVES: Contemporary imaging technology allows for advanced three-dimensional (3D) volumetric measurement of organs. Visceral and perirenal adipose tissue (PAT) have been shown to be metabolically active. Previously we have demonstrated that two-dimensional PAT measurements are associated with more aggressive renal cell carcinoma (RCC) subtypes. In this study, we evaluated total PAT volume as a predictor of renal tumor histopathology using novel 3D imaging software Vitrea LT (Vital Images, Inc., Minnetonka, MN).

METHODS: We retrospectively evaluated patients who underwent laparoscopic radical or partial nephrectomy for RCC. PAT volume was measured by post-processing of preoperative CT images using Vitrea software. Total perirenal space volume was measured by manual contouring. Structures with densities greater than adipose tissue were subtracted out using organ segmentation, thereby yielding only a total PAT volume. Demographic, clinical and operative parameters, PAT volume, and their association with tumor histopathology were evaluated.

RESULTS: In this pilot analysis, a total of 18 patients were included. There were 7 (39%) men and 11 (61%) women with a median body mass index (BMI) of 26 kg/m2. The median tumor size was 2.5 cm (1.3–6.0 cm), and the median PAT volume was 205.8 cm3. Mean PAT for RCC and benign histopathology was 345.50 cm3 and 92.67 cm3 respectively (p = 0.026).

CONCLUSIONS: In this preliminary analysis, increased PAT volume is a significant predictor of RCC histopathology over a benign RCN. Further analysis with more patients is in progress to confirm our initial findings, and to compare PAT volume to other predictive metrics.

SOURCE OF FUNDING: None

MP23-26 ACUTE URETERAL STONES: DIAGNOSTIC MODALITIES AND MANAGEMENT OUTCOMES

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INTRODUCTION AND OBJECTIVES: NCCT is the gold standard diagnostic modality for renal colic. The objectives of this study were to review prospectively the accuracy of different diagnostic methods of acute ureteral stones and the management outcomes.

METHODS: A total of 723 cases of consecutive ureteral colic due to stones presented to ER were prospectively evaluated by immediate urinalysis, KUB, color Doppler ultrasound and NCCT after control of pain. All patients were followed up for 6–8 weeks. The outcomes of the ureteral stones managements were examined. Statistical analysis was performed by SPSS software.

RESULTS: There were 619 males (85.6%) and 104 females (14.4%). Microhematuria, US, KUB and NCCT results were positive in 89.3%, 97.1%, 56.4% and 99.6% respectively. Site and diameter of stones affected significantly results of; ultrasound detection rate (P value 0.03 and 0.007 respectively), positive KUB (P value < 0.001 and < 0.001 respectively) and microhematuria (P value 0.001 and 0.001 respectively). 68.3% of stones were in pelvic ureter, 23% in upper ureter and 8.7% in middle ureter. Site of stones was related to stone diameter
CONCLUSIONS: The pelvic ureter is the commonest site of stone lodge. Stones larger than 1 cm needed intervention. Factors affecting stone management are: stone diameter, site and positive KUB. Doppler ultrasound is an alternative to NCCT for diagnosis of renal colic in ER.

SOURCE OF FUNDING: None

MP23-27 CT PLANNING IMAGE VERSUS KUB FOR PREDICTION OF STONE RADIOPACITY

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INTRODUCTION AND OBJECTIVES: From the perspective of diagnosis and treatment as well as follow-up it is of importance to know whether a kidney stone is radiopaque or not. The aim of this study was to evaluate whether the CT planning Image (CTI) can predict radiopacity.

METHODS: CT scans and KUB's were analysed in 76 consecutive kidney stone patients. CT scan and KUB were performed on the same day. The following was recorded: X-ray positive (radiopaque on KUB), CTI positive (radiopaque on CTI), location (a kidney, b upper 2/3 of ureter and c lower 1/3 of ureter including bladder), size and Hounsfeld units (HU). Patient’s ‘anterior-posterior depth’ (APD) at kidney stone level in axial plane was also measured.

RESULTS: 54 of the 76 patients (71%) had radiopaque stones on KUB. 43 (57%) of these also could be seen on the CTI, resulting in a positive predicting value (PPV) of 100% and a negative predictive value (NPV) of 67%. In the 54 KUB positive kidney stones the mean kidney stone diameter was 7 mm, mean HU’s 1.007, location: a:32, b:9 and c:13 patients. APD was mean 23.6 cm. In the KUB positive and CTI negative kidney stones (11 patients) mean kidney stone diameter was 4 mm, mean HU’s 742, location: a:32, b:9 and c:13 patients. APD in this group was mean 26.1 cm.

CONCLUSIONS: If the kidney stone can be seen on the CTI it is also visible on KUB (PPV 100%). The CTI do, however, underestimate the radiopacity of a stone on a plain KUB (NPV 67%).

SOURCE OF FUNDING: None

MP23-28 CORRELATION OF MULTI-PARAMETRIC MRI WITH ROBOT-ASSISTED TRANS-PERINEAL PROSTATE MAPPING IN DIAGNOSIS OF PROSTATE CANCER

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INTRODUCTION AND OBJECTIVES: To correlate multi-parametric Magnetic Resonance Imaging (mp-MRI) detected lesions with robot-assisted trans-perineal prostate-mapping (rTTPM) biopsy in prostatic adenocarcinoma (PCa) detection.

METHODS: A consecutive cohort of 14 patients with rising PSA and between 0–2 negative TRUS biopsies underwent mp-MRI and rTTPM biopsy from May 2011 to December 2013. The mp-MRI protocol included T1-weighted, T2-weighted, apparent diffusion coefficient maps of diffusion-weighted images and dynamic contrast-enhanced imaging. Images were read independently in routine clinical setting by three experienced radiologists. Suspicious lesions were categorized into an 8-region subdivision, according to the anatomical (anterior fibromuscular stroma, central, transitional and peripheral) zones of each prostatic lobe. Systematic biopsy cores were grouped in identical fashion and Gleason score of each region was taken as the highest score observed amongst all positive biopsies. Correlation was made between histology findings and mpMRI-detected lesions in each region.

RESULTS: The mean age was 60 years with mean prostate volume of 31.8 mls; mean PSA 9.10 ng/ml; mean PSA density of 0.25; mean number of cores 31. PCa was detected in 11/14 patients. 7 of them had corresponding mpMRI-detected lesions, of which 4 had Gleason ≥7. All 4 patients with diagnosed PCa without corresponding mpMRI findings had Gleason = 6. Lesions missed on mp-MRI were often in the central and transitional zone; none were missed in the peripheral zone.

CONCLUSIONS: mp-MRI and rTTPM are useful in detection of PCa in men for repeat prostate biopsy. mp-MRI aids detection of clinically significant prostate cancer, particularly in the peripheral zone. mp-MRI can guide targeted prostate biopsy but cannot replace rTTPM.

SOURCE OF FUNDING: None
autonomic nerve branches and the bladder mucosa was 1.15 mm posteriorly versus 4.0 mm anteriorly (0.27–2.87 vs. 2.03–6.20, p<0.001).

CONCLUSIONS: Novel 3D reconstruction of the bladder is feasible and will improve our understanding of human bladder innervation. Autonomic innervation is highly focused in the posterior aspect of the bladder and is dense at the bladder neck. The most superficial fibers vary in distance from the urothelium from 1.15–4.0 mm.

SOURCE OF FUNDING: None

MP24 ROBOTIC SURGERY NEW TECHNOLOGY

MP24-01 UPDATED EXPERIENCE WITH THE INTRACORPORAL FIRST ASSISTANT SPARING TECHNIQUE FOR ROBOT-ASSISTED PARTIAL NEPHRECTOMY
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INTRODUCTION AND OBJECTIVES: Prolonged warm ischemia time (WIT) and operative time (OT) during robot-assisted partial nephrectomy (RAPN) can lead to poor outcomes. Previous reports on our intracorporeal First Assistant Sparing Technique (iFAST) have shown significant reductions in both WIT and OT by removing dependence on the first assistant. We sought to report our continued experience using this technique and its associated learning curve.

METHODS: The iFAST technique uses an intra-corporeal preparation, consisting of pre-placed sutures on the abdominal side wall, robotic bulldog clamps, robotic-controlled ultrasound, and “sliding clip” renorrhaphy. Demographics, perioperative outcomes, and pathologic results were recorded. Regression analyses were performed to examine the effect of the FAST technique on operative outcomes from the earliest to most recent patients in our cohort.

RESULTS: 73 patients underwent RAPN using the FAST technique. The average age at surgery was 60.25 years, mean tumor size was 3.26 cm (range 1.10 – 9.20), the mean WIT was 16.8 minutes (8 – 27), and mean blood loss was 92 cc (25 – 500). On univariate analysis, postoperative change in GFR showed a statistical difference (p = 0.03); however, WIT (p = 0.06) and OT (p = 0.09) were insignificant. On univariate and multivariate analyses, all measured parameters were found to be insignificant between the groups of patients.

CONCLUSIONS: Decreasing the reliance on a first assistant during the ischemic portion of RAPN significantly reduces WIT and OT when compared to traditional RAPN technique. Further analysis is needed to determine the number of cases a surgeon must perform to master the FAST technique.

SOURCE OF FUNDING: None

MP24-02 ROBOTIC PYELOLITHOTOMY AND URETEROPELVIC JUNCTION REPAIR IN A CROSS FUSED ECTOPIKIDNEY
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INTRODUCTION AND OBJECTIVES: Cross fused renal ectopia is a rare congenital anomaly characterized by unilaterally located fused kidneys. For renal calculous disease in this patient population, shockwave lithotripsy (SWL) has a poor stone clearance rate due to inadequate urinary drainage. We report a case of robotic pyelolithotomy and ureteropelvic junction (UPJ) reconstruction in a patient with this anatomic variation.

METHODS: Our patient is a 46 year-old male with an L-shaped left-sided cross fused kidney. He also had duplication of his fused segment with hydronephrosis of the lower pole moiety suggestive of a UPJ obstruction. He presented with a 1.7 cm, a 1.1 cm and a 6 mm stone that failed previous treatment. Ultrasound identified the remaining renal stone in the upper pole moiety of the fused segment. A second pyelotomy was created and the final stone was removed. The UPJ of the lower pole moiety was dismembered and the ureter was spatulated. An Anderson-Hynes pyeloplasty was then completed over our previously placed ureteral stent and the pyelotomies were closed with 3-0 V-loc suture.

RESULTS: The patient tolerated the procedure well and was discharged home on post-operative day 3. Our operative time was 331 minutes with an estimated blood loss of 50 mL. His post-operative creatinine level was 0.85 mg/dl and at one-month follow up, his diuretic radionuclide scan demonstrated no evidence of urinary tract obstruction with a T1/2 of 12.9 minutes.

CONCLUSIONS: Robotic pyelolithotomy with ureteropelvic junction reconstruction can be considered in patients with cross fused ectopia and nephrolithiasis who have failed traditional treatment modalities.

SOURCE OF FUNDING: None

MP24-03 USE OF DEHYDRATED HUMAN AMNIOTIC MEMBRANE DURING ROBOT ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY IN EARLY RETURN OF ERECTILE FUNCTION: A RETROSPECTIVE STUDY
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INTRODUCTION AND OBJECTIVES: Thermal and traction injury, scarring, and inflammatory triggers have been suggested as probable causes of ED post robot assisted laparoscopic prostatectomy (RALP). We used dehydrated human amniotic membrane (dHAM) as a protective nerve-wrap over the neurovascular bundle (NVB) after RALP to see its anti-inflammatory and anti-scarring effect on recovery of erectile function (EF).

METHODS: Data was reviewed retrospectively from 60 men who were treated for localized prostate cancer (SHIM ≥16) with...
bilateral nerve sparing RALP by a single high volume surgeon. Group 1 included men who underwent placement of dHAM on the preserved NVB (n = 22), whereas Group 2 consisted of men who had surgical snow placed on the preserved NVB (n = 38). Both groups were followed for 6 months to assess early recovery of EF and attainment of SHIM ≥ 16.

RESULTS: No significant differences between the study groups were found with respect to age or PSA. In Group 1, 21 out of 22 patients (95%) regained EF in an average time of 27.6 ± 24.2 days. Only 19 out of 38 patients (50%) regained EF in Group 2 in an average time of 94.3 ± 44.1 days. Cox regression analysis revealed that application of dHAM was a significant predictor of early return of EF and attainment of SHIM ≥ 16 (likelihood ratio 41.8, p < 0.0001).

CONCLUSIONS: Placement of dHAM on the NVB during RALP may be a safe and effective option for accelerated recovery of EF. This is the first retrospective study in the world to assess the effect of dHAM on early return of EF post RALP.

SOURCE OF FUNDING: None

MP24-04 COMBINED MULTI-SITE PROCEDURES ARE FEASIBLE WITH ROBOTIC ASSISTED LAPAROSCOPIC SURGERY IN CHILDREN

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INTRODUCTION AND OBJECTIVES: The applications of robot assisted laparoscopic surgery (RALS) in children have grown significantly over the past decade. However, little is known about the applicability of robotic surgery for pediatric combined multi-site cases. Herein we report the feasibility of combined multi-site robotic procedures in the pediatric population.

METHODS: Three combined procedures were identified in a series of 371 RALS cases in children. An umbilical port site for the camera and a midline sub-xiphoid port site as well as two other port sites at the level of the umbilicus on the lateral aspects of the abdominal wall were used. Perioperative and postoperative parameters were noted.

RESULTS: The combined procedures were one case of bilateral nephrectomies and two cases of nephrectomy and contralateral ureteral reimplantation. Mean age of the patients was 11.3 ± 5.1 years. Mean total operative time was 280.6 ± 64.6 min, with mean console times for the first and second procedures of 117.0 ± 39.1 min. and 113.6 ± 20.2 min. respectively. The mean hospital stay was 1.5 days. No perioperative or postoperative complications were encountered.

CONCLUSIONS: Combined multi-site procedures are feasible with RALS in the pediatric population. Repositioning of the patient and selective placement of the same four port sites are useful steps that can facilitate the completion of the second procedure without the need for additional port sites, and will still be needed with next generation robotic systems such as the Intuitive Surgical Xi that may avoid the need for patient repositioning.

SOURCE OF FUNDING: Institutional

MP24-05 FEASIBILITY OF OMITTING CORTICAL RENORRHAPY DURING ROBOTIC PARTIAL NEPHRECTOMY: A MATCHED ANALYSIS

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INTRODUCTION AND OBJECTIVES: The effect of cortical renorrhaphy on renal volume and functional loss after partial nephrectomy is not well understood. Our objective is to assess the safety of omitting cortical renorrhaphy during robotic partial nephrectomy and to measure preliminary functional outcomes.

METHODS: The first 15 robotic partial nephrectomies performed with a running base layer for the collecting system and vessels, but without cortical renorrhaphy were evaluated for intraoperative blood loss, urine leaks, and postoperative bleeds. The non-renorrhaphy group was then matched 1:2 by RENAL nephrometry score to a running, sliding clip cortical renorrhaphy group and complications and functional outcomes were evaluated.

RESULTS: No differences were seen between renorrhaphy and non-renorrhaphy in gender (p = 0.53), age (p = 0.29), BMI (p = 0.34), Charlson score (p = 0.86), hypertension (p = 0.52), diabetes (p = 0.74), tumor diameter (p = 0.13), nephrometry score (6.4 vs. 6.3, p = 0.86), or preoperative glomerular filtration rate (p = 0.58). Warm ischemia time was less for the non-renorrhaphy group (p < 0.001). One pseudoaneurysm requiring embolization (1/30 = 3%) was seen in the renorrhaphy group compared to none in the non-renorrhaphy group. No urine leaks occurred. The median %loss in GFR was −8.8% (IQR −18%, 0) for renorrhaphy and −4.4% (IQR −8.2%, 10%) for non-renorrhaphy (p = 0.10) at a mean of 4-months. The median volume loss was −19.2 cm3 (IQR −13, −25) for renorrhaphy and −10.4 cm3 (IQR −5, −13), for non-renorrhaphy (p = 0.006).

CONCLUSIONS: Omission of cortical renorrhaphy appears feasible with no urine leaks or complications observed.Renal volume loss was improved by omission of cortical renorrhaphy. Future studies should further quantify the effects of renorrhaphy on tissue strangulation and segmental artery occlusion.

SOURCE OF FUNDING: None

MP24-06 ROBOTIC KIDNEY TRANSPLANTATION WITH REGIONAL HYPOTHERMIA: RESULTS FROM A PROSPECTIVE TWO-ARM NON-RANDOMIZED CONTROLLED TRIAL (IDEAL PHASE 2B)

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INTRODUCTION AND OBJECTIVES: Minimally invasive approaches to kidney transplantation (KT) have recently been described. We recently developed and described a novel technique of robotic KT(RKT) using intra corporeal graft cooling. We assessed the comparative effectiveness of RKT and open KT(OKT) by evaluating peri and post-operative outcomes.

METHODS: From Jan-Dec 2013, a total of 247 patients with end stage renal disease underwent KT at a tertiary referral center of which 225 patients who met the selection criteria were enrolled into this prospective two-arm non-randomized controlled trial (IDEAL Phase-2b). Primary outcome was post transplant graft function. Secondary outcomes measured included surgical and immunologic complications, and peri-operative parameters. All patients had a minimum follow up of 6 months.

RESULTS: Fifty and 175 patients underwent RKT and OKT, respectively. The basic characteristics of the two groups were comparable. Mean serum creatinine at discharge was 1.3 and 1.2 mg/dl in RKT and OKT patients respectively (p = 0.71).
Post-operative pain and analgesic requirements were significantly less in patients undergoing RKT (p=0.01). One patient of RKT and 4(2.2%) of OKT needed post transplant dialysis. No lymphocele was detected in protocol non contrast CT done at 3 months in the RKT group (0% vs. 23.8%; p=0.05). One graft was lost in the OKT group. One patient death in RKT (1.5 months post transplant, cardiac failure) and 2 in OKT group were noted respectively.

CONCLUSIONS: RKT with regional hypothermia is safe and easily reproducible. Early outcomes are equivalent to OKT; with trends towards lower complications, quicker graft function recovery and shorter patient convalescence.

SOURCE OF FUNDING: None

MP24-07 A COMPARISON OF PATIENT COMFORT AND SATISFACTION AFTER ROBOTIC PROSTATECTOMY WITH SUPRAPUBIC TUBE VERSUS URETHRAL CATHETER DRAINAGE

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INTRODUCTION AND OBJECTIVES: Robotic-assisted laparoscopic prostatectomy (RALP) with suprapubic tube (SPT), as compared to urethral catheter (UC) drainage, has been proposed to improve patient comfort and recovery. We sought to compare short-term outcomes for pain and satisfaction after RALP with SPT versus UC drainage.

METHODS: Between August 2012 and January 2014, 132 men underwent a RALP and completed a series of questionnaires addressing postoperative pain and satisfaction. Group 1 (n=84) underwent a RALP by a single surgeon who placed a UC and removed it between post-operative day (POD) 7–10. Group 2 (n=48) underwent a RALP by a different single surgeon who placed an SPT and UC. On POD 1 the UC was removed. On POD 9 the SPT was capped and removed on POD 11-12 if the patient was voiding adequately.

RESULTS: Pre-operative and intra-operative patient characteristics were not statistically significantly different between groups. One week after surgery the penile pain score was statistically significantly lower in Group 2 (58% reported minimal to moderate pain) compared to 78.6% in Group 1 (p=0.02). Bladder spasms and overall pain were not significantly higher for Group 1 compared to Group 2 (p>0.05). Moreover, when asked “How big a problem has your urine storage device been?” 19.1% of patients in Group 1 reported it as a ‘moderate to big’ problem compared to 12.5% in Group 2, however this was not statistically significant (p>0.05).

CONCLUSIONS: SPT drainage is associated with less penile pain post RALP compared to UC drainage. Continued data accrual is underway.

SOURCE OF FUNDING: None

MP24-09 COMPLETELY INTRACORPOREAL ROBOTIC-ASSISTED LAPAROSCOPIC ILEOVESICOSTOMY IS ASSOCIATED WITH EARLIER RETURN OF BOWEL FUNCTION

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INTRODUCTION AND OBJECTIVES: Ileovesicostomy has been used as a treatment for neurogenic bladder dysfunction in individuals unwilling or unable to perform intermittent catheterization. The open technique is associated with post-operative complications including wound infection, urethral incontinence, and
extended length of hospital stay (LOS). Using the technique of intracorporeal laparoscopic bowel-to-bowel anastomosis may improve post-operative recovery and complications. Our goal is to report initial results for intracorporeal laparoscopic bowel-to-bowel anastomosis robotic-assisted as compared to open ileovesicocystostomy.

METHODS: A retrospective review of fifteen open and 4 robotic ileovesicocystostomy procedures performed between September 2005 and April 2011 was performed. Demographic data, intraoperative, and postoperative data were obtained.

RESULTS: A total 19 ileovesicocystostomies were performed (15 open, 4 robotic). Age, BMI, and pre-operative urodynamics were similar between groups. Bowel function returned earlier in the robotic group (9 days vs 3.8 days, p = 0.02). However, operative time (252 min vs 290 min, p = 0.28), estimated blood loss (218 mL vs 131 mL, p = 0.15), LOS (16 vs 8 days, p = 0.30), and follow-up (38 months vs 26 months, p = 0.16) were similar between open vs robotic groups, respectively. There were no intraoperative complications in either group.

CONCLUSIONS: The outcomes for open and robotic-assisted ileovesicocystostomies performed were similar. However, completely intracorporeal robotic-assisted laparoscopic ileovesicocystostomy may be associated with earlier return of bowel function.

SOURCE OF FUNDING: None
radical cystectomy with bilateral pelvic lymphadenectomy, including two females and one male. Hysterectomy and bilateral oophorectomy were also done in the females, while prostatectomy was done in the male patient. The mean patient age was 73 years. One case was done entirely using the robot, while laparoscopic bilateral NU and robotic-assisted laparoscopic cystectomy were performed in the remaining two cases.

RESULTS: The operative time for the purely robotic-assisted case was 327 minutes, with a minimal estimated blood loss, while the mean operation time was 370 minutes for the hybrid cases with a mean estimated blood loss of 350 ml. The mean hospital stay was 10 days. No perioperative complication was reported. No tumor recurrence was noted since discharge.

CONCLUSIONS: Simultaneous laparoscopic bilateral nephroureterectomy and radical cystectomy may be performed safely using robotic-assisted methods. The blood loss and incision wound length are greatly reduced when compared to traditional open surgery. Studies with a larger patient number and longer follow-up period may generate more concrete conclusions.

SOURCE OF FUNDING: None

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MP24-13 SAFETY OF LIVE ROBOTIC SURGERY TRANSMISSION IN UROLOGY: A PROPENSITY SCORE-MATCHED STUDY

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INTRODUCTION AND OBJECTIVES: Distance learning has revolutionized the educational delivery process. Live surgery transmission represents an important teaching tool in robotic surgery. To date, little is known regarding the safety of operating under these conditions. The objective of this study is to assess the outcomes of live-transmitted robotic assisted radical prostaectomy compared to those achieved in standard environment.

METHODS: From January 2008 through October 2012, 3929 patients underwent RARP at our institution by a single surgeon. From this cohort, eighteen patients underwent live transmission RARPs. A propensity-score analysis was conducted comparing live transmission cases to those operated without transmission, applying multivariable analysis. Perioperative, pathological outcomes and complications were compared between the two matched groups.

RESULTS: There was no significant difference in epidemiological and preoperative clinical and pathological variables between the two matched groups. All live transmission patients had full nerve sparing compared to 52.6% in the matched standard group (p = 0.001). There were no significant differences in laterality, ease of nerve sparing or difficulty of anastomosis. Operative times and estimated blood loss were comparable in both groups. There were no intraoperative complications in either group. Tumor dimensions were greater in standard group. Other postoperative pathological outcomes were similar between groups. Postoperative complication rates, pain scores, length of hospital stay (LOS) and indwelling catheter duration were similar for the groups. This study’s main limitation is that it is a retrospective non-randomized study.

CONCLUSIONS: This report demonstrate that live surgery transmission of robotic assisted radical prostatectomy is safe and does not compromise perioperative outcomes.

SOURCE OF FUNDING: None

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MP24-14 ROBOTIC INTRACORPOREAL VESCICA ILEALE PADOVANA (VIP): PERIOPERATIVE OUTCOMES

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INTRODUCTION AND OBJECTIVES: Robotic radical cystectomy (RC) with intracorporeal neobladder reconstruction is currently considered a challenging procedure characterized by a long operative time, leading to concern about its wide reproducibility. The aim of our study is to illustrate perioperative outcomes of our technique for robotic, intracorporeal, orthotopic, Padua neobladder, using staplers to entirely replicate established open principles of reservoir configuration.

METHODS: From August 2012 to December 2013, 41 patients underwent robotic intracorporeal Padua stapled neobladder at a single tertiary cancer center. We performed robotic RC, extended lymphadenectomy, and totally intracorporeal Padua neobladder. Baseline demographics, pathology data, complications, and functional outcomes were assessed.

RESULTS: Robotic intracorporeal urinary diversion was successfully performed in 41 patients with a minimum 90-d follow-up. Mean age and body mass index were 64.7 yr (SD 7.2) and 27.7 kg/m² (3.6) respectively. Mean estimated blood loss was 210 ml (SD 60), mean time to regular diet was 6 d (range: 5–21 d), mean hospital stay was 9 d (range: 6–45 d), and 30- and 90-d complications were Clavien grade 1–2 (n = 15 and 0), Clavien grade 3–5 (n = 12 and 9), respectively. This study is limited by small sample size and short follow-up period.

CONCLUSIONS: Robot-assisted orthotopic neobladder (VIP) is feasible and safe. The partially stapled neobladder we presented could shorten operative time for totally intracorporeal urinary diversion.

SOURCE OF FUNDING: None

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MP24-15 ROBOTIC SINGLE-PORT TRANSUMBLICAL RADICAL PROSTATECTOMY: OUR FIRST THREE CASES USING THE GEL-PORT SYSTEM

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INTRODUCTION AND OBJECTIVES: To evaluate the feasibility of robotic single port transumbilical radical prostatectomy by describing the technique and early outcomes.

METHODS: From April 2013 to December 2013 Three patients with prostate cancer presented at CFO (Centro Oncologico Fiorentino) were treated with single site RALP. Perioperative data, surgical, oncological and functional short-term outcomes were compared. Functional outcome was assessed using validated continence and erectile function questionnaires. With the consent form signed, laparo-endoscopic single site (LESS) robotic radical prostatectomy was performed with the robot da Vinci S. The GelPort has been used as an access platform through a 4.5-cm umbilical incision.

RESULTS: The average total operative time was minutes 290; console time was 210 minutes. There were no significant
differences in preoperative prostate specific antigen (PSA), clinical staging, and preoperative Gleason scores in the three pathients. The estimate blood loss was 250 ml and no blood transfusion required. No intraoperative complications, one wound ombeilcal infections. The abdominol drain was removed 24 hours after surgery. The patients were discharged from the hospital in day two after surgery. The urethral catheter was removed within 8 days after surgery. At 24 weeks of follow-up, the patients used 0 pads for continence daily, none had positive margins.

CONCLUSIONS: Laparo-endoscopic single site (LESS) robotic radical prostatectomy is feasible to be performed and reduces some of the difficulties encountered with conventional LESS RP. In the initial experience, patient selection is required. The procedure has limited complications, excellent oncologic and continence outcomes as well as acceptable potency outcomes comparable to the conventional robotic radical prostatectomy.

SOURCE OF FUNDING: None

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MP24-16 SINGLE VERSUS DUAL-CONSOLE ROBOT-ASSISTED RADICAL PROSTATECTOMY: IMPACT ON INTRAOPERATIVE AND POSTOPERATIVE OUTCOMES IN A TEACHING INSTITUTION

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INTRODUCTION AND OBJECTIVES: To compare the outcomes of a dual versus single-console system in a resident training program using intraoperative, perioperative, and postoperative measures.

METHODS: Patients with PCa who underwent RALP prior to and after implementing a dual-console system at an academic tertiary care center were reviewed from 2006–2012. All surgeries were performed by a single faculty surgeon well after the learning curve was established. In all cases chief residents participated in the surgery and were allowed to perform progressively more portions of the procedure. Demographic, intraoperative and pathologic parameters were obtained. Continence and erectile function were assessed at 6 and 12 months. Postoperative complications, excellent oncologic and continence outcomes as well as acceptable potency outcomes comparable to the conventional robotic radical prostatectomy.

RESULTS: Of 381 patients, 185 and 196 underwent single- or dual-console RALP respectively. There was a significant decrease in mean operative time using the dual console system (222 vs. 171 minutes, p<0.0001) as well as in the incidence of intraoperative complications (8.65% vs. 1.53%, p<0.0001) and postoperative complications (14.1% vs. 6.63%, p=0.03). Complications of Clavien grade ≥3a occurred more frequently with a single-console system (7% vs. 1%, p=0.003.) These differences persisted when controlling for potential confounders by multivariate regression.

CONCLUSIONS: When training resident surgeons to perform RALP, a dual-console system may improve intraoperative and perioperative outcomes. The dual-console may represent a safer, more efficient modality and may be a more ideal platform for robotic surgical education as compared to a single console system.

SOURCE OF FUNDING: None

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MP24-17 OUTCOME OF ROBOT-ASSISTED PARTIAL NEPHRECTOMY: SINGLE CENTER EXPERIENCE WITH 36 CASES

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INTRODUCTION AND OBJECTIVES: Recent studies suggested Robot-assisted partial nephrectomy (RAPN) showed reducing learning curve, warm ischemic time and blood loss compared to laparoscopic partial nephrectomy, regardless of advanced cases such as high score of RENAL nephrometry. Moreover, the challenging case included in hilar tumor and full endophytic tumor were performed using TilePro which was given real time image to surgeon. The aim of this study was to be analyzed outcome of early experience with RAPN in our institution.

METHODS: Since 2010, ten women and 26 men, mean age 60 yr, underwent RARP included in three CKD IIIb and three solitary kidney. Mean tumor size was 32 mm. The mean preoperative e-GFR was 69.5 ml/min/1.73m2.

RESULTS: Mean console and warm ischemia time were 125 min and 20 min, respectively. The median estimated blood loss was 170 ml. The median removed tumor weight was 23 g. The mean postoperative e-GFR in one month was 64.1 ml/min/1.73m2. There was a significant difference between pre- and postoperative e-GFR. Pathology revealed renal cell carcinoma in 35, AML in one. All resection margins in RCC were negative. There were no intraoperative complications or conversion to open or radical nephrectomy. There were two urinary leakages and two blood transfusions in postoperative complication.

CONCLUSIONS: We considered RAPN in minimal invasive surgery was acceptable to preserve renal function and anticancer effect.

SOURCE OF FUNDING: None

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MP24-18 MODIFIED POSTERIOR RECONSTRUCTION FOR URETHROILEAL ANASTOMOSIS OF ROBOTIC-ASSISTED RADICAL CYSTECTOMY WITH INTRACORPOREAL ILEAL NEOBLADDER RECONSTRUCTION

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INTRODUCTION AND OBJECTIVES: Robotic-assisted surgery has become the mainstay of minimally invasive urologic surgeries. Robot-assisted radical cystectomy (RARC) with intracorporeal ileal neobladder reconstruction is also one of the blooming field. Several studies from high volume centers have described the details of this procedure. However, to date, the procedure is still not yet standardized.

METHODS: From November 2013 to May 2014, five case of urethelial cancer of the urinary bladder received RARC with intracorporeal ileal neobladder reconstruction. We utilized a modified posterior reconstruction method for urethroileal anastomosis.

RESULTS: A 20 Fr opening was made over antimesentric site of the ileum near urethra. First, two 12 cm 3-0 monocryl sutures tied together, rectourethralis of the urethral stump and seromuscular layer of the ileum was approximated. Posterior opening of the ileum was sutured to the posterior urethra. Second, two 16 cm 3-0 monocryl sutures tied together and the posterior part of the urethroileal anastomosis was performed with one arm of the suture.
from the 5 to 11 o’clock in a clockwisely and completed with the second arm counterclockwisely. An 18 Fr silicone Foley catheter was inserted during anastomosis. We believe this tension-free method can reduce the anastomotic urine leak rate perioperatively. The running suture between rectourthralis and seromuscular layer of ileum can avoid postoperative bleeding from this site. Finally, we hypothesize this may achieve a lower long-term vesicourethral stricture incidence rate.

CONCLUSIONS: This modified method of urethral anastomosis offers excellent tension-free and watertight closure. In order to establish validity of these results, long term study involving a greater number of cases is required.

SOURCE OF FUNDING: None

MP24-19 DEVELOPMENT AND VALIDATION OF THE CHECK-LIST BASED ASSESSMENT TOOL FOR ROBOT ASSISTED RADICAL PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: Robotic-assisted radical prostatectomy (RARP) is the standard of care for surgical treatment of localized prostate cancer. Surgical training and its assessment are critical in assuring optimal outcomes after robot-assisted approach towards prostatectomy. This study aims to develop and validate a checklist-based performance assessment tool utilizing the Healthcare Failure Mode and Effect Analysis (HFMEA) for trainees undertaking RARP.

METHODS: This multi-institutional, observational, prospective study used HFMEA to identify critical steps associated with RARP. HFMEA employed pre-emptive risk assessment to minimize adverse events. After designing a safety checklist, content validation helped develop the RARP Assessment Score. 17 surgical fellows were scored based on the RARP Assessment Score while performing RARP. Results were analysed relative to RARP experience to examine sub-process learning curves.

RESULTS: 5 surgeons were observed for 42 console hours to map key steps of RARP. HFMEA identified 84 possible failure modes with 46 potential causes with “Hazard score” ≥8. Content validation by multi-national experts created the RARP Assessment Score, comprising of 17 stages and 41 steps. This was acceptable, feasible and demonstrated educational impact. Learning evaluation revealed that easier steps (for example patient preparation) are undertaken earlier during training and fellows achieve “competence” within few procedures. Fellows failed to achieve competence in challenging critical steps, such as vesico-urethral anastomosis in the initial phase of the study.

CONCLUSIONS: RARP Assessment Score based on HFMEA methodology identified critical hazardous steps specific to RARP and was used to assess and evaluate surgeons while performing RARP.

SOURCE OF FUNDING: Royal College of Surgeons of England The Urology Foundation Olympus

MP24-20 THE COMPARISON OF THE SUPER SELECTIVE OR TOTAL ARTERIAL CLAMPING IN ROBOTIC PARTIAL NEPHRECTOMY IN AN INITIAL CASE SERIES

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INTRODUCTION AND OBJECTIVES: To compare the results from the super selective (SS) and total arterial clamping (TC) in our initial case series of robotic partial nephrectomy(RAPN) in terms of operative time, warm ischemia time, reanoraphy time, blood loss, postoperative renal function, adverse events, and surgical margin status.

METHODS: The initial 28 consecutive RAPNs performed for solid renal tumors in our hospital were compared for body mass index, tumor size, R.E.N.A.L. nephrometry score, tumor location, surgical time, warm ischemia time, renal function change after surgery, operative blood loss, surgical margin status, and adverse events (AEs).

RESULTS: Super selective clamping was used 9 patients and total clamping was used in 19 patients. The renal tumor size (15 ± 3.97 mm in the SS group vs. 20 ± 8.44 mm in the TC group), operative time (221 ± 40.81 mins in the SS group vs. 270 ± 62.85 mins in the TC group), warm ischemia time (14 ± 6.21 mins in the SS group vs. 19 ± 9.93 mins in the TC group) showed significant difference between the two groups (P = 0.039, 0.021, 0.035).

CONCLUSIONS: The super selective arterial clamping in RAPN appears to be safe and technically feasible minimally invasive option for nephron-sparing surgery, based on our initial case series. Further studies are needed to draw more definitive conclusion.

SOURCE OF FUNDING: No

MP24-21 THE FEASIBILITY AND SAFETY ANALYSIS OF ROBOT-ASSISTED LAPAROSCOPIC PYELOLITHOTOMY IN THE TREATMENT OF COMPLICATED RENAL CALCULI

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INTRODUCTION AND OBJECTIVES: To discuss the feasibility and safety of robot-assisted laparoscopic pyelolithotomy (RALPL) for the treatment of complicated renal calculi.

METHODS: Six cases of RALPL for complicated renal calculi were performed from March 2013 to July 2013. Of these cases, three were male, and the others female. The median age was 40 years (37–59 years). Four patients chose RALPL because they suffered from concomitant pyelo-ureteral junction obstruction (PUJO), while the remaining two got ipsilateral adrenal tumor. All the stones located in lower calices and pelvis with three cases in left kidney and the others in right. The median calculus diameter was 31 mm (27–33 mm). A transperitoneal approach was employed in all the cases. In patients with PUJO, robot-assisted laparoscopic pyelolithotomy (RALP) was conducted after RALPL was fulfilled. However, robot-assisted laparoscopic adrenalectomy was performed prior to RALPL for patients with ipsilateral adrenal tumor.
RESULTS: The operations were accomplished successfully. The median operating time (OT), estimated blood loss (EBL) was 115 minutes (90–130 minutes) and 75 ml (50–120 ml), respectively. There was no need for transfusion and the median hospital stay was 5 days (4–7 days). No evidence of residual fragment was identified in a repeat KUB film one month postoperatively for all the patients.

CONCLUSIONS: Renal calculi with concomitant PUJO is a strong indication for RALPL, which is also a selectable modality for other complicated renal calculi.

SOURCE OF FUNDING: None

MP24-22 ASSOCIATION OF R.E.N.A.L NEPHROMETRY SCORE WITH OUTCOMES OF ROBOT-ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY
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INTRODUCTION AND OBJECTIVES: To evaluate the predictive value of the R.E.N.A.L (radius, exophytic, nearness, anterior, location) nephrometry scoring system and to investigate its influence on perioperative outcomes of robot-assisted laparoscopic partial nephrectomy (RALPN).

METHODS: From March 2010 to May 2014, 45 RALPN were subdivided into low risk group (R.E.N.A.L nephrometry score <7), median risk group (R.E.N.A.L nephrometry score 7–9) and high risk group (R.E.N.A.L nephrometry score ≥10), whose perioperative data was retrospectively analyzed.

RESULTS: All the procedure were fulfilled successfully except 2 cases in median risk group and 3 cases in high risk groups converted to robot-assisted radical nephrectomy (RALRN). The operating time (OT), warm ischemic time (WIT) and estimated blood loss (EBL) in low risk group was 65 minutes, 14 minutes and 35 ml, and 95 minutes, 22 minutes and 110 ml in median risk group, and 150 minutes, 30 minutes and 320 ml in high risk group (P<0.05). The recovery was uneventful and no complication was identified.

CONCLUSIONS: The R.E.N.A.L nephrometry score has value as a predictive tool for success rate and perioperative outcomes of RALPN and R.E.N.A.L nephrometry score ≥10 should not be a contraindication of RALPN.

SOURCE OF FUNDING: None

MP24-23 OPEN VERSUS MINIMALLY INVASIVE PARTIAL NEPHRECTOMY: ASSESSING THE IMPACT OF BMI ON PERI-OPTERATIVE OUTCOMES IN 3,686 CASES FROM A NATIONWIDE DATABASE (NSQIP)
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INTRODUCTION AND OBJECTIVES: Many surgical procedures become more complex in obese or morbidly obese patients. The impact of Body Mass Index (BMI) on post-operative complications in the context of partial nephrectomy has been understudied. Here, we use a national surgical quality database to explore the association of BMI with peri-operative outcomes for both Open Partial Nephrectomy (OPN) and Minimally Invasive Partial Nephrectomy (MIPN).

METHODS: Years 2005 to 2012 of the National Surgical Quality Improvement Program were queried for both OPN and MIPN using CPT codes. Postoperative complications were organized according to Clavien Grades and then compared across normal weight (BMI = 19.0–25.0), overweight (BMI = 25.1–30.0), and obese (BMI ≥ 30.1) patients using standard descriptive statistics. Multivariate logistic regression modeling adjusted for patient age, comorbidities, and functional status.

RESULTS: There were 1,667 OPN and 2,019 MIPN patients included in our study. There was a significant increasing trend for operative time with increasing BMI (p<0.001). The overall complication rate after OPN was 17.9%, 17.2%, and 17.9% (p=0.945) for normal weight, overweight, and obese patients, respectively; while the overall complication rate after MIPN was 6.8%, 6.3%, and 8.7% (p=0.148). Univariate analysis and multivariate logistic regression modeling demonstrated that obese and overweight patients were not at increased risk for any complication grade after both OPN and MIPN.

CONCLUSIONS: This nationwide database sample demonstrates that although operative time is increased in obese and overweight patients, they are no more likely to experience peri-operative complication after OPN or MIPN than normal weight patients.

SOURCE OF FUNDING: None

MP24-24 ROBOT-ASSISTED PARTIAL NEPHRECTOMY VERSUS LAPAROSCOPIC PARTIAL NEPHRECTOMY: THE LEARNING CURVE OF A SINGLE SURGEON
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INTRODUCTION AND OBJECTIVES: To evaluate the learning curve of laparoscopic partial nephrectomy (LPN) and robot-assisted partial nephrectomy (RPN) of a single surgeon.

METHODS: In our prospectively maintained database, 208 minimally invasive PN performed from 2004/4 to 2014/4 by one surgeon. Open conversion or without pure-LPN or RPN were excluded. Seventy-nine LPNs and 129 RPNs were analyzed. Patients were divided into subgroups of 25 consecutive patients (LPN1 ~ LPN3, and RPN1 ~ RPN5) according to time sequence of operation. Perioperative data, including age, BMI, operation time, warm ischemia time (WIT), estimated blood loss (EBL), and length of hospital stay (LOS) were compared between and within the LPN and RPN groups. Most recent LPN and RPN groups (LPN3 and RPN5) were also compared.

RESULTS: The overall WIT (37.1 vs. 24.9 minutes), operation time (276.2 vs. 240.0 minutes) were shorter in RPN group. Within LPN groups, WIT was longer in LPN2 comparing with LPN3 (34.7 vs 21.3 minutes, p=0.002). Within RPN groups, longer operation time from RPN1 to RPN5 (p=0.006), but no difference between neighboring subgroups. WIT didn’t show differences between these subgroups. Comparing LPN3 and RPN5 groups, higher PADUA score (7.9 vs 8.9, p=0.016), longer operation time (234.5 vs 282.7 minutes, p=0.043), and longer LOS (5.1 vs 6.3 days, p=0.034) were noted in the RPN5 group. The warm ischemia time was similar.

CONCLUSIONS: The learning curve of LPN was 50 cases. The WIT, operation time, and LOS improves as experience increased...
**INTRODUCTION AND OBJECTIVES:** Robotic partial nephrectomy (RPN) has gained popularity for the treatment of T1a renal tumours. We assessed whether outcomes achieved using RPN in T1a tumours could be successfully reproduced in T1b tumours.

**METHODS:** Using a prospective database of 123 elective cases, the peri-operative, oncological, and functional outcomes of 101 T1a tumours were compared with 22 T1b tumours including a single T2a. Student’s T-test was used to determine significance.

**RESULTS:** Mean age was 55.6 years (T1a) and 55.1 years (T1b); BMI 28.7 vs. 27.5 and mean PADUA scores 7.43 vs. 8.53 (p < 0.05). There were no significant differences in operative times, estimated blood loss was significantly decreased in the T1a group (145 mls vs. 194 mins); warm ischaemic times (17.9 vs. 19.7 mins) or hospital stay (3.4 days and 3.6 days). Estimated blood loss was significantly decreased in the T1a group (145 mls vs. 244 mls), with no significant difference in subsequent haemoglobin drop (1.42 vs. 1.47 g/dl). Serum creatinine increase was 0.05 mg/dl (T1a) vs. 0.19 mg/dl (T1b).

**CONCLUSIONS:** The transition from LPN to RPN is rapid in an experienced laparoscopic surgeon.

**SOURCE OF FUNDING:** Nil

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**MP24-25 IS ROBOTIC PARTIAL NEPHRECTOMY SAFE FOR T1B TUMOURS? A COMPARISON OF THE FUNCTIONAL AND ONCOLOGICAL OUTCOMES FOR T1A AND T1B TUMOURS AT A SINGLE CENTRE**

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1Guy’s Hospital (United Kingdom)

**INTRODUCTION AND OBJECTIVES:** Robotic partial nephrectomy (RPN) has gained popularity for the treatment of T1a renal tumours. We assessed whether outcomes achieved using RPN in T1a tumours could be successfully reproduced in T1b tumours.

**METHODS:** Using a prospective database of 123 elective cases, the peri-operative, oncological, and functional outcomes of 101 T1a tumours were compared with 22 T1b tumours including a single T2a. Student’s T-test was used to determine significance of variation between cohorts, with p < 0.05 considered significantly different.

**RESULTS:** Mean age was 55.6 years (T1a) and 55.1 years (T1b); mean tumour size 2.61 cm vs. 5.03 cm; ASA scores 1.79 vs. 1.7; BMI 28.7 vs. 27.5 and mean PADUA scores 7.43 vs. 8.53 (p < 0.05). There were no significant differences in operative times, 179 mins (T1a) vs. 194 mins (T1b); warm ischaemic times (17.9 vs. 19.7 mins) or hospital stay (3.4 days and 3.6 days). Estimated blood loss was significantly decreased in the T1a group (145 mls vs. 244 mls), with no significant difference in subsequent haemoglobin drop (1.42 vs. 1.47 g/dl). Serum creatinine increase was 0.05 mg/dl (T1a) vs. 0.19 mg/dl (T1b).

**CONCLUSIONS:** The transition from LPN to RPN is rapid in an experienced laparoscopic surgeon.

**SOURCE OF FUNDING:** Nil

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**MP24-27 THE IMPACT OF BODY MASS INDEX ON THE TREATMENT OUTCOME FOR URETERAL STONES WHEN USING A THIRD GENERATION LITHOTRIPTER**

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**INTRODUCTION AND OBJECTIVES:** We investigated the impact of body mass index (BMI) on the treatment outcome for a solitary ureteral calculus using a third generation (Dornier Compact Delta II) lithotripter, as BMI has been reported to be an independent predictor for treatment failure after extracorporeal shockwave lithotripsy (ESWL) with first or second generation lithotripters.

**METHODS:** From January 2013 to December 2013, 80 patients who underwent ESWL for a solitary ureteral calculus, with a mean (range) size of 6.9 (4–15) mm, in this community hospital were enrolled. ESWL failure was defined as when treatable stones (stone >3 mm) or ureteral obstruction were present 30 days after the ESWL. Body mass index, stone size and localization, and treatment parameters were evaluated for their prognostic relevance on therapy success. Logistic regression was used to calculate the odds ratios, and p-value < 0.05 was considered statistically significant.

**RESULTS:** Twenty-four patients (30%) experienced ESWL failure, with a mean (range) follow-up of 28.2 (4–50) days. The mean (sd) BMI was 26.2 (3.9)kg/m2 and 27.0 (4.9)kg/m2 for those with ESWL failure and their counterparts, respectively. Compared to patients with BMI < 24 kg/m2, the univariate odds ratio for ESWL failure was 1.58 (p = 0.46) for BMI 24–27 kg/m2, and 0.67 (p = 0.52) for BMI >27 kg/m2. The results remained unchanged after multivariate adjustment.

**CONCLUSIONS:** Using a third generation lithotripter, BMI has no impact on the treatment outcome for ureteral stones. This effect might be attributed to a greater penetration depth of the shockwave energy.

**SOURCE OF FUNDING:** Mennonite Christian Hospital Research Funds.
**MP24-28 IMPROVED EFFICIENCY OF ESWL WITH OPTICAL COUPLING CONTROL**

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**INTRODUCTION AND OBJECTIVES:** In modern “dry” lithotripters SW are generated in a membrane covered water cushion which is then coupled to the patient. To limit energy loss a coupling agent, usually ultrasound gel, is used in this acoustic interface. During the coupling process air pockets are inevitably trapped in the coupling area which remains invisible to the operator. These air pockets dramatically decrease stone fragmentation efficiency with up to 40%.

**METHODS:** To check for air bubbles in the coupling area a videocamera was installed in the therapy head of our Dornier Gemini lithotripter. All air bubbles in the coupling zone can then be removed under visual control. We evaluated the effect of this optically controlled coupling (OCC) on treatment results (01/10/11 – 30/09/13) and compared these to the results obtained in a “blind” coupling mode (01/04/11 – 30/04/12).

**RESULTS:** OCC significantly reduces the required number of SW with 25.4% for renal stones and 25.5% for ureteral stones. Energy level is reduced by 23.1% for renal stones and by 22.5% for ureteral stones. For renal stones total applied energy is thus reduced by 42.9%. Effectiveness quotients were comparable: in the “blind” mode 73 for renal and 74 for ureteral stones respectively; in the OCC mode 75 for renal and 78 for ureteral stones respectively.

**CONCLUSIONS:** OCC consistently guarantees totally bubble free coupling. This significantly reduces the total energy needed to obtain comparable treatment results. Theoretically this should also reduce incidence and severity of SW-induced adverse effects. We advocate the introduction of OCC in all lithotripters.

**SOURCE OF FUNDING:** None

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**MP24-29 CAN WE FURTHER IMPROVE LOWER POLE STONE CLEARANCE RATES? A RANDOMISED CONTROLLED STUDY**

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**INTRODUCTION AND OBJECTIVES:** Various adjunctive measures have been tested to improve the stone free rates (SFR) for lower pole stones (LPS), but few are randomised or controlled. We report the results of addition of an adjunctive measure (inversion 30 degree head down Trendelenbugh position) to improve the SFR of LCS.

**METHODS:** Patients with LCS (4–20 mm) were recruited and randomized to either shockwave lithotripsy (SWL) or SWL with simultaneous inversion therapy. Standardized shockwaves were given to all patients stratified into 3 categories pending stone size. Additional shockwaves were given to patients with stone fragments at day 2, weeks 2, 4, 12, 24 and at 1 year.

**RESULTS:** A total of 140 patients were recruited. Patients were comparable with respect to age, sex, race and stone parameters. The overall SFR at week 12 was 72% (n=49/68) in patients with SWL and 76% (n=54/71) in SWL with simultaneous inversion at the end of study. SFR of SWL versus SWL with simultaneous inversion was not statistically significant, and no significant adverse effects were noted in both groups of patients. SFR was better in stone of smaller sizes, with a 79% SFR for stones <10 mm, 75% for stones 11–15 mm and 55% SFR for stones 16–20 mm.

**CONCLUSIONS:** Although not statistically significant, SWL with simultaneous inversion is a valuable adjunct in assisting the passage of lower pole renal stones with a SFR of 76%. In clinical practice, this also translates to a 5% improvement in SFR with no added cost.

**SOURCE OF FUNDING:** None

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**MP25 ENDOUROLOGY: IMAGING 2**

**MP25-01 COMPARISON OF FUNCTIONAL RENAL PARENCHYMAL VOLUME PRESERVATION BETWEEN PARTIAL NEPHRECTOMY, CRYOABLATION, AND RADIOFREQUENCY ABLATION USING 3-D VOLUME MEASUREMENTS**

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**INTRODUCTION AND OBJECTIVES:** Small renal masses (SRM) can be managed effectively via partial nephrectomy (PN) and more recently via thermal ablation (TA). While the oncologic outcomes favor PN, there is little data regarding the degree of renal parenchymal preservation between the various nephron-sparing procedures.

**METHODS:** We performed a retrospective review of consecutive patients that underwent PN (open, laparoscopic, or robotic approach) and TA [cryoablation (CA) or radiofrequency ablation (RFA)] for SRM<4 cm at three academic institutions. Patient and tumor characteristics were collected and analyzed. Using 3-dimensional rendering software, preoperative and postoperative functional renal parenchymal volume (FRPV) was calculated for the tumor-bearing kidney. The percent change in FRPV was compared between the procedure types.

**RESULTS:** A total of 150 patients were included for analysis: 90 PN and 60 TA. While preoperative tumors were larger in PN group, there was no difference in mean nephrometry score between the groups. The TA group was found to have a lower mean FRPV loss (~8.1% vs. 16.5%, p<0.005). There were no differences between modality of TA (CA vs. RFA) or between approaches to PN (open, laparoscopic, robotic). Multivariate analysis indicates TA vs. PN is independently associated with less FRPV loss, after controlling for all tumor characteristics.

**CONCLUSIONS:** Compared to PN, TA is associated with a lower degree of FRPV loss during treatment of a SRM. This
MP25 ENDUROLOGY: IMAGING 2

MP25-02 PERIRENAL FAT CHARACTERISTICS ON PRE-OPERATIVE CT SCAN DOES NOT PREDICT DIFFICULTY OF DISSECTION

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INTRODUCTION AND OBJECTIVES: RENAL Ne-

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metastatic pelvic nodes. MRI and diffusion-weighted imaging (DWI) in detection of imaging. Our aim is to compare imaging features from standard after surgery, but is not optimally evaluated by conventional imaging. Features included short axis (SA), long axis (LA), and SA/LA ratio. Irregular margin and fatty hilum were recorded for standard MRI, while apparent diffusion coefficient (ADC) and ADC normalized to muscle (nADC) were recorded for DWI. Generalized estimating equations and McNemar tests were used to compare imaging features in detecting nodal metastasis relative to pathologic reference standard.

RESULT: 32 nodes were identified in 8/36 patients. Features associated with metastasis were standard SA > 5 mm (AUC = 0.85), standard LA > 6 mm (AUC = 0.80), nADC < 1.35 (AUC = 0.66), and absence of fatty hilum (AUC = 0.73). Non-adjusted ADC was not associated with metastasis (p = 0.303).

CONCLUSION: Imaging findings from standard MRI and DWI achieved reasonable accuracy for detecting metastatic lymph nodes from bladder cancer, although sensitivity was higher than specificity. Standard MRI short-axis > 5 mm had the highest accuracy. When using DWI, normalization of ADC values to muscle improved diagnostic performance. Future studies can assess these MRI findings in guiding prognosis and decision-making for bladder cancer patients.

SOURCE OF FUNDING: None

MP25-04 DIAGNOSTIC ACCURACY OF PROSTATE HISTOCANING

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INTRODUCTION AND OBJECTIVES: Prostate HistoScan ning (PHS) is a novel ultrasound-based tissue characterisation application which has the potential to confirm or rule-out prostate cancer. We aimed to evaluate the accuracy of PHS using whole-mount radical prostatectomy specimens as the reference standard.

METHODS: Between July 2010 and November 2011, 46 men (median age 63 years and median PSA 7.74 ug/L) scheduled to radical prostatectomy within our institution, underwent PHS following TRUS imaging just before surgery. PHS axial images were overlaid onto corresponding digital axial images of each radical prostatectomy specimen, permitting cognitive correlation of PHS lesions with actual tumours on prostatectomy. Accuracy values were calculated at the octant, quadrant, and hemi-gland level. In addition we compared the accuracy of PHS between anterior and posterior prostate.

RESULTS: In this retrospective study, 36 patients (age 71 ± 9; 30 men, 6 women) were included who underwent cystectomy for bladder cancer with preoperative MRI including DWI between 2006 and 2013. A fellowship-trained radiologist unaware of pathology reviewed MRI and DWI in different sessions and recorded pelvic nodes. Features included short axis (SA), long axis (LA), and SA/LA ratio. Irregular margin and fatty hilum were recorded for standard MRI, while apparent diffusion coefficient (ADC) and ADC normalized to muscle (nADC) were recorded for DWI. Generalized estimating equations and McNemar tests were used to compare imaging features in detecting nodal metastasis relative to pathologic reference standard.

RESULTS: 32 nodes were identified in 8/36 patients. Features associated with metastasis were standard SA > 5 mm (AUC = 0.85), standard LA > 6 mm (AUC = 0.80), nADC < 1.35 (AUC = 0.66), and absence of fatty hilum (AUC = 0.73). Non-adjusted ADC was not associated with metastasis (p = 0.303).

CONCLUSION: Imaging findings from standard MRI and DWI achieved reasonable accuracy for detecting metastatic lymph nodes from bladder cancer, although sensitivity was higher than specificity. Standard MRI short-axis > 5 mm had the highest accuracy. When using DWI, normalization of ADC values to muscle improved diagnostic performance. Future studies can assess these MRI findings in guiding prognosis and decision-making for bladder cancer patients.

SOURCE OF FUNDING: None

MP25-03 UTILITY OF QUALITATIVE AND QUANTITATIVE IMAGING FEATURES FROM STANDARD AND DIFFUSION-WEIGHTED MRI FOR DETECTION OF METASTATIC PELVIC LYMPH NODES AT RADICAL CYSTECTOMY FOR BLADDER CANCER

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INTRODUCTION AND OBJECTIVES: Presence of metastatic lymph nodes is a major predictor of bladder cancer survival after surgery, but is not optimally evaluated by conventional imaging. Our aim is to compare imaging features from standard MRI and diffusion-weighted imaging (DWI) in detection of metastatic pelvic nodes.

METHODS: In this retrospective study, 36 patients (age 71 ± 9; 30 men, 6 women) were included who underwent cystectomy for bladder cancer with preoperative MRI including DWI between 2006 and 2013. A fellowship-trained radiologist unaware of pathology reviewed MRI and DWI in different sessions and recorded pelvic nodes. Features included short axis (SA), long axis (LA), and SA/LA ratio. Irregular margin and fatty hilum were recorded for standard MRI, while apparent diffusion coefficient (ADC) and ADC normalized to muscle (nADC) were recorded for DWI. Generalized estimating equations and McNemar tests were used to compare imaging features in detecting nodal metastasis relative to pathologic reference standard.

RESULTS: 32 nodes were identified in 8/36 patients. Features associated with metastasis were standard SA > 5 mm (AUC = 0.85), standard LA > 6 mm (AUC = 0.80), nADC < 1.35 (AUC = 0.66), and absence of fatty hilum (AUC = 0.73). Non-adjusted ADC was not associated with metastasis (p = 0.303).

CONCLUSION: Imaging findings from standard MRI and DWI achieved reasonable accuracy for detecting metastatic lymph nodes from bladder cancer, although sensitivity was higher than specificity. Standard MRI short-axis > 5 mm had the highest accuracy. When using DWI, normalization of ADC values to muscle improved diagnostic performance. Future studies can assess these MRI findings in guiding prognosis and decision-making for bladder cancer patients.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: To evaluate the feasibility of Prostate Histoscanning (PHS) guided target acquisition and Transrectal Ultrasound (TRUS) biopsy using the additional specialized software Prostate Histoscanning™ True Targeting (PHS-TT).

METHODS: PHS-TT (HistoscanningTM, Advanced Medical Diagnostics, Waterloo, Belgium) was performed on patients who were planned for TRUS biopsy between February 2013 to September 2013. The data were processed in the Histoscanning T-ITM workstation. The volume of interest (VOI) – prostate volume was defined by the operator through interaction with the PHS application. PHS was performed over the VOI by the software and all abnormal areas ≥0.2 cm³ were highlighted. Targets were plotted on the abnormal areas in the anterior region of the prostate and biopsied.

RESULTS: 43 patients underwent both ‘targeted PHS-TT guided’ and ‘standard 12 core systematic’ biopsies. All the patients had abnormal areas in the PHS with a mean volume of 4.3 g. The overall cancer detection rate was 46.5% (20/43). Individual cancer detection rates for systematic cores and target cores were 44% (19/43) and 26% (11/43) respectively, but the detection rate of target cores raised to 43.7% (7/16) in biopsy naïve patients. In these patients, the cancer detection rate (43.7% vs. 14.8%, p = 0.06) and the cancer positivity of the cores (30.1% vs. 6.8%, p < 0.01) of target cores were higher than those patients with prior biopsies.

CONCLUSIONS: The results of target biopsies were comparable to systematic biopsies. PHS could be an effective tool for identifying prostate cancer with better detection rate in fewer biopsy cores and hence less complications.

SOURCE OF FUNDING: None

MP25-06 OPTICAL COHERENCE TOMOGRAPHY PROVIDES IMAGES SIMILAR TO HISTOLOGY AND ALLOWS THE PERFORMANCE OF EXTENSIVE MEASUREMENTS OF DRUG-ELUTING METAL STENTS IN ANIMAL URETERS

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INTRODUCTION AND OBJECTIVES: Comparison of optical coherence tomography (OCT) images and histology images of metal stents (MSs) inserted in animal ureters. Evaluation of reliability of an OCT based automated method for the performance of quantitative evaluation of ureteral MSs.

METHODS: A zotarolimus-eluting metal stent (ZES) and a bare metal stent (BMS) were inserted in each ureter of 10 pigs and 6 rabbits. OCT was performed in unobstructed stented ureters. Histopathologic examination of the stented ureters embedded in glycol-methacrylate took place. Quadrants of OCT images were compared to their respective histologic images by employing 2 independent observers who delineated different layers in the quadrants of OCT images and correlated them to the respective histologic quadrants. Manual (integrated OCT device software) and automated measurements of the OCT images using an automated strut detection method were compared.

RESULTS: The observers highly agreed on the delineation of urothelium from the lamina propria and the lamina propria from the muscle layer of the ureteral wall. The algorithm measurements were similar to the manual measurements and the algorithm proved to be reliable in the evaluation of ureteral MSs. Significantly higher endothelial hyperplasia of the BMSs in comparison to the ZESs was also quantitatively demonstrated by the strut detection method.

CONCLUSIONS: OCT proved to be a reliable method for the evaluation of ureteral MSs. OCT provided images of the stented ureteral lumen similar to light microscopy quality. Measurements of the stented ureter are reliably performed by the automated strut detection method.

SOURCE OF FUNDING: None

MP25-07 THE ACOUSTIC SHADOW WIDTH IS A MORE ACCURATE PREDICTOR OF TRUE STONE SIZE DURING ULTRASOUND

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INTRODUCTION AND OBJECTIVES: Ultrasound images of kidney stones display a bright stone with a distal shadow. We hypothesize the width of the shadow is a more accurate predictor of true stone size than width of the stone image.

METHODS: Forty five calcium oxalate monohydrate kidney stones ranging from 1–10 mm were imaged in a water bath. The width of the stone and the shadow was measured at depths of 6, 10, and 14 cm. A linear mixed-effect model was used to compare measurements of shadow width and depth versus true stone size. Subgroup analysis was performed to determine the percentage of stones that were over-classified as greater than 5 mm when true stone size was less than 5 mm.

RESULTS: Measurement of shadow width compared to true stone size resulted in mean overestimation at 0.9±0.8 mm, 1.5±1.0 mm, 2.0±1.2 mm at 6, 10, 14 cm depths, respectively. Overestimation of stone width increased with depth (p<0.001). Measurement of shadow width compared to true stone size resulted in an
underestimation of $-0.02 \pm 0.4 \text{ mm}$, $-0.04 \pm 0.6 \text{ mm}$, and $-0.19 \pm 0.8 \text{ mm}$ at 6, 10, 14 cm depths, respectively. The acoustic shadow was a better predictor of true stone size at all depths ($p < 0.001$). Subgroup analysis demonstrated that over-classification occurred in 17/60 cases (28%) when the stone width was measured and 7/60 cases (12%) when the shadow width was measured.

**CONCLUSIONS:** Stone size was consistently overestimated when directly measuring stone width and worsened with increasing depth. Measuring shadow width significantly reduced overestimation of true stone size.

**SOURCE OF FUNDING:** This work was supported by NIH DK043881 and DK092197, and NSBRI through NASA NCC 9-58.

**INTRODUCTION AND OBJECTIVES:** We established a low dose protocol for the follow up of ureteral stones and reducing radiation exposure was assessed on 28 patients.

**METHODS:** Between July 2011 and December 2013, 28 patients who had acute renal colic were investigated with non-contrast spiral computerized tomography (CT). The control protocol consisted of a lower dose and limited section scanning. All tomographies were performed with multi-detector flash CT. A dedicated technician performed tomographies according to the location of the stone, the scanning was carried out from the previous stone location to the caudal direction for a length of 5–15 cm. The estimated radiation exposure in mSv units for initial and control tomography were analyzed.

**RESULTS:** The mean age was 41.4 (23–68) the mean stone size was 5.6 mm (3.0–10.4). Twenty-three patients had lower ureteral stone, 1 patient had mid-ureteral stone 4 patients had upper ureteral stone. After control tomography, spontaneous passage was seen in 10 patients and 18 ureteroreonoscopies were performed for the removal of the stone. Mean radiation exposure in the first and the control tomographies were 7.9 (4.1–14.7) and 1.4 (0.7–3.2) mSv respectively. Mean length of scanning in the control CT was 136.9 (50–287) mm. Overall, there was a 98% reduction in radiation exposure. In patients who didn’t have spontaneous passage, all stones were detected with the low dose protocol.

**CONCLUSIONS:** The low dose protocol utilizing multi-detector flash CT is an efficient method and decreases radiation exposure for the follow-up of ureteral stone disease.

**SOURCE OF FUNDING:** None

**INTRODUCTION AND OBJECTIVES:** NBI is a new technique, using only special parts of the light to enhance detection of blood vessels and therefore to improve detection of urothelial carcinoma in addition to white-light endoscopy (WLE). NBI data in urology are limited and the aim of this study was to find out, if WLE + NBI is really superior to WLE alone.

**METHODS:** Since 08/2013 flexible WLE was performed with HDTV and chip-on-the-tip technology (Olympus) in the FU of superficial bladder cancer. WLE was followed by NBI (n = 251) or WLE 2 (n = 196) by the same urologist, with the endoscopic light being switched of for 10 sec. in between, but leaving the cystoscope in place.

**RESULTS:** Rates of recurrences were similar in both groups (NBI 76 (30.3%); WLE 52 (26.5%)). NBI after WLE identified more tumours in 13 pat. (5.69 vs. 3.92). In 8 pat. NBI showed no vascularization in suspicious areas. WLE2 after WLE identified more tumours in 8 cases (3.75 vs. 3.13).

**CONCLUSIONS:** The use of NBI after WLE leads to an increased number of detected tumors, being numerically superior to simple double examination. Additionally, ruling out vascularization in suspicious areas by NBI may reduce unnecessary TURB’s in the FU of superficial bladder cancer.

**SOURCE OF FUNDING:** None

**INTRODUCTION AND OBJECTIVES:** Superparamagnetic iron oxide (SPIO) nanoparticles have been used as magnetic resonances (MR) molecular imaging contrast agent. In order to increase uptake of SPIO, a new method to functionalize the surface of SPIO with a bladder cancer-specific cells penetrating peptide (CPP)-polyarginine peptides (R11) was studied and evaluated the biological characteristics and MRI contrast-enhanced effect in vitro.

**METHODS:** SPIO-R11 was synthesized by chemical methods. The crystal core and size was characterized by transmission electron microscopy. Bladder cancer cell line (T24) and immortalized normal uroepithilium cell line(SV-HUC) were used to evaluate SPIO-R11 tumor-targeting activity and cytotoxicity. Those processed cells were determined by 3T microMR. Cell ultrastructure was observed by TEM.

**RESULTS:** The synthesis did not induce significant change on physicochemical properties of SPIO. The uptake of SPIO-R11 was obviously more than that of pure SPIO, and meanwhile the iron oxide content in T24 cells was more than in SVHUC. TEM result suggested that SPIO-R11 was mainly concentrated on cell vesicle and lysosome, and no obvious damage evidence was seen on cell ultrastructure. In vitro MRI results show that the T24 cancer treated with SPIO-R11 has a significant negative reinforcement compared to the control groups, and the T2 signal intensity decreased more than 72.6%.
CONCLUSIONS: SPIO-R11 was synthesized successfully via chemical methods without significant change on physicochemical properties. It has the uptake properties of safety, high efficiency and specificity in T24 bladder cancer cell. The in vitro experiment indicated that SPIO-R11 may be a valuable MR contrast agent for further in vivo animal experiment and diagnostic applications in human.

SOURCE OF FUNDING: None

MP25-11 COMPARISON OF HISTORIC VS CONTEMPORARY RADIATION DOSAGE IN RENAL COLIC

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INTRODUCTION AND OBJECTIVES: Serial CT scanning for renal calculus disease remains contentious because of concerns about increased radiation exposure above previous established levels. We aimed to quantify contemporaneous radiation exposure with that delivered in the era of IVU.

METHODS: We searched our hospital database for all patients who presented to the emergency department over a one month period (March) in 1990 with a diagnosis of renal colic and compared them with a contemporaneous series. The estimated effective radiation dose exposure for each patient was calculated, and correlated with size and location of calculi.

RESULTS: The average effective radiation dose per patient in the 1990 group, for initial diagnosis and subsequent follow-up, was 4.61 ±2.83 mSv. The average follow-up time in this group was 37.29 days, with a range from 0–122.99 days. The average effective radiation dose per patient in the 2013 group was 4.75 ±2.27 mSv. The average follow-up time in this group was 62.79 days, with a range from 0–171.60 days. Data was also collected on patient length of stay and time to diagnosis. In the 1990 group there was a mean delay to definitive diagnosis which ranged from 0.93–1.92 days.

CONCLUSIONS: The estimated effective radiation exposure dose to each patient currently is only marginally higher than in the era of IVU, with improvements in length of hospital stay and dose to each patient currently is only marginally higher than in the era of IVU.

SOURCE OF FUNDING: None

MP25-12 CONTEMPORARY SENSITIVITY AND SPECIFICITY OF DIGITAL PLAIN X RAY FOR IDENTIFICATION OF VARIANT CALCIUM COMPOSITION URINARY CALCULI

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INTRODUCTION AND OBJECTIVES: Radiological imaging remains ubiquitous in the follow-up of patients with renal tract calculi. Concern exists regarding radiation dosage with serial CT scanning. We assessed whether newer digital imaging technology improved the utility of plain X Rays in determining the size and location of calcium based urinary calculi.

METHODS: Laboratory databases across two urology centres were audited, for calculi containing >85% calcium oxalate or >85% calcium hydrogen phosphate. We identified 113 calculi (91 calcium oxalate, 22 calcium hydrogen phosphate). Digital imaging for each of these patients was obtained through hospital radiology systems and analysed to determine whether CT identified calculi were visible on X-ray KUB.

RESULTS: The average calculus seen on X-ray was 8.43+/−4.99 mm, and the average calculus not seen on X-ray even when CT imaging was available was 5.39+/−3.20 mm as measured on CT (p<0.001). 74.3% of all calculi were visible of digital X-ray. X-ray was found to be 83.1% sensitive for calculi >5 mm. 50% of stones <5 mm were not seen on X-ray. Statistical significance was noted for the relationship between visibility and position in the renal pelvis and proximal ureter (82%). 50% of mid-ureteric calculi and 75% of distal ureteric calculi were visible.

CONCLUSIONS: Digital X-ray KUB is sensitive for calcium salts calculi >5 mm especially in the upper renal tract. Sensitivity for other calculi may be below best practice standards. This would suggest that CT or ultrasound as an adjunct to plain X-ray for accurate follow-up may be required in many instances despite radiation dosage.

SOURCE OF FUNDING: None

MP25-13 MRI AND US COMBINED STEREOTASSIC PROSTATIC BIOPSY: OUR PRELIMINARY EXPERIENCE

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INTRODUCTION AND OBJECTIVES: Explain our experience with stereotastic prostatic biopsy by fusion of MRI (Magnetic Risonance Imaging)/US (Ultra Sounds) imagines in real time (BiopSee®, Tema Sinergie, Germany).

METHODS: From December 2013 to February 2014, 9 “prostate cancer (PCa) high risk patients” were processed to trans-perineal stereotassic prostatic biopsy. All patients had a previous prostatic mapping, negative for PCa. The average age was 68 years (range 59 – 71 years), the average prostate volume was 74 ml (range 50 – 106 ml) and the average PSA amounted to 7,5 ng/ml (range 2,4 – 14 ng/ml). 6 patients had suspected metastasys by previous MRI analysys. These information were integrated by BiopSee System with data obtained by a biplanar TRUS trasducer on a stepper. As results, prostatic MRI suspicious lesions were merged, in real time, with TRUS images. Then a transperineal saturation biopsy was done (32 samples); suspicious MRI areas were included. Every target was recorded by the software.

RESULTS: PCa diagnosis in 6/9 patients (detection rate = 67%). Positive correlation between MRI suspicious lesion and histological results in 4/6 patients (67% of patients). Patients with no suspicious MRI areas, underwent to saturation biopsy, had 8,3% of samples affected by PCa (5/60 samples). Only 1 patients reported a post-operatory bleeding, spontaneously concluded. No patients with urinary tract infections and/or urinary acute retention.

CONCLUSIONS: Our preliminary experience with stereotassic biopsy reveals itself as a safe procedure, easy to use with high
detection rate. More records are necessary in order to confirm these results.

SOURCE OF FUNDING: None

MP25-14 IS THE AMOUNT OF RADIATION EXPOSURE DURING FOLLOW-UP IMAGING SAFE IN PATIENTS UNDERGOING ABLATION OF T1 RENAL MASSES?

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INTRODUCTION AND OBJECTIVES: Percutaneous thermal ablation is an accepted minimally invasive treatment option for small renal masses, proven to be a safe and effective alternative. Serial follow-up imaging is recommended for surveillance to identify recurrence. The aim of this study was to quantify the amount of radiation exposure per year for follow-up imaging after ablation for stage T1 renal masses.

METHODS: A retrospective review of 71 patients with stage T1 primary RCC who underwent cryoablation (N = 49) or microwave ablation (N = 22) from 2009 – 2013. The effective radiation dose (mSv) was calculated using the reported dose-length product multiplied by the abdomen conversion factor (0.015). Patient characteristics, tumor size, type of follow-up imaging, radiation exposure of follow-up imaging and length of follow-up were measured.

RESULTS: Of the 71 patients (mean age 66 ± 8, 70.4% male) the average follow-up was 16.7 ± 12.4 months. Mean maximum diameter of the renal mass was 2.64 cm ± 1.00. Surveillance imaging was performed with MRI (66.2%) and/or CT scans (26.8%). The radiation dose exposure per year was extrapolated from the length of follow-up and on average was 17.30 mSv (range 0 – 148.48 mSv). Obese patients had higher radiation dose exposure per year (p = 0.029).

CONCLUSIONS: With the acceptable occupational radiation exposure limit of 50 mSv per year, radiation for patients undergoing surveillance imaging after ablation for T1 primary RCC is at an acceptable level. In patients with CT-only surveillance imaging, those who were obese had higher radiation dose per year. Variation in surveillance regimens among urologists suggests a role for a standardized protocol that takes into account both cost and radiation exposure.

SOURCE OF FUNDING: None

MP25-15 RADIATION EXPOSURE IN UROLOGICAL PROCEDURES: ARE WE CONSISTENT OR ARE SOME PATIENTS AT UNNECESSARY RISK?

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INTRODUCTION AND OBJECTIVES: X-ray visualisation is integral to commonly performed urological procedures. Each X-ray exposes patients and staff to ionising radiation which can induce DNA damage and potentially increase the risk of developing cancer. Little guidance is available regarding diagnostic reference levels (DRL) of radiation for these procedures and instead principles of ALARA (as low as reasonably achievable) are adhered to. We aimed to assess the variation in levels of radiation exposure between urologists performing these procedures.

METHODS: A prospective single centre study was performed within a UK centre. Duration and levels of radiation exposure (cGy.cm2), were collected for all: percutaneous nephrolithotomies (PCNL), stent insertions and ureteroscopies over a 3 month period (Sept-Nov 2013) for all urologists.

RESULTS: 121 stent insertions were performed by 13 operators, an average of 9.3 procedures per surgeon (range 1 – 28). Per procedure exposure averaged 39.1 cGy.cm2 (range 3.2 – 84.5 cGy.cm2) and exposure duration averaged 11.2 seconds (range 0.9 to 34). 95 Ureteroscopy and lasers were performed by 8 operators with an average of 11.8 (1 – 35) per operator. Exposure averaged 41.67 cGy.cm2 (range 3.6 – 86 cGy.cm2) and exposure duration averaged 10.5 seconds (range 1.2 – 29). 10 PCNLs were performed by 2 operators whose’ radiation exposure averaged 408.9 cGy.cm2 (range 341.9 – 475.9 cGy.cm2). Exposure duration per PCNL averaged 117.6 seconds (range 107.3 – 128).

CONCLUSIONS: We are inconsistent in the levels of radiation exposure between operators for these commonly performed procedures. Some exceed acceptable levels. The cumulative product of repeated exposure puts patients and staff at undue risk. Increased awareness and improvements are essential to minimising the preventable risk of radiation induced malignancies. Local protocols and DRLs should be encouraged.

SOURCE OF FUNDING: None

MP25-16 HOW ACCURATE IS URINARY TRACT STONE SIZE REPORTING FOLLOWING COMPUTED TOMOGRAPHY (CT) SCANS?

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INTRODUCTION AND OBJECTIVES: Assessment of stone size with urinary tract imaging forms the basis of clinical decision making in patients with urolithiasis. 2 years ago we compared the accuracy of stone size being reported on CT KUB by radiologists to measurements made by urologists and presented the findings. This study identified the need for a standardised method of reporting. A local protocol has since been set up in our unit and we aimed to assess the effectiveness of this change in practice.

METHODS: In 2011, 100 patients who underwent ureteroscopy and stone fragmentation in a single United Kingdom unit from June-November 2011 were identified. CT KUB images were reviewed and the size of calculi was measured in three dimensions using electronic ruler on PACS by urologists. A comparison was made between the size reported by radiologists and these measurements made by urologists. This study was then repeated between March-October 2013 for another 100 patients after a reporting protocol was in place.

RESULTS: In the 2011 study, a comparison between the stone size measurements revealed a difference of 1–2 mm in 24% stones, 2–3 mm in 9% stones and >3 mm in 7% stones. There was no difference in measurements in 60% of stones. In the 2013 study there was no difference in measurements in 70%. A difference of 1–2 mm in 18%, 2–3 mm in 10% and >3 mm in 2%.

CONCLUSIONS: A standardised reporting protocol is effective for accurately assessing urinary tract calculi size. This is important for planning clinical decisions and we advise other centres to implement similar protocols.

SOURCE OF FUNDING: None
MP25-17  NP-59 USEFULNESS FOR DIAGNOSING ALDOSTERONE-PRODUCING ADENOMAS IN PATIENTS WITH EQUIVOCAL ADRENAL CT FINDINGS

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INTRODUCTION AND OBJECTIVES: Two major causes of primary aldosteronism are aldosterone-producing adenomas (APA) and idiopathic hyperaldosteronism (IHA). In this study, we tried to determine the role of NP-59 in identifying aldosterone-producing adenomas before adrenalectomy, especially when diagnostic CT is equivocal.

METHODS: We performed a retrospective analysis in patients with clinical diagnosis of primary aldosteronism. The medical records of 36 patients were reviewed, including 25 patients who received adrenalectomy. Accuracy of non-invasive imaging findings was determined by comparison with pathologic findings and post-operative outcomes.

RESULTS: Twenty-three patients received unilateral adrenalectomy under the non-invasive imaging diagnosis of APA. The diagnoses were based on CT in 11 patients and on CT and NP-59 findings in 12 patients. The results of pathology were adrenal cortical adenoma in these 23 patients and the positive predictive value was 100%. Blood pressure and potassium levels significantly improved after surgery in these patients (p<0.01). Serum biochemistry and adrenal size of both limbs and bodies of patients with IHA were not significantly different than those of patients with APA.

CONCLUSIONS: In primary aldosteronism, the imaging modality of adrenal CT and NP-59 adrenal scan has high positive predictive value for APAs. Laterization by this modality before adrenalectomy can reduce unnecessary invasive examinations such as adrenal venous sampling and provide excellent treatment outcomes.

SOURCE OF FUNDING: None

MP25-18  VIRTUAL PARTIAL NEPHRECTOMY ANALYSIS: ANATOMICAL OPERATION PLANNING USING COMPUTATIONAL THREE-DIMENSIONAL MODEL

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INTRODUCTION AND OBJECTIVES: For achieve negative cancer margin, minimizing urological complications and renal functional with robot assisted partial nephrectomy (RAPN), operation planning with precise three-dimensional anatomical renal structures and detailed evaluation of remnant renal volume is essential. We assessed computational PN planning analysis (Virtual PN analysis).

METHODS: Between 2012 and 2014, 18 patients were underwent Virtual PN analysis prior to RAPN surgery. Virtual PN was performed in following steps. 1. Evaluation of arterial branch for selective clamping by showing renal vascular-supplied area. 2. Planning of the tumor cut surface with optimal margin in precise segmented 3D anatomical model. 3. Detailed volumetric analyses and quantitative estimates of postoperative renal function based on remnant renal volume. At the operation, the surgeon identified the targeted artery and determined surgical margin according to virtual PN. The surgical outcomes between virtual PN and real operation were compared.

RESULTS: All patients had negative cancer surgical margins and no urological complications. Median tumor size, RENAME score, and warm ischemia time was 2.7 cm 3, 7, and 39 minutes, respectively. Selective clamping was successfully done in 8 patients within 10 patients were proposed from Virtual PN. Median tumor volume and resection volume (RV) in virtual PN were 7.25 and 11.35. RV was significant correlated with actual resected specimen volume (r2=0.672, p<0.001). The predicted eGFR based on volume loss was significant correlated with actual eGFR value (r2=0.653, p<0.001).

CONCLUSIONS: Virtual PN analysis prior to RAPN allowed us to executing anatomic RAPN and to predict the surgical outcomes.

SOURCE OF FUNDING: None

MP25-19  MASS LESION OVER ANTERIOR BLADDER WALL

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INTRODUCTION AND OBJECTIVES: A 39-year-old female, gravida 1, para 0, had cesarean delivery because of severe pre-eclampsia and marginal placenta previa. Progressive low abdominal pain and gross hematuria were noted on postoperative day 1, combined with symptoms of oliguria, high fever, and hemodynamic shock.

METHODS: The cystography and CT both demonstrating the mass lesion over the anterior wall instead of the dependent site of the bladder. Besides, the contour line of the mass on image was slick and well defined with obtuse angle to anterior wall. At the cystoscopy examination, we found a mucosa defect and superficial and deep detrusor muscle detachment over anterior bladder wall. Emergency exploratory laparotomy showed intramural laceration of bladder wall, from outside the serosa at the dome area to inside the mucosa near the anterior bladder neck. Cy- storrhaphy was performed immediately.

RESULTS: The patient recovered well without any lower urinary tract symptoms or hemodynamic instability.

CONCLUSIONS: The transmural dissection of bladder wall in this case was a rare and new diagnosis, which could not be classified as any known subtype of bladder injury. This complication might cause intramural infective hematoma, which is located in the hypervascular transmural area and infection can hematogenously spread out rather easily and cause septic shock without warning. The downside retractor hooked the bladder accidentally in cesarean surgery and caused transmural laceration when pulling downward. Instead of direct penetration or cutting through, this occult injury could be missed and cause a potential life-threatening crisis.

SOURCE OF FUNDING: None

MP25-20  THE PERFORMANCE OF TRUS IN THE DIAGNOSIS OF DEFECT OF SEMINAL VESICLES

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INTRODUCTION AND OBJECTIVES: To explore the effect of TRUS in the evaluation of seminal vesicle defect and compare with MRI imaging.

METHODS: We evaluated prospective cohort of 1249 patients with suspected OA by TRUS, from 2009 to 2013. It was found that dilation of the ejaculatory duct (ED, 29.9%, 374/1249) was the most common cause of OA, followed by seminal vesicle (SV) abnormalities (28.5%, 356/1249). 237 patients were diagnosed with congenital defects (agenesis or/and hypoplasia) of the SV, constituting more than half of SV disease in OA (19.0%, 237/1249). Not as ED, congenital defects of SV cannot be corrected with surgical treatment. Therefore, it is meaningful to compare TURS and MRI for accurate diagnosis to SV defects. Among our study, 30 patients with agenesis or/and hypoplasia of the SV on TRUS were further evaluated with pelvic magnetic resonance imaging (MRI) within two years aiming to verify TRUS results.

RESULTS: The concordance rate for diagnosing congenital defects of the SV was 73.3% (22/30).

CONCLUSIONS: TRUS is a reliable convenient method for diagnosing agenesis or hypoplasia of the SV in OA patients with high concordance of MRI, while MRI is useful in patients with inconclusive TRUS results.

SOURCE OF FUNDING: None

MP25-21 NATIONAL TRENDS IN FOLLOW-UP IMAGING AFTER PYELOPLASTY IN CHILDREN IN THE US
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INTRODUCTION AND OBJECTIVES: Radiographic follow-up after pyeloplasty for the correction of ureteropelvic junction obstruction is not well defined in children. The purpose of this study was to characterize postoperative care after pediatric pyeloplasty to identify trends in imaging use.

METHODS: Using the MarketScan Database, patients 0–18 years undergoing pyeloplasty from 2007–2010 were identified. Iaging was classified as functional (diuretic renogram, IVP) and non-functional (ultrasound, CT, MRI). The postoperative period was divided into ≤6, 6–12, 12–24, 24–36 and >36 month intervals. We excluded patients with <24 months of postoperative enrollment in MarketScan. Multivariate logistic regression was performed to determine associations between demographic variables and imaging utilization patterns.

RESULTS: We identified 546 patients with mean ± SD follow-up of 3.0 ± 0.8 years, of whom 27% underwent minimally-invasive pyeloplasty. Overall, 5.5% of patients had no postoperative imaging. Within the first 6 months, 482 patients (88%) had at least one imaging study, and 122 patients (22%) received renal scans. Within the first 12 months, 92% of patients had at least one imaging study, which was most commonly ultrasound. After 12 months, one-third were not followed with imaging, and of the 66% of patients receiving imaging, it was most commonly ultrasound. At least annual imaging was only significantly associated with older age on multivariate logistic regression.

CONCLUSIONS: Following pediatric pyeloplasty, there is variation in modality and intensity of imaging follow-up. After 1 year, one-third of patients do not receive subsequent imaging. The majority of patients are followed with renal ultrasound with less use of functional imaging compared to imaging follow-up in adults.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: To evaluate the value of imaging in the diagnosis of localized amyloidosis of the ureter.

METHODS: We previously reported an association between convalescence after radical prostatectomy (RP) and the integrity of the pelvic floor muscle and membranous urethral length (MUL). We evaluated postoperative urinary continence associated factors on magnetic resonance imaging (MRI) and their predictive accuracy.

METHODS: We prospectively analyzed the 100 patients who underwent RP at our institute. The MUL, prostate volume, the shape of the prostatic apex, and the prostatic urethral angle were measured by preoperative MRI. The pre- and postoperative urethral pressure profiles were measured to assess urethral sphincter function after surgery. Continence, defined as being pad free and no leakage of urine, was assessed at three months after surgery.

RESULTS: Fifty-nine patients achieved continence at three months. The MUL on MRI was longer in the continent group than in the continent group (13.5 mm vs. 11.5 mm, p = 0.001). The patients with a prostatic apex overlying the anterior membranous urethra on MRI showed a worse uroinary continence rate than those without it (47.6% vs. 78.4%, p = 0.003). The MUL (OR = 1.317, p = 0.007) and shape of the prostatic apex (OR = 5.961, p = 0.006) were independent preoperative predictors for the recovery of continence at three months after RP. The inclusion of the MUL and prostatic apical shape on MRI increased the predictive accuracy of the base model from 0.670 to 0.796 (p = 0.012).

CONCLUSIONS: Our results show that maximal preservation of the MUL is important during RP, especially for patients with a short MUL or those with a prostatic apex overlying the anterior membranous urethra.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Localized amyloidosis of the ureter was a rare disease and can easily be confused with a neoplasm. We reviewed relevant literatures based on specific cases and explored the value of imaging in the diagnosis of localized amyloidosis of the ureter.

METHODS: Here we reported the case of a 55-year-old woman who presented with loin pain and painless gross hematuria. Imaging features of the patient was analyzed. We also reviewed the previous English literature about localized ureteral amyloidosis.

RESULTS: Middle-aged women were likely to suffer from the disorder. Loin pain and hematuria were the main clinical features. There were no specific performance on radiologic imaging and ureteral calcification was not widespread. The easiest involved part was lower ureter. Nephroureterectomy was the predominant treatment. Biopsies via an ureteroscope prior to surgery or intro-operative frozen section examination, which
yielded the diagnosis of amyloidosis, could help in the avoidance of unnecessary surgery. The use of dimethyl sulfoxide or follow-up with serial imaging may become a promising treatment.

CONCLUSIONS: The value of imaging in the diagnosis of localized amyloidosis of the ureter is limited.

SOURCE OF FUNDING: No

MP25-24 THE VALUE OF CT SPECTRUM IMAGING IN DIFFERENTIAL DIAGNOSIS OF RENAL CANCER INVADING RENAL PELVIS AND RENAL PELVIS CARCINOMA INVASING KIDNEY: A PRELIMINARY STUDY

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INTRODUCTION AND OBJECTIVES: The surgical treatment and postoperative management of kidney cancer or renal pelvis cancer were significantly different. However, traditional CT scan was hard to distinguish renal cancer invading renal pelvis or renal pelvis carcinoma invading kidney. In this study, we preliminarily study the application value of CT spectrum imaging in the differential diagnosis of renal cancer invading renal pelvis and renal pelvis carcinoma invading kidney.

METHODS: Institutional review board approval and written informed consent was obtained. 30 cases of renal cancer and 30 renal pelvis carcinoma confirmed by pathological examination were respectively selected. All patients underwent single-source dual-energy spectral CT scan. Iodine-based material-decomposition images of cortex and medulla phase were obtained. Normalized iodine concentration (NIC), iodine concentration ratios of lesion-to-normal renal tissue ratio (LNR) was calculated. Independent samples t test were performed.

RESULTS: The mean normalized iodine concentration (NIC) (0.49 mg/ml ±0.08) during cortex phase in the renal cancer was significantly higher than that in renal pelvis carcinoma (0.23 mg/ml ±0.18). There was no significant difference in NIC of medulla phase (p>0.05), which was (0.55 mg/ml ±0.15) and (0.44 mg/ml ±0.25), respectively. LNR value during the cortex phase of renal cancer was 0.29 ±0.50, which was lower than that of renal pelvis carcinoma (p<0.01).)

CONCLUSIONS: The use of spectral CT with iodine-based material decomposition images and the quantitative analysis of iodine concentrations are expected to distinguish renal cancer invading renal pelvis or renal pelvis carcinoma invading kidney.

SOURCE OF FUNDING: No

MP25-25 REDUCING THE RADIATION DOSE WITH THE ADAPTIVE STATISTICAL ITERATIVE RECONSTRUCTION TECHNIQUE FOR CHEST CT IN ADULTS: A PARAMETER STUDY

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INTRODUCTION AND OBJECTIVES: To investigate the relatively lowest radiation dose by maintaining good image quality in adult chest scanning of GE CT equipment.

METHODS: 72 cases of adult patients were randomly divided into six groups. In each group, we set up a different value of noise index (NI) every number from 13.0 to 23.0. For each group, several image series were reconstructed using different levels of adaptive statistical iterative reconstruction (ASIR) (30%, 50%, 70%). So we got 18 image sequences of different combinations of NI and ASIR percentage in all. Quantitative noise-CT value, standard deviation (SD) were assessed at the region of interest. The volume CT dose index (CTDI) and dose length product (DLP) were recorded. Signal-to-noise ratio (SNR) and contrast-to-noise ratio (CNR) were calculated.

RESULTS: There was no significant difference in CT values among the 18 image sequences. The SD value reduced with the noise index’s reduction or ASIR%’s increase. The different combinations of noise index and ASIR% were assessed. The CTDI and DLP were diminishing as the NI rising up. The scores that received from subjective image quality evaluation reduced in all groups as the ASIR% increasing.

CONCLUSIONS: Increasing NI can reduce radiation dose. On the premise of maintaining the same image quality, using a suitable percentage of ASIR can increasing the value of NI. To assure image quality, we eventually got the conclusion that when NI was set in 17.0, ASIR% was 50%, the image quality could be optimal for not only satisfying the requirements of clinical diagnosis, but also achieving the purpose of low-dose scanning.

SOURCE OF FUNDING: No

MP25-26 DISTRIBUTION OF PROSTATE CANCER FOCI IN PATIENTS WITH TRANRECTAL 10-CORE SYSTEMIC RANDOM BIOPSY-ANALYSIS OF 5310 CORES IN SOUTH TAIWAN

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INTRODUCTION AND OBJECTIVES: To evaluate the detection site of prostate cancer foci in patients receiving transrectal ultrasound guided 10-core systemic random biopsy.

METHODS: From September 2005 to December 2013, 1237 men received TRUS-guided biopsy due to either abnormal digital rectal examination (DRE) or serum PSA more than 4.0 ng/ml and 706 patients were excluded from this study for less than 10-core random biopsy. A total of 531 patients underwent 10-core random biopsy transrectally. Each core was reported separately, including malignancy or benignity, Gleason score, and the proportion of malignancy. The frequency and distribution of prostate cancer were evaluated and compared according to DRE finding.

RESULTS: One hundred and forty-two (26.7%) were positive for prostate cancer, including 66 of 396 (16.7%) men with normal DRE and 76 of 135 (56.3%) with abnormal DRE. Patients with normal DRE exhibited younger age (68.2 ± 71.5 yrs, p = 0.007), lower serum PSA (16.0 ± 29.5 ng/ml, p = 0.0001), larger prostate size (47.0 ± 39.4 ml, p = 0.025), less positive cores (3.6 ± 5.4 cores, p = 0.0003), and less Gleason score (6.6 ± 7.5, p < 0.0001) than those with abnormal DRE. The most detection site of prostate cancer in abnormal DRE patients was left apex (45%), following by left mid-lateral (43%) and left base-parasagittal area (43%). The most detection site of prostate cancer in normal DRE patients was left apex (29%), following by left mid-lateral (27%), left mid-parasagittal (27%), and right apex (25%).

CONCLUSIONS: Left apex area is the most common detection site for prostate cancer in both patients with or without abnormal DRE.

SOURCE OF FUNDING: None
MP25-27 CLEAR CELL RENAL CELL CARCINOMA LOCALISED AT SINUS RENALIS CONFUSED WITH RENAL PELVIS MASS IN IMAGE
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INTRODUCTION AND OBJECTIVES: To identify a right renal pelvic mass confused with kidney tumor incidentally detected by ultrasonography.
METHODS: An abdominal enhanced computed tomography (CT) scan displayed a 2.3 × 2.1 cm mass in right sinus renalis. The neoplasm enhanced significantly. Urinalysis, cystoscopic examination and urine pathology was negative for transitional cell carcinoma. Retro-grade pyelography didn’t find definite mass in pelvis.
RESULTS: The Laparoscopic nephrectomy was done under the preoperative diagnosis of renal cell carcinoma according to those images. In operation we ligated the ureter as early as possible in case of transitional cell carcinoma. The sample was splitted and showed a solid cystic tumor with complete pseudocapsule near renal pelvis fat. Histopathologic examination was reported as clear cell renal cell carcinoma.
CONCLUSIONS: If there is no pathologic proof for transitional cell carcinoma, the mass enhance significantly and can be performed nephrectomy. Otherwise, ureterorenoscopy should be done to avoid nephroureterectomy.
SOURCE OF FUNDING: None

MP25-28 POSTERIOR NUTCRACKER SYNDROME: CLINICAL, RADIOLOGICAL AND SURGICAL MANAGEMENT OF 30 PATIENTS
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INTRODUCTION AND OBJECTIVES: Posterior nutcracker syndrome is a retro aortic left renal vein (RLRV) entrapment between the aorta and the vertebra. Urological symptoms can be caused by increased pressure in the renal vein.
METHODS: Thirty patients with TNCS were studied at our institution from January 2009 to January 2014, had urologic symptoms with RLRV. Retrospectively, patients’ medical records, radiological characteristics and surgical management were analyzed.
RESULTS: The patients’ mean age was 23 years (range, 8–72 years) and the male to female ratio was 10 to 1. The urologic symptoms of the initial diagnosis were various (haematuria: 20 of the 30 patients; left flank pain: 30 of the 30 patients; inguinal pain: 27 of the 27 male patients; and gross haematuria: 5 of the 30 patients). The distribution among the type I, II, III, and IV of RLRV was 26, 0, 4, and 0 patients, respectively. The concomitant diseases were Wilkie syndrome (1 patient) and varicocele (24 of the 27 male patients). 4 patients underwent transposition of the left renal vein.
CONCLUSIONS: The most common type of RLRV was type I. Transposition of the left renal vein was concomitant with the resolve of the symptoms. Conservative management is the appropriate method of treatment in patient with not severe symptoms.
SOURCE OF FUNDING: Nil

MP25-29 EFFECTS OF FIRST-LINE TREATMENT USING POTASSIUM CITRATE IN RADIOLUCENT URINARY STONES
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INTRODUCTION AND OBJECTIVES: In extracorporeal shock wave lithotripsy (ESWL) treatment for radiolucent urinary stones, contrast medium injection or ultrasonographic focusing is mandatory for the confirmation of stone location. When this attempt was insufficient for localization, endoscopic surgical treatment could be considered. However, some patients were not suitable for anesthesia or surgery due to underlying comorbidities. In this case, we used potassium citrate as a first-line treatment for the patients who are suspected of uric acid stone in previous laboratory examinations and analyzed the effects of medical therapy.
METHODS: From 2011 to 2013, we retrospectively analyzed patients medical records who were offered medical therapy as a first-line treatment for radiolucent renal or ureteral stones. Potassium citrate (5 g/pack, 3 times a day) was used in all patients. Treatment success was defined as complete dissolution of stone after medication and we divided patients into two groups according to treatment results.
RESULTS: Among the total 28 patients, 16 (57.1%) had complete dissolution and 12 (42.9%) had partial or no dissolution. There were no differences in serum uric acid levels and stone size between two groups before treatment. However, there were significant differences in age, stone HU, stone size to density, urine pH, and medication period. On multivariate analysis, stone HU [odds ratio (OR), 2.71], stone size to density (OR, 2.50) and urine pH (OR, 7.00) were significant factors influencing on success rate.
CONCLUSIONS: When surgical treatment or ESWL was not possible due to patient’s some situations, medical first-line treatment using potassium citrate would be considered in selected cases.
SOURCE OF FUNDING: None

MP25-30 VALIDATION OF A NOVEL ASIAN DIETARY QUESTIONNAIRE IN ASSESSING NUTRITIONAL RISK FACTORS FOR URINARY STONE FORMATION
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INTRODUCTION AND OBJECTIVES: Nutritional risk factors for lithogenesis can be identified using a detailed three-day food diary, which is analysed and interpreted by a registered dietician. A novel dietary questionnaire, tailored to local food patterns for lithogenesis can be identified using a detailed three-day food diary, which is analysed and interpreted by a registered dietician. A novel dietary questionnaire, tailored to local food and beverages in Singapore was developed to identify dietary lithogenic risk factors.
METHODS: A 36-item dietary questionnaire was developed, which quantified intake of stone inhibitors (citrate and fluids), stone promoters (animal protein and oxalate) and calcium. Twenty healthy volunteers were recruited to complete the dietary questionnaire. This was followed by a three-day food diary. A dietician, who was blinded to the questionnaire data, conducted a telephone interview for 24-hour diet recall. The responses to the dietary questionnaire were compared with the nutrient analysis
of 24-hour diet recall. Pearson’s correlation analysis was used to determine the relationship between the two variables.

**RESULTS:** The questionnaire required approximately five minutes to complete. Amount of fluid intake was well-captured on the questionnaire \((r = 0.55, p = 0.01)\). Strong positive linear relationship was observed for calcium intake \((r = 0.87, p < 0.01)\). No linear relationship noted for animal protein intake on the questionnaire \((r = 0.08, p = 0.73)\). From the questionnaire, subjects responded average consumption of citrate-rich food (orange, lime, pineapple) of 1–2 times/month. On average, oxalate-rich food (bai-cai, tofu, tempeh) was consumed on a weekly basis. Both of these corresponded well with the 24-hour diet recall.

**CONCLUSIONS:** The dietary questionnaire based on Asian lithogenic food items provided a simpler tool in identifying stone-related nutrition factors compared to a three-day food diary and 24-hour food recall.

**SOURCE OF FUNDING:** None

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**MP26 LAPAROSCOPIC SURGERY: NEW TECHNOLOGY 2**

**MP26-01 SINGLE PORT LAPAROSCOPIC HERNIOPLASTY—COST EFFECT DEBATE**

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**INTRODUCTION AND OBJECTIVES:** Inguinal hernia is a common disease and the operation today has been established to progress to the single port surgery. The new procedure is feasible and the cost effect is still debating.

**METHODS:** We retrospectively evaluated patients who underwent hernioplasty for inguinal hernia under supervision by single surgeon from 2009 to 2013. Patients were divided into single port hernioplasty, laparoscopic hernioplasty and conventional open hernioplasty.

**RESULTS:** Fifteen patients received single port hernioplasty, 21 received laparoscopic hernioplasty and 121 received conventional open hernioplasty. All single port hernioplasty were performed for bilateral hernia. The operation time was shorter in laparoscopic group than in the single port group without statistical difference. The analgescs use was significant less in the laparoscopic group than in the other groups. The total cost was higher in the single port group than that in the laparoscopic group. The outcomes of pure LESS-RP were similar to LRP. Locally advanced patients with large prostate may be not suitable for LESS-RP. This is the first RCT studying LESS-RP and early outcomes are acceptable.

**CONCLUSIONS:** Single port laparoscopic hernioplasty is clinical feasible and cost effective for patients and hospital management.

**SOURCE OF FUNDING:** None

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**MP26-02 LAPAROENDOSCOPIC SINGLE-SITE RADICAL PROSTATECTOMY VS CONVENTIONAL LAPAROSCOPIC RADICAL PROSTATECTOMY: INTERIM REPORT OF A PROSPECTIVE AND RANDOMIZED CLINICAL TRIAL**

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**INTRODUCTION AND OBJECTIVES:** To compare the safety and efficacy of laparoendoscopic single-site surgery radical prostatectomy (LESS-RP) and conventional laparoscopic radical prostatectomy (LRP).

**METHODS:** A prospective, randomized, and controlled clinical trial was undertaken from Sep 2012. The LESS-RP and LRP were preformed through trans-peritoneal approach.

**RESULTS:** By May 2014, we had recruited 20 prostate cancer patients treated by radical prostatectomy. Of them, ten cases were in pure LESS-RP and others were in LRP group. The mean operative times were 232.5±53.5 and 207.4±53.3 min. The estimated blood loss was 414±444 and 325±293 ml. Each group had blood transfusion rate of 20%. In LESS-RP group, one case with prostate volume of 107.3 ml and pT3b had rectal injury. The petrolysis drainage time were 8.5±4.4 and 8.1±7.5 days, and the first post-operative day VAPS were 2.1±0.6 and 2.2±1.4. Final pathological results in LESS-RP group and in LRP group were T2a 5, 2, T2b 1, 3, T2c 2, 2, T3a 1, 2 and T3b 1, 1 cases, respectively. All patients were in N0M0. Positive surgical margin rates in each group were 10% and all occurred in pT3a cases. The one-month post-operative PSA levels were lower than 0.02 ng/ml in all cases. All patients had fully recovered in continence 6 months post-operatively.

**CONCLUSIONS:** The outcomes of pure LESS-RP were similar to LRP. Locally advanced patients with large prostate may be not suitable for LESS-RP. This is the first RCT studying LESS-RP and early outcomes are acceptable.

**SOURCE OF FUNDING:** Human Resources and Social Security of China.

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**MP26-03 LAPAROENDOSCOPIC SINGLE-SITE SURGERIES: A MULTICENTER EXPERIENCE OF 469 CASES IN JAPAN**

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**INTRODUCTION AND OBJECTIVES:** To compare the safety and efficacy of laparoendoscopic single-site surgery radical prostatectomy (LESS-RP) and conventional laparoscopic radical prostatectomy (LRP).
INTRODUCTION AND OBJECTIVES: Laparoendoscopic single-site (LESS) surgery has been used for various urological diseases over the last few years. To report a multi-institutional series of non-robotic urological LESS surgery in Japan.

METHODS: Consecutive cases of LESS surgery performed between February 2009 and December 2012 at 9 academic institutions were included. The effectiveness and safety of the procedure were examined in this retrospective analysis.

RESULTS: Included in analysis were 469 cases. The most common procedures were adenectomy (n=177) and radical nephrectomy (n=143). The procedures also included nephroureterectomy (n=40), living donor nephrectomy (n=40), pyeloplasty (n=30), urachal remnant excision (n=9), simple nephrectomy (n=7), radical prostatectomy (n=6) and others (17). The access sites included umbilicus (n=248, 53%) and other site (n=221, 47%), and transperitoneal approach was used in 385 cases (82%) and retroperitoneal in 84 cases (18%). The Median operation time was 148 min in adenectomy, 211 min in radical nephrectomy, 278 min in nephroureterectomy and 241 min in living donor nephrectomy and 227 min in pyeloplasty. Conversion to reduced port surgery occurred in 27 cases (5.8%), conventional laparoscopy in 12 cases (2.6%) and conversion to open surgery in 2 (0.4%) case. Intraoperative complications occurred in 9 cases (1.9%), and post-operative complications in 26 cases (5.5%). There were only 5 (1.1%) major complications evaluated with Clavien-Dindo classification.

CONCLUSIONS: Non-robotic laparoendoscopic single-site surgery is technically feasible and safe for various urologic diseases in Japan.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: We conducted the present study to assess the long-term experience and oncologic outcomes of laparoendoscopic single-site radical nephrectomy (LESS-RN).

METHODS: We performed a chart review of patients who had undergone LESS-RN since 2009; patients with pathologically confirmed renal cell carcinoma and a minimum of 2 years of follow-up were included in this study. All procedures were performed by use of a homemade single-port device with a wound retractor and surgical gloves as we have previously described. The demographic, preoperative, and postoperative data were statistically analyzed.

RESULTS: Out of the 27 patients who underwent LESS-RN during the study period, 23 patients had a minimum follow-up of 2 years and up to 5 years. Mean follow-up was 50.3 ± 8.7 months. Patients had a mean age of 57.9 ± 11.5 years; mean BMI of 23.3 ± 3.1 kg/m2 and there were 12 male patients (42.6%). The mean tumor size was 4.6 ± 2.4 cm. The mean operative time was 204 ± 67 minutes and estimated blood loss was 187 ± 271 ml. There was only 1 intraoperative complication (4.3%); diaphragm injury) and 1 case conversion to open method. Nineteen patients (82.6%) showed clear cell carcinoma. Eighteen patients (78.3%) were pT1 and 7 tumors (30.4%) were high Fuhrman grade (III/IV). All surgical margins were pathologically negative. Cancer-free survival was 86.1% at 5 yr; cancer-specific survival was 95.7% at 5 yr, as projected by the Kaplan-Meier method.

CONCLUSIONS: This study reaffirms that LESS-RN is safe and feasible in properly selected patients.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Laparoscopic adrenalectomy via four trocars is a well-established procedure. Laparoendoscopic single-site surgery (LESS) is a step toward the development of more minimally invasive surgery. However, it is initially difficult for even well-trained surgeons in conventional laparoscopic surgery to perform LESS.

METHODS: Since July 2011 to December 2013, we have performed laparoendoscopic transperitoneal Adx on 54 patients; 31 LESS-Adx (including 2 bilateral cases) and 23 conventional Adx. We summarize our initial experience of LESS-Adx. Lap-Protecor and E.Z access (Hakko, Japan) or GelPOINT (Applied Medical, CA) were placed though a single 3-cm umbilical incision. In right Adx, 2 mm MiniLap (Stryker, CA) was used for liver retraction.

RESULTS: Two patients who underwent bilateral LESS-Adx were diagnosed with ACTH-independent bilateral adrenocortical macronodular hyperplasia and pheochromocytoma linked to MEN2 syndrome, respectively. Comparing the 29 unilateral LESS-Adx with the 23 conventional Adx, mean BMI of patients was 23.9 ± 2.1 vs 23.9 ± 4.2, operative time was 200.7 ± 12.6 vs 204.9 ± 15.3 minutes and blood loss was 38.5 ± 12.9 vs 44.3 ± 21.8 mL with no significant difference.

CONCLUSIONS: LESS for Adx is a technically feasible and safe procedure in carefully selected patients. The definitive clinical, aesthetic and functional advantages of this technique require further analysis.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: To introduce laparoendoscopic single site (LESS) retroperitoneal lymph node dissection (RPLND) via pararectus approach for treatment of nonseminomatous testicular cancer.

METHODS: From September 2010 to June 2012, 4 male patients (age 18 ~ 27 years old), present with enlarged right testicle and elevated AFP level, underwent right radical orchidectomy. The histopathological analysis revealed nonseminomatous germ cell tumor. LESS-RPLND was performed 3 weeks after
INTRODUCTION AND OBJECTIVES: The aim of the present study was to further evaluate our initial experience, including those two previously presented cases, of simultaneous LESS for the surgical treatment of intra-abdominal pathologies in two different organs.

METHODS: Five patients with bilateral renal cell carcinoma (RCC) (n = 2), bilateral aldosterone-producing adrenal adenoma (n = 1), right proximal ureter stone and left nonfunctioning kidney (n = 1), and synchronous left RCC and sigmoid colon cancer (n = 1) underwent simultaneous LESS with use of the umbilicus as the portal of entry. Perioperative outcomes including operative time, estimated blood loss, and complications were analyzed retrospectively.

RESULTS: All procedures were completed successfully without conversion to conventional laparoscopic or open surgery and without the need for other extramucilcal incisions. The surgical outcomes are summarized in Table 2. All surgical procedures were completed within a reasonable operative time with minor bleeding; 1 patient whose preoperative hemoglobin level was 9.2 g/dL (reference range: 13–17 g/dL) required a blood transfusion. The mean incision length was 3.6 cm (range, 3–4 cm), and the mean postoperative pain score, as measured by use of a visual analogue scale, was 4.6 (range, 4–6) on postoperative day 1 and 1.8 (range, 1–2) on the day of discharge. There were no problems in resumption of oral intake. In all patients, the incisions were nearly hidden in the umbilicus, providing excellent cosmetic results.

CONCLUSIONS: Simultaneous LESS of intra-abdominal pathologies in two different organs was technically feasible and safe. The procedure could be performed with minimal morbidity and obvious cosmetic advantage.

SOURCE OF FUNDING: None
RESULTS: All procedures were completed without conversion. Compare with traditional laparoscopic surgery, operative time (P < 0.05) and VAPS (P < 0.05) show significant difference in LESS group, and no difference was noted in other factors (P > 0.05). There was no secondary bleeding, wound infection, intestinal obstruction, incision hernia and other severe postoperative complication. Follow-up of 2 to 36 months shows no local recurrence.

CONCLUSIONS: Laparoscopic single-site radial nephrectomy by Single-Cup or Single-Ring glove technique is feasible, effective and safe. It gives a more mini-invasive and cosmetic option for young or female patients. The characteristics of lower-cost, more aesthetic, repeat use of the homemade devices appeared to be popularized. Further experience and long-time evaluation are required.

SOURCE OF FUNDING: None

MP26-10 COMPARISON OF RETROPERITONEAL LAPAROSCOPIC ADRENALECTOMY WITH SINGLE-SITE SURGERY AND CONVENTIONAL RETROPERITONEAL LAPAROSCOPIC ADRENALECTOMY

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INTRODUCTION AND OBJECTIVES: To compare the clinical efficacy of retroperitoneal laparoscopic with single-site surgery (LESS) and conventional retroperitoneal laparoscopic adrenalectomy, and to investigate the safety, feasibility and value of retroperitoneal laparoscopic adrenalectomy with single-site surgery.

METHODS: From January 2010 to June 2013, 17 patients underwent retroperitoneal laparoscopic with single-site surgery (A group, n = 17), 15 patients underwent conventional retroperitoneal laparoscopic adrenalectomy (B group, n = 15) from January 2008 to December 2009. The operation time, the operative bleeding volume, the postoperative hospitalized day, the postoperative intestinal function recovery time, the pain scores, the cosmetic results were compared between two groups.

RESULTS: All operations were successfully without major surgical complications in both groups. No patients of LESS were converted to conventional retroperitoneal laparoscopic surgery. There were no significant differences in the operative bleeding volume, the postoperative hospitalized day, the postoperative intestinal function recovery time, the pain scores. The patients undergoing LESS showed better cosmetic results (p < 0.05) and longer operative time (p < 0.05).

CONCLUSIONS: The retroperitoneal laparoscopic adrenalectomy with single-site surgery is safe and feasible surgical modality, however, multicenter randomized clinical trials are necessary to further elucidate the safety and efficiency of this new technique.

SOURCE OF FUNDING: None

MP26-11 A COMPARATIVE ANALYSIS OF LAPAROENDOSCOPIC SINGLE-SITE ADRENALECTOMY AND CONVENTIONAL LAPAROSCOPIC ADRENALECTOMY: INITIAL EXPERIENCE AT SAPPORO CITY GENERAL HOSPITAL

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INTRODUCTION AND OBJECTIVES: It has been reported that laparoendoscopic single-site (LESS) adrenalectomy for the patient with adrenal tumor was safe and feasible. LESS surgery has been introduced into our institute for the urologic disease since 2012. We compared the clinical outcome of LESS adrenalectomy (LESSad) with conventional laparoscopic adrenalectomy (CLad).

METHODS: From January 2012 to April 2014, we have performed LESSad for 24 patients with adrenal tumor, meanwhile CLad have been performed 17 patients during the same period. The patient backgrounds, operating time, estimated blood loss, peri- and post-operative complications, and hospital stay after surgery were collected from the clinical records and comparative analysis was performed between the two groups.

RESULTS: The patient age (52 vs 55) and laterality (L/R: 14/10 vs 10/7) were comparable between the two groups. LESSad were more performed in female patients compared to CLad (F/M: 18/6 vs 7/10 p < 0.05). No difference was seen in operating time (159.6 min vs 180.1 min) and estimated blood loss (157 mL vs 44.4 mL) between two groups. No major complication or mortality was occurred in either group. In LESSad, only one patient was converted to open surgery due to unexpected blood loss and technical difficulty.

CONCLUSIONS: In our initial experience, LESS adrenalectomy is safe and feasible treatment option for adrenal tumors compared with conventional laparoscopic adrenalectomy. In addition, cosmetic outcome might be clinical advantage for LESS adrenalectomy.

SOURCE OF FUNDING: None

MP26-12 EXPERIENCE OF LAPAROENDOSCOPIC SINGLE-SITE SURGERY FOR ADRENALECTOMY

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INTRODUCTION AND OBJECTIVES: Laparoendoscopic single-site surgery (LESS) is a newly development of laparoscopy, avoiding multiple ports minimize morbidity. Combined with retroperitoneoscopy, this technique is quit suitable to adrenalectomy.

METHODS: All patients whose adrenalectomy was performed with LESS by single surgeon within 10 years was collected. We analyzed tumor size, tumor patholoy, OP time, estimated blood loss, complication, OP time, and postoperative convalescence, wound pain and hospital stay for evaluation the possibility of LESS for adrenalectomy.

RESULTS: None of our patient need transfusion, and most of them start oral intake the next day. We didn’t place drainage after operation due to quit samll amount of blood loss. Wound pain was extremely small and the parenteral analgesics during admission less then one dose. Complication grade in Clavein score only limit to grade 1 and hospital stay was short. Besides, this surgery wasn’t obstructed by previous abdominal surgery due to retroperitoneal approach, and the tumor size was the main determinant that influenced the wound size.

CONCLUSIONS: By improving from open to laparoscopy, from transperitoneum to retroperitoneum, from multiple ports to single port. LESS adrenalectomy is a resolutive and novel technique with better outcome, less complication, and better cosmesis.

SOURCE OF FUNDING: None
MP26-13 LAPAROENDOSCOPIC SINGLE-SITE SIMPLE NEPHRECTOMY USING A MAGNETIC ANCHORING SYSTEM IN A PORCINE MODEL

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INTRODUCTION AND OBJECTIVES: Magnetic anchoring devices have been suggested to have the benefit of reducing the number of port sites in laparoscopic surgery. In this study, we prospectively assessed the feasibility of using a magnetic anchoring and guidance system (MAGS) in laparoscopic single-site (LESS) surgery performed by novices.

METHODS: A total of 10 LESS simple nephrectomies were performed with or without MAGS in a non-survival porcine model by 6 operators with no previous LESS surgery experience. After installation of the homemade single port, an intra-abdominal magnet was fixed to the renal parenchyma and the kidney position could be changed easily by moving the external handheld magnet. The length of the procedure and any intraoperative complications were evaluated.

RESULTS: Operative time (mean±standard deviation) was shorter in the group using the magnetic anchoring device (M-LESS-N) than in the group with conventional LESS nephrectomy (C-LESS-N) (63±20.8 min vs. 82±40.7 min, respectively). Although all nephrectomies were completed uneventfully in the M-LESS-N group, renal vein injury occurred during dissection of the renal hilum in two cases of C-LESS-N surgery and was resolved by simultaneous transection of renal artery and vein with an Endo-GIA® stapler.

CONCLUSIONS: LESS nephrectomy using MAGS is a feasible technique for surgeons with no LESS surgery experience. Taking into account the two cases of renal vein injury in the C-LESS-N group, the application of MAGS may be beneficial for overcoming the learning curve of LESS surgery, in particular by facilitating dissection of the renal hilum.

SOURCE OF FUNDING: Nothing to declare

MP26-14 LAPAROENDOSCOPIC SINGLE-SITE SURGERY IS FEASIBLE IN THE PEDIATRIC UROLOGY PATIENTS

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INTRODUCTION AND OBJECTIVES: We report the results of laparoscopic single-site (LESS) for various 27 pediatric urologic diseases, such as ureteropelvic junction obstruction (UPJO), varicocele testis, hypoplastic kidney with ectopic ureter (EU), undescended testis, and disorder of sex development (DSD). In order to evaluate the postoperative pain, we used the “pain face scale”.

RESULTS: The mean operative time was as follows: pyeloplasty (246 minutes), nephrectomy and nephroureterectomy (155.6 minutes), varicocele testis (58 minutes), orchiopepxy (60 minutes), bilateral orchiopepxy (170 minutes), gonadectomy and hysterepectomy (189 minutes). Postoperatively all of the symptoms and disappeared in all 27 patients without complications. Postoperative pain face scales in pyeloplasty patients showed lower scores on Days 3 and 4 between the LESS group and the control group (conventional method).

CONCLUSIONS: The advantages of LESS include superior aesthetics with a smaller scar, and less pain. LESS can be adequately performed, and is feasible in the pediatric urology patients.

SOURCE OF FUNDING: None

MP26-15 SUPRAPUBLIC-ASSISTED LAPAROENDOSCOPIC SINGLE-SITE SURGERY NEPHRECTOMY WITH REPORT OF 110 CASES

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INTRODUCTION AND OBJECTIVES: To describe the initial clinical experience of suprapubic-assisted laparoscopic single-site surgery nephrectomy (SA-LESS-N) and evaluate its safety, feasibility and efficacy.

METHODS: 110 patients including 86 males and 24 females, with a mean age of 52.6 years, were subjected to SA-LESS-N. There were 83 non-functioning kidneys, 24 renal carcinomas, and 3 tuberculosis kidneys. Patients were positioned in lateral decubitus with affected side elevated 70°. One 5- and 10-mm (or two 5-mm) trocars were inserted into the umbilical edge. A 10-or 5-mm trocar was inserted into abdominal cavity below the pubic hairline, through which a 10-mm 30° or 5-mm 0° laparoscope was placed. The specimens were removed after the incisions below the pubic hairline were enlarged or they were crashed and removed from the incision at the umbilicus.

RESULTS: SA-LESS-N was successfully completed in 110 patients. Seven patients required conversion to standard laparoscopy because of intraoperative bleeding (n=6), and failure to progress (n=1). One patient underwent open conversion because of gradual bleeding during the dissection of dense adhesive renal pedicle due to infection and fibrosis. The mean operative time for simple nephrectomy 115 mins, radical nephrectomy 85 mins. The mean blood loss was 150 ml. Hospitalization duration was between 5 and 8 days with a mean postoperative stay of 7.1 days. The mean follow-up of 23.1 months showed hidden umbilicus scar.

CONCLUSIONS: SA-LESS-N appears to be feasible, safe and effective. It would not only lead to improved cosmetic results, but lead to little postoperative pain.

SOURCE OF FUNDING: None

MP26-16 SUPRAPUBLIC-ASSISTED LAPAROENDOSCOPIC SINGLE-SITE SURGERY (SAE-LESS) FOR NEPHROURETERECTOMY

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INTRODUCTION AND OBJECTIVES: We report 17 case of suprapubic-assisted laparoendoscopic single-site surgery (SA-LESS) for nephroureterectomy in patients with right upper urinary tract cell carcinoma.

METHODS: Patients including 10 males and 7 females, with a mean age of 67.6 years, were subjected to SA-LESS nephroureterectomy. There were 9 renal pelvic carcinomas, 4 ureteral carcinomas, two renal tuberculosis, and one megaureter with empyema. One 5- and 10-mm trocars were inserted at margin of umbilicus. A 5-mm trocar was inserted into abdominal cavity below the pubic hairline. The operation was performed under direct vision achieved by a 5-mm flexible-tip 0° laparoscope placed through the trocar below the pubic hairline. The distal ureter was dissected and blocked by a Hem-O-lok. The bladder cuff excision was performed. The ureter was isolated completely and radical nephrectomy was performed according to the method of the standard laparoscopy. The specimen was removed after the incisions below the pubic hairline was enlarged transversely.

RESULTS: All the procedures were successfully performed. The median operative time was 160 minutes, and the median blood loss was 150 ml. All the patients resumed ambulation on postoperative day 1. Pelvic drainage tube was removed on postoperative day 2–3. Urethral catheter was removed on postoperative day 6–7.

CONCLUSIONS: SA-LESS nephroureterectomy appears to be feasible, safe and effective. The placement of trocar at umbilicus and below the pubic hairline not only decreases the difficulty of operation, but can also leads to good cosmetic results.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: To evaluate the feasibility, safety and efficacy of a quick technique for novel laparoscopic adrenalectomy via transumbilical approach.

METHODS: 49 patients including 26 males and 23 females, with a mean age of 41.5 years, were subjected to transvaginal NOTES-assisted laparoendoscopic single-site surgery adrenalectomy (TN-LESS-A) or suprapubic-assisted laparoendoscopic single-site surgery adrenalectomy (SA-LESS-A). 26 cases had left adrenal tumors, 22 cases had right adrenal tumors, and 1 case had bilateral adrenal tumor combined with right renal tumor. The mean diameter of adrenal tumor was 3.5 cm. A quick technique was used in all the procedures. The bigger specimens were re-removed through an extended incision at posterior vaginal fornix. The specimen was removed after the incisions below the pubic hairline was enlarged transversely.

RESULTS: All the procedures were successfully completed. The median operative time was 160 minutes, and the median blood loss was 150 ml. All the patients resumed ambulation on postoperative day 1. Pelvic drainage tube was removed on postoperative day 2–3. Urethral catheter was removed on postoperative day 6–7.

CONCLUSIONS: SA-LESS nephroureterectomy appears to be feasible, safe and effective. The placement of trocar at umbilicus and below the pubic hairline not only decreases the difficulty of operation, but can also leads to good cosmetic results.

SOURCE OF FUNDING: None

CONCLUSIONS: This quick technique for novel laparoscopic adrenalectomy via transumbilical approach is feasible and safe with less blood loss, minimal invasion, less operative time, fewer complication, short convalescence and good cosmetic result.

SOURCE OF FUNDING: None

CONCLUSIONS: This quick technique for novel laparoscopic adrenalectomy via transumbilical approach is feasible and safe with less blood loss, minimal invasion, less operative time, fewer complication, short convalescence and good cosmetic result.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: To present our preliminary experience with transperitoneal laparoendoscopic single-site (LESS) nephrectomy (RN) using a homemade single-port device in China.

METHODS: From July 2010 to November 2011, eleven patients with renal tumor not greater than T2 underwent LESS-RN by an experienced laparoscopic surgeon. A homemade single-port device was used through a 5-cm umbilical incision. A combination of standard and articulating laparoscopic instruments was used. The sequence of steps of LESS-RN was similar to transperitoneal laparoendoscopic RN. Patient characteristics, perioperative variables and postoperative outcomes were recorded and analyzed.

RESULTS: Except for two transperitoneal laparoscopic conversions and one hand-assisted laparoscopic conversion, the other procedures were completed successfully, without conversion to open surgery. The mean operative time was 224.5 (155–297) minutes, estimated blood loss 270.9 (50–900) ml, and hospital stay 10.4 (5–15) days. The mean visual analogue pain scale (VAPS) on the first postoperative day was 4.0/10. Final pathological analysis revealed renal cell carcinoma in all cases with a stage distribution of three T1a, five T1b and three T2a tumors. With the mean follow-up period of 21.4 (12–28) months, all patients were alive without evidence of tumor recurrence or metastasis, and were satisfied with the appearance of the scars.

CONCLUSIONS: Transperitoneal LESS-RN using a homemade single-port device is technically feasible and safe in a selected group of patients (low BMI and stage tumor) and has excellent cosmetic results. Although preliminary oncologic outcome isn’t compromised, the long-term evaluation of these patients awaits.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Laparoendoscopic single-site (LESS) nephrectomy has been reported as a less invasive surgical technique. We report our department’s initial operative outcomes in kidney transplantation donors.

CONCLUSIONS: This quick technique for novel laparoscopic adrenalectomy via transumbilical approach is feasible and safe with less blood loss, minimal invasion, less operative time, fewer complication, short convalescence and good cosmetic result.

SOURCE OF FUNDING: None
METHODS: Data were collected retrospectively in 6 (between 2012 and 2014) and 30 (between 2002 and 2012) kidney donors who underwent LESS and hand-assisted laparoscopic surgery (HALS) for nephrectomy, respectively. HALS nephrectomy used 3 ports in addition to hand access. Demographic and clinical data included age, body mass index (BMI), anatomical variation, operating time, estimated blood loss, warm ischemic time (WIT) and perioperative complication based on Clavien-Dindo classification.

RESULTS: Median age (LESS vs HALS; 50.5 vs 54 years, P > 0.05) and BMI (21.2 vs 22.8 kg/m², P > 0.05) was not significantly different between LESS and HALS groups. One (16.7%) and seven (23.3%) donors who underwent LESS and HALS, respectively, had anatomical variation such as multiple renal vessels or left inferior vena cava. Operating time (median 230 vs 279.5 min, P > 0.05), estimated blood loss (median 62 vs 100 ml, P > 0.05), and WIT (4 vs 4 min, P > 0.05) were not significantly different between the two groups. There was no perioperative complications equivalent to Clavien-Dindo grade 3 or more in both groups. Postoperative serum creatinine was also not significantly different (0.965 vs 0.895 mg/dl, P > 0.05).

CONCLUSIONS: LESS donor nephrectomy is feasible and safe with potential benefit in invasiveness and cosmetics.

SOURCE OF FUNDING: None

CONCLUSIONS: Reduced port nephrectomy using 3-mm working trocars was the same operability as compared to conventional laparoscopic nephrectomy and was not impaired cosmesis. Pfannenstiel reduced port nephrectomy is a safe and feasible procedure with further advantage of cosmesis.

SOURCE OF FUNDING: None

MP26-20 PFANNENSTIEL REDUCED PORT SURGERY FOR RENAL TUMOR: A CLINICAL REPORT OF 2 CASES

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INTRODUCTION AND OBJECTIVES: We previously reported laparoscopic single-site(LESS) nephrectomy through umbilical or pararectal incision. The several comparative studies on LESS versus conventional laparoscopic nephrectomy showed that LESS nephrectomy was better in cosmesis and postoperative pain, but was associated with longer operative time, higher conversion rate and higher technical difficulty. For the purpose of improvement of cosmesis and operability, we performed two cases of Pfannenstiel reduced port nephrectomy.

METHODS: In the first case, GelPOINT was placed through 2-cm umbilical incision and two additional 3-mm trocars were inserted. The specimen was extracted through 4-cm Pfannenstiel incision. In the second case, GelPOINT was placed through 5-cm Pfannenstiel incision and two additional 3-mm trocars were inserted. The specimen was extracted without any extra skin incision. In both cases, the endoscope and vessel sealing device were inserted through the GelPOINT. We used 3-mm scissors and dissecting forceps (KARL STORZ) and 3-mm bipolar forceps (Gyrus ACMI).

RESULTS: The operating times were 228 and 155 minutes, respectively. In both cases, estimated blood loss was little and there were no intra- and post-operative complications. Patients began oral intake and walking on postoperative day 1. An epidural anesthesia was performed for 48 hours after surgery. The visual analog pain scale on postoperative day 1, 3, 7 were 20, 5, 13 and 0, 43, 14, respectively.

INTRODUCTION AND OBJECTIVES: Laparoscopic single-site (LESS) surgery is a recently developed technique and has been widely accepted by surgeons. LESS surgery is a minimally invasive surgery in which the operator performed operation through a single entry port, typically around the umbilicus. The single port placement in the umbilicus may enable simultaneous procedures to be performed via the same incision. There were just few case reports about the LESS in combined abdominal surgery, which included ovarian cystectomy/appendectomy, ureterolithotomy/renal cyst unroofing, nephrectomy/radical prostatectomy, etc. Herein, we present a case about the concomitant LESS for nephrectomy and anterior resection of the sigmoid colon.

METHODS: A 74-year-old female with bloody stool for 10 days was found to have concomitant sigmoid colon cancer and left renal cell carcinoma (RCC). A single umbilical incision was used for LESS nephrectomy and anterior resection of sigmoid colon.

RESULTS: The LESS left radical nephrectomy took 3.5 hours with blood loss of 250 mL and the anterior resection of sigmoid colon took 1 hour with blood loss of 50 mL. Transfusion with packed RBC 2 unit was required. Pathologic examination revealed left RCC, clear cell type, 6 cm and sigmoid colon adenocarcinoma, 4 cm. The final wound measured 5.5 cm. Postoperative recovery was uneventful and she had minimal postoperative pain. She was discharged from the hospital on postoperative day 8.

CONCLUSIONS: In a patient with concomitant tumors in kidney and colon, this approach provides a beneficial surgery for both tumors resection. It also shows that increasingly simultaneous surgeries can be done using a LESS surgical in the future.

SOURCE OF FUNDING: None
develop ingenious methods for providing adequate retraction without cluttering the laparoscopic workspace. In WCE 2012, we introduced a useful internal retractor system named EndoGrab™. Herein we present our initial experience using a novel port-free retractor system named EndoLift™ to provide adequate retraction of the liver during right laparoendoscopic single-site nephrectomy (LESS-N).

METHODS: The EndoLift™ device is comprised of a telescopic bar and two articulated clips positioned on either end of the bar. In a case of right LESS-N, this device was introduced into the abdominal cavity through an existing 5-mm port by means of a reusable applier. The bar was positioned underneath the liver and the applier was used to grasp one of the clips and anchored it to the intra-abdominal wall. The process of fastening the second clip created the lift necessary to move the liver out of the operative field. Once the liver was lifted properly, the applier was removed and the port was available for use by other laparoscopic tools. Repositioning of the EndoLift™ was easily performed as necessary and provided superior retraction. At the end of the procedure, the EndoLift™ was easily removed by using the applier.

RESULTS: Good visualization was maintained during the procedure and there were no intraoperative complications. Postoperative aggravation of the liver function was transient and within the permissible range.

CONCLUSIONS: The EndoLift™ is easy to use and is found to provide optimal retraction and enhance good visualization.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Minimization of the single incision length is required to reduce invasiveness and improve cosmesis in laparoendoscopic single-site (LESS) surgeries. We invented and validated an estimating formula to minimize single incision in LESS donor nephrectomy (LESSDN).

METHODS: Cross-sectional area of the graft kidney was assessed by longer and shorter diameter (r and s) of the kidney in CT scan and kidney reduction coefficient (p) after removing the blood. Cross-sectional area of the extraction wound was calculated on the basis of the minimal wound length (x) and skin extension coefficient (q). The estimating formula was invented based on the assumption that the cross-sectional areas of both were equal. The formula was calculated as x = \( \frac{(\pi r q s)}{2p} \) (\( \pi = \text{Pi} \)). The formula was applied in 24 donors who underwent LESSDN using GelPOINT on the pararectal single incision and compared with 26 previous donors without application of the formula.

RESULTS: Coefficients p and q were calculated as 1.46 and 0.80 in 7 previous donors and 10 previous patients with cancer who underwent nephrectomy, respectively. The mean length of incision and the mean warm ischemic time (WIT) in the donors who the formula was applied were significantly shorter than those in the donors who the formula was not applied, respectively (5.62 vs 5.34 cm and 281 vs 207 s; p = 0.004 and p = 0.034, respectively).

CONCLUSIONS: The formula was effective to minimize the length of single incision according to the size of kidney in LESSDN without prolonged WIT.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: To verify the safety and feasibility of applying pure retroperitoneal approach laparoendoscopic single-site adrenalectomy (LESS-A) in the treatment of adrenal gland tumors.

METHODS: From October 2009 to November 2013, twenty patients accepted LESS-A through retroperitoneal approach in our institute for the treatment of adrenal tumors. In LESS-A, a Quadport device was placed through a 3.0-to 3.5-cm transverse skin incision below 12th rib tip into retroperitoneal space. The LESS-A was performed by using 0 lens 5 mm flexible tip video-laparoscope and conventional laparoscopic instruments. We evaluated this technique in terms of operative time, estimated blood loss, peri-operative complications, drainage time, post-operative pain score (VAPS, 0–10) and pathological results.

RESULTS: The 20 procedures in this group were completed successfully with LESS-A. There was no additional trocar added, no conversion to conventional laparoscopic or open surgery. Application of Quadport reduced the instrument clash, both intracorporally and extracorporally. The average operative time were 93(50–180) min, average estimated blood loss were 35.25(5–200) ml. There was no severe peri-operative complication. The average VAPS in the first post-operative day was 1.75(1–3). The average drainage time was 1.6(1–3) d, post-operative hospital day was 3.6(2–6) d. There was no secondary bleeding or wound infection. Pathological results showed 2 cases of adrenal pheochromocytoma, 15 cases of adrenal cortical adenoma, 2 case of adrenal myelolipoma and 1 case of adrenal cyst.

CONCLUSIONS: The retroperitoneal approach LESS-A is feasible and safe. It offers a superior cosmetic outcomes and short convalescence, albeit with a longer operative time than conventional laparoscopic adrenalectomy.

SOURCE OF FUNDING: No
Triport +®️, one pre-bent grasper, sealing instrument (Ligasure 35 mm blunt tip®️). Approach was pararectal, in only one slim man transumbilical. Three LESS were exclude (2 partial AE only, one adrenal cancer with rapid progression converted to SLAE and then to open surgery). This 15 LESS AE compared to 15 SLAE with similar characteristics chosen among 54 SLAE performed 1/2008–2/2012.

RESULTS: In 8 cases of LESS-AE, 3 mm port added to elevate of liver/spleen. Mean parameters of LESS-AE vs. SLAE (F-test of T- test): maximal diameter of tumour 43.7 vs. 42.2 mm (p=0.295), time of surgery 63.3 vs 69.8 min (p=0.29), blood loss 38.0 vs. 38.2 ml (p=0.0012), BMI 26.9 vs. 28.5 (p=0.23), discharging from hospital 5.4 vs. 4.2 day (p=0.03). No complications in both groups.

CONCLUSIONS: Going out from objective data, LESS is an feasible and alternative method for AE. But only in very well selected cases. Subjectively assessed: It must be done by more skilled surgeon. In LESS is more complicated to solve any per-operative complications. Profit of patient is questionable and not proved at this study.

SOURCE OF FUNDING: MH CZ - DRO (Faculty Hospital in Pilsen - FNPI, 00669806), the Charles University Research Fund (project number P36), grant IGA NT 12010-5.

MP26-26 VAGINAL EXTRACTION OF THE KIDNEY FOLLOWING LAPAROSCOPIC NEPHRECTOMY

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INTRODUCTION AND OBJECTIVES: We report the detailed technique and results of transvaginal extraction of the kidney following laparoscopic nephrectomy.

METHODS: Since June 2014, 5 female patients with a median age of 67 years underwent transvaginal extraction of the kidney after laparoscopic nephrectomy. After completion of the primary laparoscopic nephrectomy and entrapping the removed kidney, the patient was placed in the supine lithotomy position. Transvaginally a transverse posterior colpotomy was created at the apex of the tented up posterior fornix. Opening peritoneum was made bluntly by fingers under laparoscopic view. The drawstring of the entrapped specimen was delivered into the vagina. Laparoscopically a transverse posterior colpotomy was created at the apex of The tented up posterior fornix and the drawstring of the entrapped specimen was delivered into the vagina. After laparoscopic exit was completed, the specimen was extracted intact via the vagina. When the vaginal space was tight for large specimen, an additional incision was made towards the operated side. After removal of the specimen, the peritoneum was sutured laparoscopically and the posterior colpotomy incision was repaired transvaginally.

RESULTS: Vaginal extraction was successful in all 5 patients. Median operative time for the vaginal extraction procedure was 58 minutes. Blood loss was minimal. Median specimen weight was 447 gm. (range 271 to 655). No intraoperative complications occurred. Postoperatively one case needed catheterization temporally because of neurogenic bladder.

CONCLUSIONS: Vaginal extraction is an efficacious and minimally morbid technique for removing the intact kidney after laparoscopic radical nephrectomy.

SOURCE OF FUNDING: None

MP26-27 NOTES RADICAL PROSTATECTOMY: AN ANATOMICAL DESCRIPTION OF TRANSRECTAL ROUTE

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INTRODUCTION AND OBJECTIVES: To explore the feasibility of trans-rectal Natural Orifice Transluminal Endoscopic Surgery (NOTES) radical prostatectomy in a cadaveric model and to define the anatomical landmarks of this surgical route.

METHODS: With the cadaver in an exaggerated lithotomy position, a full thickness incision was made on the anterior wall of the rectum. The anteriorly visible denonvillier fascia was incised sharply, exposing the posterior surface of the prostate. A single-port device (GelPOINT®️) was inserted trans-anally pass the incision on the anterior wall of the rectum, into the bluntly created space between rectum and prostate. Three, 5 mm ports were placed through the GelPOINT®, at 3, 6, and 9 o’clock positions. A 5 mm, 0° degree lens was introduced at 6 o’clock position; followed by laparoscopic scissors and laparoscopic grasper. Prostatic and periprostatic anatomy was defined as encountered during each step of the procedure.

RESULTS: The length of the procedure was 90 minutes. Exposure of the posterior surface of the prostate and seminal vesicles was easily achieved. No additional openings of the rectal wall were made. Integrity of the surgical specimen was preserved during extraction.

CONCLUSIONS: TRRP is technically feasible in the cadaver model, being facilitated by previous experience with perineal surgery. Anatomical observations during the present experimental study suggest that the transrectal NOTES routes provides good exposure of the operative field and easy access to the posterior surface of prostate. Future experimental endeavors should focus on reproducibility of this approach and feasibility of lymph node dissection using trans-rectal route.

SOURCE OF FUNDING: TUBITAK for Oktay AKCA

MP26-28 LAPAROSCOPIC ADRENALECTOMY FOR PRIMARY ALDOSTERONISM PATIENTS 70 AGED YEARS AND OLDER

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INTRODUCTION AND OBJECTIVES: Nowadays it is increasingly reported that excessive aldosterone provides direct injury to the kidney and the heart. In the guidelines of Japan Endocrine Society for the primary aldosteronism (PA), it is recommended to find PA patients positively using plasma aldosterone density and the ratio of the plasma renin activity. Therefore opportunity of screening primary aldosteronism is increasing for old hypertensive patients.
however we don’t reach a broad consensus on surgical adaptation of laparoscopic adrenalectomy (LA) for elderly PA patients.

METHODS: To understand surgical advantage for elderly PA patients, we evaluated safety and effectiveness between 70 years and older PA patients and younger PA patients those who went through LA in our hospital from January 2007 to December 2013.

RESULTS: 429 LA were performed during this period, 17 patients (13 men and 4 women) aged 72 years old (70–77) for a median age have high blood pressure for 20.8 years with a median length. The median of BMI and Charlson comorbidity index was 25.3 and 1 respectively. There were not any significant differences between elderly and younger about operation time, blood loss, hospital stay and surgical complications analyzed with Clavien classification. In all patients serum aldosterone significantly decreased after LA and in 16 patients antihypertensive agents became decreasing in 35 months for a mean observation period.

CONCLUSIONS: It is necessary to compare prognosis with elderly PA patients undergoing only a medical therapy, LA was safe and effective for the treatment of elderly PA patients suffering from high blood pressure for long time.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: We aimed to describe our experience with the transvaginal NOTES in female patients, and to evaluate its feasibility, safety and efficacy.

METHODS: 172 female patients with a mean age of 36.3 years and a median body mass index of 26.2 kg/m², were subjected to transvaginal NOTES. In transvaginal NOTES-assisted laparoscopic procedures, a 5-mm trocar and a 10-mm trocar were inserted in the umbilical edge. A 5-mm or 10-mm trocar was inserted in the posterior vaginal fornix for a 5-mm flexible-tip 0º or 10-mm 30º laparoscope. In pure transvaginal NOTES procedures, a 30-mm incision was made at the posterior vaginal fornix, and a 5-mm trocar was introduced into the pelvic cavity. A 5-mm flexible-tip 0º laparoscope was inserted into the pelvic cavity. A Zou-Port was introduced at the posterior vaginal fornix. Dissection was performed according to the method of the standard laparoscopy. The intact specimen was extracted transvaginally.

RESULTS: Transvaginal NOTES was successfully completed in 172 patients, included 21 adrenalectomy, 124 nephrectomy, 4 nephroureterectomy, 1 nephron sparing surgery, and 1 heminephrectomy. Pure transvaginal NOTES procedures performed included 5 renal cyst excision, 16 nephrectomy, The mean operative time was 123, 116, 183, 188, and 87 minutes, and blood loss was 162, 94, 137, 175, and 26 ml for NOTES-assisted nephrectomy, adrenalectomy, nephroureterectomy, pure NOTES nephrectomy, pure NOTES renal cyst excision.

CONCLUSIONS: Transvaginal NOTES is feasible, safe and effective. It provides a good cosmetic outcome. However, existing instruments need improving for the development of transvaginal NOTES.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: The GreenLight Simulator is designed to emulate the experience of photoselective vaporization of the prostate. The GreenLight Simulator was developed through University of Minnesota’s Center for Research and Education in Simulation Technologies and American Medical Systems®. We sought to evaluate the simulator to teach safe practices during this procedure.

METHODS: We developed a structured curriculum to evaluate the GreenLight simulator’s ability to teach safety principles to medical students, residents, and several faculty members. Over 3 months, 20 residents completed several modules and repeated the modules 3 times. Global scores, sweep speed, average laser distance, and ability to coagulate bleeds were recorded. Statistical analysis was performed with SAS v9.3 (SAS Institute Inc., Cary, NC). This was done with a random effects model adjusting for repeated measures across resident experience.

RESULTS: There were 331 trials completed on the GreenLight Simulator. There was no significant difference between sweep speed, blood loss, and average laser distance between clinical years. There was an increase in more efficient vaporization with increased clinical experience. This was also seen with increased usage of the simulator. Again, there was no correlation between sweep speed, blood loss, and average laser distance with increased usage, although users became more efficient at vaporization.

CONCLUSIONS: More clinical experience correlated with more efficient vaporization, but did not correlate with sweep speed or laser distance. The GreenLight simulator was a useful tool in teaching important safety elements of the PVP procedure.

SOURCE OF FUNDING: None

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CONCLUSIONS: More clinical experience correlated with more efficient vaporization, but did not correlate with sweep speed or laser distance. The GreenLight simulator was a useful tool in teaching important safety elements of the PVP procedure.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: Crowdsourcing is the practice of obtaining services from a large group of people; typically from an online community such as the Amazon.com Mechanical Turk Project. We hypothesized that the ‘crowd’ could score performances comparably to scores derived from expert surgeons of dry lab laparoscopic skill tasks videotaped during the AUA BLUS curriculum validation project.

METHODS: 24 candidate videos of laparoscopic skill tasks performed by surgeons of varying levels of laparoscopic case experience - 12 suturing and 12 pegboard transfer performances were evaluated by 5 faculty experts and at least 60 Amazon.com Mechanical Turk crowd-workers. Each rater provided responses to the same multi-domained rating scale from the Global Objective Assessment of Laparoscopic Skills (GOALS) tool. We compared mean global performance scores provided by experts and crowd-workers using Cronbach’s alpha and estimated performance-specific passing probabilities by cut-offs established with receiver operating characteristic (ROC) curves.

RESULTS: Within 48 hours we received 1,840 crowd-worker ratings, of which 1,438(78.2%) passed analysis eligibility criteria based on discrimination questions used to assess the integrity of the scorer’s responses. Faculty experts completed the reviews in 10 days. Inter-rater reliability was excellent (\(\alpha=0.954\)) for the 5 faculty experts and good (\(\alpha=0.826\)) for the mean crowd-worker scores. C-SATS ratings provided excellent discrimination between passing and failing video performances as defined by faculty experts (area under ROC curve = 96.9%; 95% CI: 90.3%–100%).

CONCLUSIONS: A properly-sized and qualified crowd can accurately score laparoscopic skill performances on par with faculty experts. Crowd-based ratings may be an efficient method for assessing passing/failing performances, and for measuring change in performance after training.

SOURCE OF FUNDING: None

MP27-03 CONSTRUCT VALIDITY OF THE BASIC LAPAROSCOPIC UROLOGIC SURGERY (BLUS) SKILL TASKS
Timothy Kowalewski, Robert Sweet, Ashleigh Menhadjadi, Timothy Averch, Geoffrey Box Bodo Knudsen, Timothy Brand, Michael Ferrandino, Jihad Kauk, Jaime Landman, Benjamin Lee, Elspeth McDougall, Bradley Schwartz, Thomas S Landvay

MP27-04 THE SHEEP AS AN ANIMAL MODEL FOR COLLECTING SYSTEM HEALING STUDIES AFTER PARTIAL NEPHRECTOMY
Bruno Marroig, Waldemar S. Costa, José A. Damasceno-Ferreira, Diogo B. De Souza, Fábio O. Ascoli, Marco A. Pereira-Sampaio, Francisco J.B. Sampaio

INTRODUCTION AND OBJECTIVES: The American Urological Association created the BLUS skills tasks as an objective assessment tool to determine laparoscopic skills proficiency. Our goal was to assess the ability of these proposed tasks and metrics to objectively discriminate skill levels.

METHODS: 117 subjects participated across eight different urologic centers in the United States; all were given four dry-lab laparoscopic tasks: Peg Transfer, Cutting, Suturing, and Clip Applying. We employed the Electronic Data Generation and Evaluation platform (Simulab Corp, Seattle WA) to record synchronized video and tool motion metrics for all tasks along with proctor-recorded task errors. Two methods were used to establish ‘ground truth’ skill levels: demographically-derived status and blinded video review by five faculty urologists employing the Global Objective Assessment of Laparoscopic Skills (GOALS) instrument for a representative subset of the database (12 suturing, 12 peg transfer; maximum, median, and minimum task times). We employed Pearson’s correlation to evaluate agreement between metrics and ground truth.

RESULTS: Demographically-derived skill categories failed to provide statistically-significant skill discrimination. Blinded video GOALS evaluation did provide skill discrimination. Task time, path length, and motion smoothness (jerk cost) correlated with ground truth (\(p=0.69, 0.69 - 0.79\) respectively) for Peg Transfer and (\(p=0.86, 0.91 - 0.84\) respectively) for Suturing (\(p<0.01\)). Economy of motion and force consensus depended on their definition.

CONCLUSIONS: The BLUS Peg Transfer and Suturing skill tasks showed good construct validity based on a consensus of established objective metrics and blinded video review by the expert faculty panel.

SOURCE OF FUNDING: American Urological Association
necropsy for urea and creatinine evaluation. An ex vivo retrograde pyelogram and retrograde injection of methylene blue ink were performed to evaluate leakage. Samples from the operated pole were analyzed by histological methods.

RESULTS: During necropsy, an urinoma surrounding the operated kidney, was observed in one animal. Peritoneal fluid levels of urea and creatinine were elevated. Retrograde pyelograms exhibited contrast medium extravasation through the operated pole in all kidneys. The opened collecting system was also confirmed by methylene blue ink injection. The operated pole was covered by collagenous tissue and adhered to adjacent organs.

CONCLUSIONS: The sheep should be considered as the best experimental model for research on collecting system healing after partial nephrectomy.

SOURCE OF FUNDING: CAPES, FAPERJ

INTRODUCTION AND OBJECTIVES: Here we conducted vesicourethral anastomosis training for da Vinci prostatectomy using an original three-dimensional (3D) pelvic organ model. Using biotexture modeling technology, we created this model from a patient’s computed tomography data using a 3D printer. A pelvic-specific narrow and deep working space was accurately reproduced. Moreover, we quantitatively validated the training and provided results to the trainees. Here we report on the utility of this training.

METHODS: The da Vinci S was docked to this model. Vesicourethral anastomosis was performed using 12 continuous sutures starting at the 6 o’clock position. Anastomosis quality was evaluated by suture interval measurements. The completed anastomosis site was cut off, opened, and then scanned. The suture intervals were measured as pixel counts using image analysis software, and the variability among them was schematized. The results were presented to the trainees as feedback in the form of a table.

RESULTS: Three trainees performed this training five times each. The mean time required by each of the three trainees for the anastomosis was 8 min 16 s, 15 min 34 s, and 16 min 51 s. The time required for anastomosis decreased with each training session. The training also reduced the suture interval variability.

CONCLUSIONS: This training method not only allows anastomosis training under conditions that more closely approximate real-world surgery but also enables trainees to recognize their weak points. We believe that this useful training method will reduce the time required for anastomosis and improve its quality.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: PCNL has a significant learning curve. Commercial simulators have prohibitive costs/pitfalls. Hence we constructed, evaluated and patented our novel indigenous PCNL simulator.

METHODS: Our portable fluoroscopy compatible simulator was designed and constructed using CAD software. It uses the usual PCNL instruments, replicates natural tissue-haptics, has various error alarms, simulates respiratory movements and uses regular ureteroscope to confirm successful puncture. Simulator evaluation: “Simulator orientation and puncture demonstration”, performed by PCNL expert (control). 13 trainees underwent a 3-step test in the operating room. Step 1: 3 successful punctures were performed and “End points” measured Step 2. Two practice sessions given (30 mins each) Step3. Repeat test as in step 1 Pre and post test subjective performance assessed with GRS scale.

RESULTS: Parameters Mean Pretest parameters Mean Postest parameters p value GRS (range 1–5) Spearman Correlation Identify anatomy 2.38 4.46<0.005 Plan needle puncture 2.15 4.46<0.005 Instrument use 2.69 4.15<0.005 Ability to perform tasks 2.4<0.005 Overall performance 2.31 4.15<0.005 Objective measurements Fluoroscopy time (secs) per attempt 9.1 4.09<0.005 No. failed attempt/success 2.23 0.72<0.005 Time (secs) per attempt 191.21 85.9<0.005 Total time (secs) 3 attempts 573.61 257.7<0.005.

CONCLUSIONS: Our PCNL simulator is an efficient means of skill acquisition. It provides an opportunity for supervised, repetitive performance of essential technical skills in a controlled, low stress, OR environment. It allows trainee evaluation, provides tailored training sessions and has the potential to decrease the learning curve for skill acquisition in order to maximise trainee performance. It has a low initial and maintenance cost. Developing such simulators may open up new avenues in urology trainee education.

SOURCE OF FUNDING: Nil

INTRODUCTION AND OBJECTIVES: To compare two high-fidelity with one low-fidelity endourological simulator for ureteroscopy (URS)

METHODS: The Endouro trainer LS 50® (Samed®, high-fidelity), the Adam Endo Trainer® (Prodelphus®, high-fidelity) and the Endouro Trainer® (Cook Medical®, low-fidelity) were tested. Nine experienced endourologists (>30 URS procedures/year) and nine unexperienced residents (0 URS procedures) performed a semi-rigid URS with ureteral stone extraction in each trainer. The order of using the simulators was randomized. The performance was rated using the global rating scale (GRS). Finally, the participants answered a questionnaire concerning realistic appearance, usability and training effect.

RESULTS: GRS scores differed significantly between experienced and unexperienced urologists (33.26 vs. 19.15, p<0.001). All participants were in agreement concerning usability, appearance and use for training of all simulators. Only, the question of suitability for training was evaluated differently: experienced endourologists would not use the Endouro Trainer® whereas the unexperienced residents would use it for training. Cannulation
the upper tract was only possible using strong force in the Adam Endo Trainer®. On the other hand, the Adam Endo Trainer® and Endouro trainer LS 50® were seen to be most realistic, whereas the participants agreed to only use the Endouro Trainer® and the Endouro trainer LS 50® for regular training. CONCLUSIONS: The high-fidelity Endouro trainer LS 50® showed the best realistic appearance and suitability and was recommended for training, although unexperienced residents would also consider a low-fidelity simulator to be a good training option.

SOURCE OF FUNDING: None

MP27-08 MODULAR TRAINING FOR PERCUTANEOUS NEPHROLITHOTRIPSY: THE SAFE WAY TO GO

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1University of Patras (Greece) 2University of Leipzig (Germany) 3Medical University of Vienna (Austria)

INTRODUCTION AND OBJECTIVES: Structured training programs including both laboratory and clinical practice are lacking in Percutaneous nephrolithotripsy (PCNL). To present a modular training scheme (MTS) which aims into the efficient PNL training and safety for the patients.

METHODS: Two trainees with no experience in PCNL attended the MTS which included 5 modules. An animal lab course initially took place for basic skill acquisition (Module 1). Modules 2,3,4,5 included the performance of puncture, tract dilation, single stone and large stone management in clinical cases, respectively. Each participant progressed from the one module to the other in stepwise fashion under constant mentoring and evaluation by a senior endourologist. When the trainees completed the MTS, they proceeded in the performance of 60 PNL procedures independently while the mentor performed 25 cases for comparison purposes. A Global rating scale of 6 domains was used for objective evaluation.

RESULTS: One pig and 16 cases as well as 2 pigs and 22 cases were necessary for the successful completion of the MTS. The operative and fluoroscopy time achieved a plateau similar to the mentor and never exceeded 13.3%. Statistical significance was defined as p = 0.05.

CONCLUSIONS: The MTS successfully combined animal and stepwise clinical training based on a standardized technique and objective evaluation.

SOURCE OF FUNDING: None

MP27-09 TRAINING ON PORCINE MODELS IMPROVES DEXTERITY IN URETEROSCOPY

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INTRODUCTION AND OBJECTIVES: To validate training on porcine models as a tool to improve dexterity in semi-rigid ureteroscopy and stenting.

METHODS: Eighteen Urology residents were evaluated when performing semi-rigid ureteroscopy and stenting on four porcine models. All standard equipment and instruments, including fluoroscopy and ureteroscope, were available. All animals received intramuscular enrofloxacin as antibiotic prophylaxis. With the animal under general anesthesia induced by ketamine and Telazol, and maintained by inhalational isoflurane. A 8.9 Fr semi-rigid ureteroscope was placed in the bladder. Each ureteral orifice was identified and a 0.038-inch diameter guidewire was unilaterally placed, and the ureteroscope was performed. After the ureteroscopy, a 5 Fr ureteral stent was placed into one of the ureters.

RESULTS: All the procedure ureteroscopy and stenting were successfully performed. The ureteroscopy was repeated for 3 times by each resident. The mean time of ureteroscopy and stenting were 7.5 min and 4.5 min, respectively. No perforation and stripping occurred during all the procedures. All the animal were alive, 3 of the porcines had a mild hematuria after the procedure and disappered after two days. All residents felt more familiar with the instruments and the procedure after the training.

CONCLUSIONS: Training on porcine models is an effective means of skills acquisition for ureteroscopy procedure. It is recommendable before operating on patients.

SOURCE OF FUNDING: None

MP27-10 A SIMULATION-BASED URETEROSCOPY CURRICULUM – INTEGRATING TECHNICAL AND NON-TECHNICAL SKILLS

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INTRODUCTION AND OBJECTIVES: Simulators within ureteroscopy have extensive validation evidence and can now be integrated within a formalised curriculum. Additionally, non-technical skills are a common cause for error in the operating room and can also be developed via simulation. This study therefore aimed to: 1. To develop a ureteroscopy curriculum, integrating both technical and non-technical skills teaching. 2. Validate the developed curriculum terms of feasibility, acceptability, content validity and educational impact.

METHODS: Curriculum development and content validation was conducted via Delphi methodology until a saturation of information was achieved. Novice medical students were then recruited (n = 32) for a randomised control trial for validation. The intervention cohort completed the simulation-based curriculum; this group and the control cohort subsequently underwent assessment within a full immersion environment. Outcome measures included time to completion, OSATS scores and a task-specific checklist for technical skills assessment. The NOTSS rating scale was used for...
non-technical skills assessment. Subjective measures via a post-study questionnaire were additionally collected. 

**RESULTS:** Post-study questionnaire results demonstrated excellent feasibility and acceptability of the curriculum. Significant improvements within the simulation-based cohort were observed within all outcome measures recorded. Time to completion (p<0.01), OSATS scores (p<0.001), task-specific checklist scores (p=0.011) and NOTSS scores (p<0.001) were all improved, hence demonstrating the educational impact of the curriculum. 

**CONCLUSIONS:** The developed curriculum offers a feasible, acceptable and validated modality for training within uroscopy. Additionally, this study demonstrates that combining the training and assessment for technical and non-technical skills together is both feasible and educationally valuable. 

**SOURCE OF FUNDING:** Olympus and The Urology Foundation (TUF)
from native people data with age specific consideration in JUA but not in TCOG. In treatment, RALP took the advantage of less blood loss and blood transfusion rate compared with traditional approach in both CPGs. Some significant improvement in postoperative urinary control was noted when it was compared with traditional approach in both CPGs. Better outcomes in sexual function from RALP were noted in JUA and TCOG. High installment cost was mentioned in TCOG. Clear application of evidence-based medicine (EBM), level of evidence or grade of recommendation was mentioned in JUA, but no definite EBM mentioned in TCOG.

CONCLUSIONS: There are differences in roles of RALP treatment for PCa among these CPGs. From views of EBM, updating and revision of Taiwanese CPG for PCa is suggested.

SOURCE OF FUNDING: None

**MP27-14 IS A SPECIALIST NURSE-LED FLEXIBLE CHECK CYSTOSCOPY SERVICE AS EFFECTIVE AS DOCTOR-LED SESSIONS?**

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**INTRODUCTION AND OBJECTIVES:** The demands on service provision have led to an increasing number of flexible check cystoscopies being performed by Urology nurse specialists as opposed to doctors. We aimed to compare the performance of Urology nurse specialists, in a nurse-led service, with doctors on flexible check cystoscopies.

**METHODS:** Retrospective case note analysis of all flexible check cystoscopies performed in 2 centres, in patients who required further treatment after their cystoscopy. Data was collected in two separate three month time periods: 1st (01/10/12–31/12/12) all cases were performed by doctors, 2nd (01/03/13–31/05/13) all cases were performed by nurse specialists. Details recorded included the findings at flexible check cystoscopy, treatment and initial and subsequent histology results.

**RESULTS:** 137 episodes were included in the study (71-nurse, 66-doctor). Correct reporting at initial check cystoscopy with subsequent confirmation of TCC, CIS or dysplasia occurred in 99/137 (72.3%) of episodes (55-nurse, 44-doctor). Over reporting at initial flexible check cystoscopy with findings later showing any variant of inflammation/cystitis, reactive changes, atypia or no lesion occurred in 38/137 (27.2%) episodes (16-nurse, 22-doctor). The nurse-led service correctly reported 55/71 (77.5%) episodes and over-reported 16/71 (22.5%). The doctors correctly reported 44/66 (66.7%) episodes and over reported 22.66 (33.3%).

**CONCLUSIONS:** This study supports the role of the nurse-led flexible check cystoscopy service. It also demonstrated that this service is comparable in quality to doctor-led sessions. This has clear implications on the delivery of a cost effective service to meet current demands and prioritisation of roles within Urologists' job plans.

**SOURCE OF FUNDING:** None

**MP27-15 EVALUATION OF CYSTOSCOPIC FULGURATION WITH INDUCTION OF AMENORRHEA AS A MINIMALLY INVASIVE TREATMENT FOR PATIENTS WITH LARGE VESICO-UTERINE FISTULAE**

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**INTRODUCTION AND OBJECTIVES:** Even rare, vesicouterine fistulae are still seen in developing countries. For small fistulae, conservative treatment (induction of amenorrhea ± indwelling catheter) shows accepted success rate. However, for large fistulae; a surgical closure (open or laparoscopic) is preferred. This study was conducted on cases with large vesicouterine fistulae (>1 cm) to evaluate the efficacy of early cystoscopic fulguration of fistulous edges in associated with induction of amenorrhea to avoid surgical intervention.

**METHODS:** Nine patients with large vesico-uterine fistulae (>1 cm) presented with hematuria after cesarean sections (seven patients) or following myomectomy (two patient). Fistulous tracts were visualized on ultrasound and MRI in all patients. After puerperium (for cesarean section patients) or menstruation (for myomectomy patient), cystoscopic fulguration of the fistulous edges using resectoscope was done and indwelling urethral catheter was fixed for 2 weeks. At the same time, amenorrhea was induced for three months using LHRH analogue or high dose progesterone. Patients were followed up subjectively after catheter removal and then monthly. The first postoperative cystoscopy was done during the third menstrual cycle after recovery from the induced amenorrhea.

**RESULTS:** The average age of the included patients was 33 years (range 28–44 years). After recovery from amenorrhea, only one patient (with large (>2 cm) fistula) showed menouria (88% cure rate). No early or late post-operative complications were detected during a mean follow-up period of 8.6 months (range 6–16 months).

**CONCLUSIONS:** Combined cystoscopic fulguration with induction of amenorrhea is a successful minimally invasive option for patients with large vesico-uterine fistulae. This procedure could replace the classic major trans-abdominal corrective surgery.

**SOURCE OF FUNDING:** None

**MP27-16 ANALYSIS OF FACTORS PREDICTING RECOVERY OF ERECTILE FUNCTION AFTER LAPAROSCOPIC RADICAL PROSTATECTOMY**

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**INTRODUCTION AND OBJECTIVES:** To report the recovery rate of erectile function (EF) and identify various factors predicting the recovery of EF in men undergoing laparoscopic radical prostatectomy (LRP) in our center.

**METHODS:** From January 2011 to December 2012, a total of 106 men with localized prostate cancer underwent LRP in our center by one surgeon, and we gathered the preoperative EF condition and perioperative factors of these patients. We followed all the patients through telephone in March 2013, and only 89 patients were available. We collected the recovery of EF of available patients after LRP, and analyzed the perioperative factors predicting the recovery of EF after LRP.

**RESULTS:** A total of 33 patients with preoperative sexual intercourse and over 1 year follow-up were included in statistical research group, and there was no difference of the perioperative clinical data with total series. Recovery of potency was defined as postoperative penile erection. The recovery rate of EF was 51.5% without the use of any drugs or devices to assist erection. In our study, age and preoperative EF were the significant factors of recovery of potency, and preservation of neurovascular bundle and accessory pudendal artery in LRP were also the predictor factors.

**CONCLUSIONS:** A lot of factors predict the recovery of EF after LRP. In our study, accurate patient selection and adequate
surgical technique were major determinants of postoperative recovery of EF. We should take these factors into account for adequate patient stratification and counseling, in order to improve the recovery of EF after LRP.

**SOURCE OF FUNDING:** None

### MP27-17 EPISPADIA LIKE SYMPTOM CAUSED BY URETHRAL MEATUS TUMOR

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**INTRODUCTION AND OBJECTIVES:** This is a 3 years old girl with diaper usage. Her urinary upwards stream while voiding was noted by her parents since birth. Physical examination showed a nodule mass in ventral side meatus, and an 70 degree of urinary stream was seen while she void.

**METHODS:** Under infusion anesthesia, urethral catheter was inserted and the urethral meatus tumor was cauterized to create a straight route for voiding.

**RESULTS:** After the tumor vaporized, a straight urinary stream was seen in the operation room. The same improvement of urinary stream was recored by her parents at home.

**CONCLUSIONS:** This is an interesting case with epispadias like symptom by urethral metal tumor, but is it is effectively treated by evaporation the tumor. The patient and her family feel happy, because she can void normally without urine contamination.

**SOURCE OF FUNDING:** Nil

### MP27-18 BLADDER INSTILLATION OF LIPOSOME ENCAPSULATED ONABOTULINUMTOXINA IMPROVES OVERACTIVE BLADDER SYMPTOMS- A PROSPECTIVE MULTI-CENTER DOUBLE BLIND RANDOMIZED TRIAL

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**INTRODUCTION AND OBJECTIVES:** Cystoscopic intradetrusor injection of botulinum toxin has helped patients with refractory overactive bladder, but with increased risks of urinary tract infection and urinary retention. To assess whether catheter instillation of onabotulinumtoxina 200 U formulated with liposomes (lipotoxin) is safe and effective for the treatment of OAB, without the risk of retention.

**METHODS:** This multi-center, double-blind, randomized, placebo-controlled study enrolled patients with OAB who were inadequately managed by antimuscarinics. Patients were randomly assigned to intravesical instillation of lipotoxin (n = 31) or normal saline (n = 31). The primary end-point was the mean change in micturition events per three days (−4.64 for lipotoxin versus −0.19 for placebo; p = 0.0252). Lipotoxin instillation was also associated with a statistically significant decrease in urinary urgency event with respect to baseline but not placebo. However, lipotoxin instillation was associated with a statistically significant decrease in USS scores versus those of placebo (p = 0.0181). These observed benefits of lipotoxin instillation were not accompanied by an increased risk of urinary retention. Effects of lipotoxin on UIUI were inconclusive.

**CONCLUSIONS:** A single intravesical instillation of lipotoxin was associated with decreases of OAB symptoms without side effects. Intravesical instillation of liposomal botulinum toxin may be a promising approach for treatment of refractory OAB.

**SOURCE OF FUNDING:** None

### MP27-19 THE IMPACT OF STRESS MANAGEMENT ON PAIN AND ANXIETY EXPERIENCED IN PATIENTS UNDERGOING TRANSRECTAL ULTRASOUND-GUIDE BIOPSIES OF THE PROSTATE- A CASE-CONTROL STUDY

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**INTRODUCTION AND OBJECTIVES:** To assess the utilization of “stress management” to relieve anxiety and pain for patients who underwent transrectal ultrasound (TRUS) guided biopsy of prostate. The incidence of prostate cancer in Taiwan increased yearly and so did the number of the patients and morbidity. Early diagnosis and effective treatment for prostate cancer, survival rate can reach about 77% in five years. If the value of Prostate-Specific Antigen (PSA) in the blood exceeds 4 ng/ml, the doctor will advise patients to receive TRUS guided biopsy. When patients received TRUS guided biopsy, about 20% of the patients suffered from extremely large pressure, anxiety and pain. Currently there’s no example of utilizing stress-relieving management such as music therapy and one-by-one simulation education for the patients. Thus, we hope to alleviate anxiety and pain for these patients through stress management and promote to clinical practice extensively.

**METHODS:** The research was a case-control study demonstrating at surgery wards in a teaching local hospital of northern Taiwan. We categorized 82 patients into experimental group and control group. Experimental group was provided with stress management whereas control group received routine nursing care. Tests were performed before and after surgery including state-anxiety inventory, visual acuity score (VAS), respiratory rate, heart rate and blood pressure. We used SPSS 18.0 software to carry out multivariate analysis.

**RESULTS:** Baseline and disease characteristics between two groups showed no significant difference (p > 0.05). VAS of both two groups increased after surgery. We discovered that difference of VAS between post- and pre-operation was lower in experimental group with statistical significance (p = 0.03). Both two groups experienced mild anxiety before and after surgery but experimental group displayed greater decrease in state-anxiety inventory after surgery compared to control group, with statistical significance (p = 0.02). While control group had an increase in respiratory rate after surgery, experimental group had an
opposite result. Post-operation heart rate decreased and systolic blood pressure increased in both groups. In comparison with control group, there was a statistically significant (p=0.38) greater decrease in post-operation diastolic pressure in experimental group.

CONCLUSIONS: According to our research, stress management is able to alleviate anxiety and pain of the patients receiving TRUS guided biopsy of prostate and we medical workers can apply it to clinical practice.

SOURCE OF FUNDING: None

MP27-20 THE AETIOLOGY AND EFFICACY OF ENDOSCOPIC INTERVENTIONS FOR THE TREATMENT OF PERSISTENT AND RECURRENT HEMOSPERMIA

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INTRODUCTION AND OBJECTIVES: With current diagnostic modalities, especially the improvement of endoscopic examination, the proportion of patients diagnosed with idiopathic hemospermia has decreased dramatically. In the majority hemospermia is a benign condition. However, its recurrence may produce a lot of anxiety to the patient. Furthermore, in those patients older than 40 years, it may be the primary symptom of urogenital malignancy. This study was to investigate etiological diagnosis and provide corresponding management. To describe the aetiology and efficacy of endoscopic interventions for the treatment of persistent and recurrent hemospermia.

METHODS: The clinical data of 125 patients with persistent and recurrent hemospermia from multiple medical centers of south China were analyzed retrospectively. The definite etiologies of them were confirmed by physical examination including DRE, and tailored investigations such as blood PSA, TRUS, CT or MRI.

RESULTS: Of all the 125 patients, the aetiologies of 109 cases were validated by vesiculoscopy (41 seminal vesiculitis and 32 seminal stone secondary to them, 19 ejaculatory ducts obstruction, 7 Mullerian cyst, 6 cysts of seminal vesicle and 4 benign prostatic hyperplasia). The aetiologies of other 16 cases were attributable to cystadenoma of the seminal vesicle (1), tuberculosis of tractus genitalis (1), bleeding risk secondary to liver cirrhosis (2), benign prostatic hyperplasia (9) and prostate cancer (3) confirmed by urogenital instrumentation and prostate biopsy.

CONCLUSIONS: The aetiologies of persistent and recurrent hemospermia are mostly associated with seminal vesiculitis and seminal stone secondary to vesiculitis or ejaculatory ducts obstruction incompletely. Transurethral seminal vesiculoscopy could be an effective diagnostic and therapeutic procedure for it.

SOURCE OF FUNDING: This work was supported by Guangdong Provincial Science and Technology Program (2011B060300003), Fundamental Research Funds for the Central Universities (12ykpy40).

MP27-21 LAPAROSCOPIC LOWER URINARY TRACT SURGERY: ROLE OF THE SURGEON ASSISTANT

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INTRODUCTION AND OBJECTIVES: Laparoscopy has emerged as a trend of urological surgery. Surgery assistance plays an important part within laparoscopic surgery. Even more than in open surgery, efficient assistance facilitates the surgeon’s work and helps shortening the intervention duration.

METHODS: Basic principles are detailed, such as the number and the position of trocars, or how to adequately manipulate optic and camera or suction devices.

RESULTS: Assistants should adequately manipulate camera, suction and help to grasp tissues to facilitate procedures.

CONCLUSIONS: Surgeon assistant play a very important role in laparoscopic lower urinary tract surgery.

SOURCE OF FUNDING: None

MP27-22 VERRUCOUS CARCINOMA OF URETER - A CASE REPORT AND REVIEW OF LITERATURES

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INTRODUCTION AND OBJECTIVES: To report a case of verrucous carcinoma of right ureter received hand-assisted laparoscopic right nephrectomy. Case report: A 53-year-old male found to have a right hydronephrosis and renal stones by renal sonography via health checkup. There was no abdominal discomfort or urologic symptoms noted. Abdominal computed tomography showed multiple renal stones and hydronephroteretorrhea.

METHODS: The patient received hand-assisted laparoscopic right nephrectomy.

RESULTS: Dense perirenal adhesion and prominent renal pedicle with enlarged lymph nodes were found during operation. Total 500 ml pus was found in right kidney. Total operative time was 125 min while total blood loss was 300 ml. The pathologic report revealed verrucous carcinoma, involving whole renal pelvis and ureter, extending to surgical margin of ureter. Convalescence was uneventful and the patient was discharged under stable condition.

CONCLUSIONS: Verrucous carcinoma is very rare in the urinary tract. It is a well differentiated squamous cell carcinoma with specific histological and clinical behavior that differs from other ordinary squamous cell carcinoma. Aggressive local surgical treatment is the main modality of therapy. Although it is a rare disease, it should be put into the differential diagnosis in patients with renal stones and unexplained hydronephrosis.

SOURCE OF FUNDING: None

MP27-23 EXPERIENCE IN CARING A PATIENT RECEIVED ROBOTICS ASSISTED LAPAROSCOPIC ENTEROCYSTOPLASTY: A PERSPECTIVE VIEW OF NURSE PRACTITIONER IN TAIWAN

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INTRODUCTION AND OBJECTIVES: The experience of caring a patient received robotics assisted laparoscopic enterocystoplasty is described. Case report: A 55-year-old male presented to our center with a history of recurrent lower urinary tract symptoms with incontinence. The patient had undergone multiple failed procedures for his lower urinary tract symptoms. On physical examination, there was a mass in the suprapubic area consistent with an enterocystoplasty.

METHODS: Robotics assisted laparoscopic enterocystoplasty is described. The patient received robotics assisted laparoscopic enterocystoplasty.

RESULTS: The patient received robotics assisted laparoscopic enterocystoplasty.

CONCLUSIONS: Robotics assisted laparoscopic enterocystoplasty is a safe and effective procedure for managing patients with lower urinary tract symptoms and enterocystoplasty.

SOURCE OF FUNDING: None
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INTRODUCTION AND OBJECTIVES: It is not common in Asia for a nurse practitioner (NP) to care a patient with neurogenic bladder received robotic assisted laparoscopic (RAL) enterocystoplasty. Herein we shared the experience in perioperative care of RAL enterocystoplasty from a perspective view of a nurse practitioner in Taiwan.

METHODS: A 27 year-old female patient had a history of spina bifida and menigomyelocele repaired in 1988. She has repeated urinary tract infection, vesicoureteral reflux requiring hospitalization every 1 to 2 years since after previous surgery. She had deteriorated renal function since 2009 and serum creatinine was elevated up to 1.8 mg/dl. Urological sonography revealed pseudodiverticulum of urinary bladder. Intravenous urography disclosed left hydronephrosis and a contracted urinary bladder. RAL enterocystoplasty with intracorporeal intestinal anastomosis was performed in 2011. Total operative time was 175 minutes while total blood loss was 150 ml. Convalescence was uneventful. There was no vesicoureteral reflux identified 6 months after the operation.

RESULTS: A nurse practitioner serves as the primary assistant for the perioperative care of the whole hospitalization. The augmented bladder was irrigated 3 times a day in order to minimize the possible intestine mucosa obstruction. As a nurse practitioner, she also requested to relieve possible perioperative anxiety and postoperative education regarding the newly augmented bladder. After the intervention provided by the nurse practitioner, the patient was able to perform appropriate self-care at home and had no urinary tract infection since 2011.

CONCLUSIONS: The incorporation of a nurse practitioner into the clinical care for advanced robotic-assisted laparoscopic surgery warrants better medical care for patients.

SOURCE OF FUNDING: None

MP27-26 THE IMPACT OF TELEPHONE FOLLOW-UP ON COGNITIVE LEVEL OF PATIENTS INDWELLING DOUBLE J STENT AFTER PCNL
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INTRODUCTION AND OBJECTIVES: To investigate the impact of telephone follow-up on cognitive level of patients indwelling double J stent after PCNL.

METHODS: 570 patients who had undergone PCNL at the Department of Urology, the First Affiliated Hospital of Medicine School, Xi’an Jiaotong University, between May 2011 and February 2012 were enrolled in our study. These patients were divided into three groups randomly and averagely. Telephone callers of these three groups were fixed on inner thigh, the foot of the bed and suprapubic region respectively. Urine red blood cell count, incidence of catheter obstruction and cystostamp were evaluated.

RESULTS: Suprapubic group had the lowest urine red blood cell count, the lowest incidence of catheter obstruction and cystostamp. The degree of comfort of suprapubic group is superior to the other groups.

CONCLUSIONS:

SOURCE OF FUNDING: None

RESULTS: After discharge, patients in the two groups SAS and SDS were lower than those before intervention, the difference was statistically significant (P<0.05). The observation group SAS and SDS score (37.24 ± 11.99), (35.31 ± 13.89), were lower than the control group, the difference was statistically significant (P<0.05). 2 months after discharge of UDI-7 in the two groups were all item scores were lower than the prior to discharge, the difference was statistically significant (P<0.05). The observation group UDI-7 each item scores were lower than the control group, the difference was statistically significant (P<0.05).

CONCLUSIONS: Self-management guidance can improves total cystectomy and urinary diversion in the quality of life of patients, reduce the negative emotion of patients.

SOURCE OF FUNDING: None

MP27-25 THE HEMOSTATIC EFFECT OF THREE FIXED METHODS OF BALLOON CATHETER AFTER TURP
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INTRODUCTION AND OBJECTIVES: To compare the hemostatic effect of three fixed methods of balloon catheter after TURP.

METHODS: 225 patients who had undergone TURP at the Department of Urology, the First Affiliated Hospital of Medicine School, Xi’an Jiaotong University, between March 2012 and October 2013 were enrolled in our study. The patients were divided into three groups randomly and averagely. Balloon catheters of these three groups were fixed on inner thigh, the foot of the bed and suprapubic region respectively. Urine red blood cell count, incidence of catheter obstruction and cystostamp were evaluated.

RESULTS: Suprapubic group had the lowest urine red blood cell count, the lowest incidence of catheter obstruction and cystostamp. The degree of comfort of suprapubic group is superior to the other groups.

CONCLUSIONS:

SOURCE OF FUNDING: None

MP27-24 STUDY FOR THE EFFECT ON QUALITY OF LIFE AND NEGATIVE EMOTIONS BY SELF-MANAGEMENT GUIDANCE FOR PATIENTS WITH BLADDER CANCER BY RADICAL CYSTECTOMY AND URINARY DIVERSION
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INTRODUCTION AND OBJECTIVES: To explore the effect on quality of life and negative emotions by self-management guidance for patients with bladder cancer by radical cystectomy and urinary diversion, to provide guidance for clinical nursing.

METHODS: 90 cases of bladder cancer underwent radical cystectomy and urinary diversion were randomly divided into observation group and control group with 45 cases in each group, the control group was given conventional nursing, the observation group was given self-management guidance. The two groups of patients with anxiety (SAS), depression (SDS) and quality of life (UDI-7) changes were compared.

RESULTS: After discharge, patients in the two groups SAS and SDS were lower than those before intervention, the difference was statistically significant (P<0.05). The observation group SAS and SDS score (37.24 ± 11.99), (35.31 ± 13.89), were lower than the control group, the difference was statistically significant (P<0.05). 2 months after discharge of UDI-7 in the two groups were all item scores were lower than the prior to discharge, the difference was statistically significant (P<0.05). The observation group UDI-7 each item scores were lower than the control group, the difference was statistically significant (P<0.05).

CONCLUSIONS: Self-management guidance can improves total cystectomy and urinary diversion in the quality of life of patients, reduce the negative emotion of patients.

SOURCE OF FUNDING: None
routine nursing care after surgery. And the complication rate was 56.3%. Telephone follow-up efficiently enhanced cognitive level of patients indwelling double J stent after PCNL, and reduced complication rate.

**CONCLUSIONS:** Education programme with telephone follow-up to patients indwelling double J stent after PCNL will enhance the cognitive level of self care, reduce complication rate, and consequently improve the quality of life.

**SOURCE OF FUNDING:** None

**MP27-27** THE IMPACT OF MENTAL NURSING ON CURATIVE EFFECT OF PATIENTS UNDERGO URETHRAL EXTERNAL SPHINCTER INJECTION OF BOTULINUM TOXIN TYPE A FOR DYSURIA UNDER URETHROSCOPIC

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**INTRODUCTION AND OBJECTIVES:** To investigate the impact of mental nursing care on curative effect of patients undergo urethral external sphincter injection of botulinum toxin type A for dysuria under urethoscopic.

**METHODS:** 60 patients underwent urethral external sphincter injection of botulinum toxin type A for dysuria were randomly divided into two groups. The control group was given just routine nursing care after surgery. The experimental group was given routine nursing care and mental nursing care after surgery. The curative effect in these two groups was compared.

**RESULTS:** The incidence of dysuria (10.00%) and uroschesis (13.33%) in experimental group was significantly lower than the incidence of dysuria (50.00%) and uroschesis (43.33%) in control group, respectively. The incidence of comfort in the experimental group (83.33%) was significantly higher than control group (50.00%). Similarly, the satisfaction rate of patients in experimental group (100.00%) was higher than control group (70.00%).

**CONCLUSIONS:** Mental nursing care can reduce the incidence of dysuria and uroschesis, and enhance the comfort and satisfaction. Mental nursing care is a safe and efficient approach which plays a positive role on curative effect of patients undergo urethral external sphincter injection of botulinum toxin type A for dysuria under urethoscopic. Thus, mental nursing care has a wide clinical application prospect in the future.

**SOURCE OF FUNDING:** None

**MP27-28** TO COMPARE THE LENGTH OF STAY (LOS) FOR HOSPITALIZATION OF ROBOTIC ASSISTED RADICAL CYSTECTOMY BETWEEN WITH ENHANCEMENT RECOVERY AFTER SURGERY (ERAS) AND WITHOUT ERAS

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**INTRODUCTION AND OBJECTIVES:** The implementation of ERAS in Urology has been improvements in the LOS. We investigated the role of ERAS in radical cystectomy at Prince of Wales Hospital (Hong Kong) (PWH).

**METHODS:** A retrospective review of Robotic assisted Radical Cystectomy results in PWH in Aug 2011 to Jul 2012 (without ERAS) was performed. A prospective evaluation of Robotic assisted Radical Cystectomy outcome in Dec 2012 to April 2014 after implementation of the ERAS program was accomplished.

**RESULTS:** In this study, from Aug 2011 to Jul 2012, a total of 18 Robotic assisted Radical Cystectomy were performed in PWH. Means LOS was 24.8 days, minimum LOS was 7.0 days and the maximum LOS was 72.0 days. In contrast, from Dec 2012 to April 2014, a total of 18 Robotic assisted Radical Cystectomy were performed followed with the implementation of the ERAS. The means LOS was 16.6 days, minimum LOS was 7.0 days and the maximum LOS was 31.0 days. In the group without the ERAS, there were 14 patients fall into LOS from 7.0 to 30.0 days. There were 17 patient as the same above category, but there were having the ERAS implemented. There were 4 patients that classified into the LOS from 41.0 to 72 days for the group that were not having ERAS implemented vs no patients excess 31.0 days LOS in the ERAS implemented group.

**CONCLUSIONS:** There were significant improvement for the reduction of LOS and increased the number of patients having shorter period of LOS when having ERAS program implemented.

**SOURCE OF FUNDING:** None

**MP27-29** IMPLICATION OF EVIDENCE PRACTICE IN REDUCING THE RISK OF CAUTI IN BLADDER IRRIGATION SYSTEM IN PRINCE OF WALES HONG KONG (PWH)

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**INTRODUCTION AND OBJECTIVES:** Urinary tract infection (UTI) is a common condition associated with the presence of an indwelling urethral catheter. Transurethral resection of prostate (TURP) is a frequently performed procedure in urology, and bladder irrigation is often needed after surgery. There is some evidence in the literature demonstrating that the use of a closed urinary drainage system would decrease the chance of UTI when compared with the traditional open drainage system. To compare the rate of UTI after TURP between closed and open urinary drainage system.

**METHODS:** A retrospective review of TURP results in PWH 2009 (when the traditional open drainage system was still in use) was performed. A prospective evaluation of TURP outcome in 2014 after implementation of the new closed drainage system was accomplished.

**RESULTS:** From January to December 2009, a total of 109 TURP were performed in PWH. Traditional open drainage system was used after the surgery, and UTI rate requiring medical attention was 8.3% according to symptoms or urine culture results. From August 2013 to February 2014, a total of 72 TURP were performed followed with the use of closed urinary drainage system. Among these patients, 8 patients were lost to follow-up. 3 patients had UTI confirmed with urine culture upon 1 week after discharge, making the UTI rate to be 4.7% in this series of patients with the new closed urinary drainage system.

**CONCLUSIONS:** In conclusion, preliminary data have supported the use of this new closed urinary drainage system to decrease the chance of UTI.

**SOURCE OF FUNDING:** None
MP28-01 ASSOCIATION OF IPSS SUBSCALES WITH POST LASER PROSTATECTOMY URINARY INCONTINENCE

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INTRODUCTION AND OBJECTIVES: The aging male bladder contributes not only to lower urinary tract symptoms (LUTS) but also to urinary incontinence. The relationship between voiding and storage symptoms of the IPSS and urinary incontinence (UI) after laser prostatectomy using a validated instrument has not been examined.

METHODS: Retrospective cohort of 55 men (mean age 67) who underwent Greenlight laser prostatectomy for BPH. Initially, we estimated the Pearson Correlation between baseline, preoperatively, IPSS domains and UI before and after surgery using the Michigan Incontinence Symptom Index (MISI). We then fitted multivariable regression model to identify the factors predictive of urge urinary incontinence (UUI) and stress urinary incontinence (SUI) at 6 months.

RESULTS: Prior to surgery, unadjusted IPSS storage domain scores were associated with urge and stress incontinence (all P<0.05) while the voiding domain scores were not. Adjusted regression models at 6 months found that age, baseline MISI bother and IPSS voiding domain scores were predictive of UUI (p<0.002) but not for SUI.

CONCLUSIONS: Storage domain of the IPSS was associated with UI prior to laser prostatectomy but not after surgery. The loss of this association was due to an improvement in both the storage symptoms (urgency, frequency, nocturia) and incontinence symptoms after surgery. IPSS voiding domain was predictive of UI after surgery.

SOURCE OF FUNDING: None

MP28-02 WORKPLACE DANGERS AND SAFETY FOR THE UROLOGIST

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INTRODUCTION AND OBJECTIVES: The urologist practices in a workplace with inherent dangers. This study sought to assess urologists’ recognition of risks and acceptance of safety measures in contemporary practice.

METHODS: A 16-item internet survey was devised using Survey Monkey and distributed to all members of the Endourological Society. The survey included questions regarding experience with workplace dangers, use of safety practices, and demographic information. Results were tabulated electronically to evaluate trends in workplace dangers.

RESULTS: A total of 295 urologists completed the survey. Most (206, 70.8%) were in an academic/university setting, in practice >10 years (183, 65.4%), and age >40 years (218, 74.4%). Most have taken a course on radiation (76.6%), laser (64.7%), and general OR safety (51.3%). While 152 (53.5%) reported having a hospital laser goggle policy, 58.6% and 36.4% never wear goggles for holmium and neodymium laser cases, respectively. Lead apron and Journal of Endourology shield were always utilized by 90.2% and 63.0%, respectively. However, 44.9% never wear a dosimeter badge. Among those who routinely perform PCNL, the majority (68.6%) never wear a face shield. Double-gloving was not a routine safety practice for open, MIS, or endourology cases. Most have sustained a needle/sharps stick (78.7%) and a splash/fluid exposure (85.0%). Nearly 20% of respondents sustained other work-related injuries, including electrocautery/laser injuries, falls, and musculoskeletal injuries. Violent patients have been encountered by urologists in the ER (61.3%), outpatient clinic (57.1%), and hospital ward (54.3%).

CONCLUSIONS: Urologists commonly experience workplace dangers, but many fail to follow safety procedures. Future educational efforts should be developed to promote safety practices.

SOURCE OF FUNDING: None

MP28-03 ENDOSCOPIC, LAPAROSCOPIC, AND ROBOTIC UROLOGIC SURGERY IN NONAGENARIANS (90+ YEAR AGE GROUP)

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INTRODUCTION AND OBJECTIVES: Surgical outcomes in octogenarians are well-documented in the urologic literature. As life expectancy continues to rise, the average age of surgical candidates is increasing. The aim of this study is to report on our experience with minimally invasive surgery in the nonagenarian population.

METHODS: The records of 31 patients that underwent minimally invasive urologic surgery by a single surgeon between 2003–2014 were reviewed. Demographic and perioperative data were assessed.

RESULTS: The mean patient age was 91 (90–97) including 14 females/17 males. Mean ASA was 3.4 (2–4). Procedures included: ureteroscopy (n=9), laparoscopic/robotic renal surgery (n=7), transurethral resection of bladder tumor (n=6), cystoscopy with ureteral stent placement (n=4), laser prostate surgery (n=2), percutaneous renal surgery (n=1), miscellaneous (n=2). All patients had at least 3 comorbidities, of which the most common were hypertension and cardiac disease. The mean EBL was <10mL (endourologic procedures) and 168 mL (laparoscopic/robotic procedures). The mean laparoscopic/robotic operative time was 153 min (95–215) and hospitalization was 4 days (1–8). There were a total of 4 (12.9%) complications including urinary retention (n=1), pyleonephritis (n=1), intraoperative hemorrhage (n=1), and transient ischemic attack (n=1). The median follow-up was 20 months. Ten (32%) patients expired at a median of 18.4 months postoperatively, the majority of which were cancer-related complications.

CONCLUSIONS: Minimally invasive urological surgery in nonagenarians is well-tolerated in appropriately selected individuals. Surgical intervention in this patient population may provide significant palliation of symptoms towards the end of life. Patient selection, preoperative medical evaluation, experienced
anesthesiologists, and shorter operative times are associated with more favorable outcomes.

**SOURCE OF FUNDING:** None

**MP28-04 COST-SAVINGS PROTOCOL IN THE ENDO-UROLOGY SUITE DECREASES HEALTH CARE EXPENDITURES WITHOUT COMPROMISING QUALITY OF CARE**

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**INTRODUCTION AND OBJECTIVES:** Cost-containment strategies are imperative to the financial well-being of physician practices and hospital systems. Disposables represent a significant portion of the cost of endourological procedures. We investigated if a cost-savings protocol could decrease expense without compromising quality of care.

**METHODS:** We retrospectively analyzed disposable costs for 4 categories of procedures performed by 3 surgeons: PCNL (N = 30), ureteroscopy for renal stones (URSR, N = 30), ureteroscopy for ureteral stones (URSU, N = 30), and ureteroscopy with biopsy (URSB, N = 20). Spreadsheets detailed quantity and price of each tool used organized by category of device. We reviewed operative times, estimated blood loss, length of stay, stent use, complications, ancillary procedures, and stone-free rates. We created cost sheets detailing actual costs of each available disposable available by category (guidewires, access devices, dilators, stents, etc.). Finally, we implemented a prospective cost-savings protocol wherein each surgeon was apprised of the cost of each disposable requested along with the costs of alternatives.

**RESULTS:** The average cost per patient before and after the protocol were as follows: PCNL $1222 vs. $719 (p < .001), URSR $926 vs. $516 (p < .001), URSU $814 vs. $463 (p < .001), and URSB $880 vs. $417 (p < .001). There was no statistical difference in ORT, EBL, LOS, SFR, complications, stent use or ancillary procedures. The greatest savings were for laser fibers and dilation devices.

**CONCLUSIONS:** Implementation of a cost-savings protocol leads to substantial decrease in health care expenditures in the Endourology suite without compromising quality of care. Similar initiatives throughout the country have the potential to significantly impact health care costs.

**SOURCE OF FUNDING:** None

**MP28-05 DOES TIME INTERVAL FROM STONE DIAGNOSIS TO TREATMENT AFFECT OUTCOMES?**

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**INTRODUCTION AND OBJECTIVES:** Limited resources at publically funded hospitals may demand that definitive surgical intervention for stones be delayed weeks or months, necessitating drainage to stabilize the patient and protect renal function. We sought to analyze the impact of time to treatment on patient morbidity and healthcare resource utilization.

**METHODS:** We reviewed billing records to identify consecutive surgical procedures for stones (shock wave lithotripsy, ureteroscopy, percutaneous nephrolithotomy) performed at our county hospital between January 2011 and December 2013. Clinical outcomes, including need for temporizing measures and unplanned hospital encounters, from diagnosis to treatment were recorded.

**RESULTS:** A total of 795 patients underwent surgical treatment for stones during the study period. Median time from diagnosis to surgery was 83 days (range 0–1147). A total of 292 patients underwent initial placement of a stent (196) or nephrostomy tube (96), and 47 of these required one or more tube changes prior to treatment. A total of 765 unplanned encounters (emergency department (ED) or clinic visits) were required for 440 patients (55.3%), including 11.6% who required hospital admission. Patients treated > 45 days after initial diagnosis were 12.8 times (95% CI 6.8–24.0, p < 0.001) more likely to have an unplanned clinic visit and 2.5 times (95% CI 1.8–3.6, p < 0.001) more likely to have an ED visit than patients treated within 45 days of diagnosis.

**CONCLUSIONS:** Longer time interval between diagnosis and treatment is associated with increased patient morbidity. Whether this is a consequence of complications of temporizing drainage or is a reflection of differences in patient acuity is currently under investigation.

**SOURCE OF FUNDING:** None

**MP28-06 EFFECT OF GRADE OF REFLUX ON DEFLUX EFFICACY**

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**INTRODUCTION AND OBJECTIVES:** Deflux has significantly changed the paradigm for treatment of vesicoureteral reflux (VUR). It provides a minimally invasive treatment. It also may facilitate treatment at an earlier time of life, an earlier point in the course of the disease. The number of Deflux cases has risen due to a change in management and standard of care. Deflux may not be as efficacious for the treatment of higher grades of reflux, or possibly more complex cases.

**METHODS:** We retrospectively reviewed 126 patients treated with Deflux for VUR from 2003–2010. 187 ureters were treated. The mean patient age was 5.2 years (5 months to 17.3 years). 118 female and 8 males were followed from 9 months to 7.2 years. Reflux was graded with a voiding cystourethrogram under oral sedation with midazolam. Grade (G1-5) as follows: G1 = 24, G2–45, G3–78, G4 = 33, G5 = 8, bilateral = 61, with 4 complex. A static cystogram was performed until 2010 after which a positionally inserted contrast cystogram (PICC) was performed immediately after the injection. If reflux was demonstrated, more Deflux was injected. Complex cases had persistent reflux after open ureteroneocystotomy.

**RESULTS:** The overall success rate was 80.1% with 83.1% of all ureters treated. In salvage cases, the success rate was 66.7%. Recurrent VUR occurred in 3 patients with G1–12.5%, in 3 patients with G2–6.7%, in 5 with G3–6.4%, in 2 with G4–6.1%, and 1 with G5–12.5%. In bilateral patients, 3(4.9%) had recurrent reflux.
CONCLUSIONS: Deflux is a viable treatment option in VUR. There appears to be little difference in the success rate across all reflux grades.

SOURCE OF FUNDING: None

MP28-07 USE OF DEFLUX IN ADULT PATIENTS WITH VESICO-URETERAL REFLUX
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INTRODUCTION AND OBJECTIVES: We have encountered a population of adults with reflux in 2 distinct patterns. One group has recurrent pyelonephritis, the other group has painful reflux at the time of urination. It is difficult to determine whether reflux is the cause of the pain, but no other abnormalities were seen in these patients besides urinary tract infections, without pyelonephritis.

METHODS: Fourteen patients with vesico-ureteral reflux were treated with deflux. Nine had bilateral reflux, five had unilateral reflux, three left, two right. All were treated with deflux under general anesthesia using the standard deflux needle and an offset cystoscope. The deflux was implanted in the usual fashion. A total of 22 tubes of deflux were used. Two in each side of bilateral patients, which accounts for the use.

RESULTS: All patients were followed at 3 months postoperatively with ultrasonography, showing no evidence of hydronephrosis. Pyelonephritis patients had complete resolution of their condition. All but one patient with pain had resolution of symptoms. No patient had an immediate urinary tract infection, although 4 patients had recurrent bacteriuria. None of this was de novo. At the time of the implantation, all patients had a positionally inserted contrast cystogram performed to assure the reflux was resolved in all cases.

CONCLUSIONS: Deflux is efficacious in the treatment of vesico-ureteral reflux in adults. There is a sub-population of adults with recurrent pain as a result of their vesico-ureteral reflux. The etiology of this pain is difficult to discern, however, in most cases the pain resolved with resolution of the reflux.

SOURCE OF FUNDING: None

MP28-08 DELAYS OF TREATMENT FOR OBSTRUCTIVE PYELONEPHRITIS DUE TO STONES BY NON-URLOGIC SERVICES LENGTHENS HOSPITALIZATION AND INCREASES MORBIDITY
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INTRODUCTION AND OBJECTIVES: Obstructive pyelonephritis caused by a ureteral stone is a urologic emergency necessitating emergent decompression. Unfortunately, nonurologic services may not share the understanding of the emergent nature of treating this disease process. We hypothesize that admission to non-urologic services may delay treatment and thus lead to increased morbidity.

METHODS: Retrospective chart review was performed for all patients who underwent decompression by stenting or percutaneous nephrostomy tube for treatment of a febrile (Temperature >100.4°F), obstructing calculi from 2009–2012 at neighboring private and public hospitals. Patients who were decompressed or more days after initial presentation were considered as “delayed” and these charts were extensively reviewed.

RESULTS: Of 74 patients, 9 were noted to have a significant delay in treatment. All 9 were admitted to non-urologic services (8 to internal medicine, 1 to trauma surgery). Compared to the patients who were immediately decompressed, the “delayed” patients had longer post-intervention hospital stays (12.44 vs. 4.76 days, p<0.01), and had a higher proportion of intensive care unit admissions (55.5% vs. 40.6%). Chart review revealed that all delayed patients met standard criteria for either immediate imaging to evaluate for an obstructive process or emergent decompression upon initial presentation.

CONCLUSIONS: Delays in diagnosis and treatment of obstructive pyelonephritis due to stones by non-urologic services leads to increased length of hospitalization and high ICU admission rates. Non-urologic services should be educated regarding the constellation of signs and symptoms that could indicate the possibility of this disease process. After diagnosis, non-urologic services should be taught to emergently plan for decompression.

SOURCE OF FUNDING: None

MP28-09 INITIAL EXPERIENCE OF URETHRAL METALLIC STENT FOR URETHRAL STRICTURE PATIENT
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INTRODUCTION AND OBJECTIVES: To investigate whether the insertion of a thermoexpandable metallic stent (Memokath) prevent recurrent urethral stricture after visual internal urethrotomy.

METHODS: A total of 12 male patients (mean age 46±6.2 years) who have urethral stricture due to perineal trauma had a Memokath stent inserted between June 2011 and November 2012 were enrolled in the present study. All patients had a suprapubic cystostomy at least 3 months and then did a Memokath stent insertion. After 3 months we removed a Memokath under cystoscopy with local anesthesia. We evaluated the postoperative uroflowmetry and postvoid residual urine volume, and reviewed postoperative complications.

RESULTS: After insertion of the Memokath stent, the suprapubic cystostomy catheters were removed from all patients who could urinate unassisted. After post operation 3 months, all patients removed Memokath stent under cystoscopy. We follow up the patients for 1 year after Memokath stent removed. The PVR was <50 mL in 82.4% patients, and the mean uroflowmetry was 9.3 ml/sec. In all patients there was no recurrent urethral stricture for follow up period and no serious complications were observed after insertion of the Memokath stent.

CONCLUSIONS: The Memokath stent was safe and useful for urethral stricture patients and prevent recurrence.

SOURCE OF FUNDING: None

MP28-10 COMPARISON OF OUTCOMES IN PATIENTS UNDERGOING PERCUTANEOUS RENAL CRYOABLATION WITH SEDATION VERSUS GENERAL ANESTHESIA
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INTRODUCTION AND OBJECTIVES: Percutaneous renal cryoablation (PCA) was originally performed with patients under general anesthesia (GA). However, the use of local anaesthesia with conscious sedation (LACS) is now an option. We compared the efficacy and safety of GA and LACS in patients undergoing PCA for RCN.

METHODS: We performed a retrospective multicenter review of patients undergoing PCA between 2003 and 2013. Patient demographics, tumor characteristics, peri-operative, postoperative and follow-up data were recorded and compared.

RESULTS: A total of 235 patients with available data were identified. Of these, 82 patients underwent PCA under GA and 153 patients under LACS. The two groups were similar with regard to age, gender, BMI, ASA Score, tumor size, polarity, location and depth. The mean procedure time for LACS was significantly less compared to GA (102 vs. 133 min, P < 0.001). The mean hospital stay was shorter under LACS (1.08 vs. 1.95 days, P < 0.0001). The mean follow-up time for LACS and GA was 21 and 37 months, respectively (P < 0.0001). There was no difference in treatment-related complications and postoperative serum creatinine and hematocrit. Both groups had a similar percentage of patients with biopsy proven RCC (64.2% and 68.5% in the LACS and GA, respectively, P = 0.621). There was no difference in immediate or delayed failures between LACS and GA (1.9% and 3.9%; 0 and 11%, respectively, P = 0.051).

CONCLUSIONS: PCA for small renal masses under LACS is effective and safe. Our data shows that LACS has the advantage of decreased procedure time and shorter hospital stay. Prospective randomized studies are needed to confirm these preliminary findings.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: We examined for the trends of the management of iatrogenic urological injuries during underwent surgery from other departments (obstetricians, gynaecologists and general surgeons).

METHODS: Between Jan, 2006 to Apr, 2013, a retrospective review of 36 patients who underwent gynecological and colorectal surgery with emergency surgery by urology department was performed.

RESULTS: 17 patients during gynecological surgery, and 19 patients during colorectal surgery. The gynecological and obstetric diseases requiring surgery for urological injuries were cervical cancer (5 cases), uterine myoma (4 cases), ovary cancer (2 cases), endometrial cancer (2 cases), brecith delivery (2 cases), pelvic adhesion (1 cases), and endometriosis (1 cases). The diseases in general surgery were sigmoid colon cancer (9 cases), adhesive ileus (3 cases), colon perforation (2 cases), rectal cancer (2 cases), perirectal abscess (2 cases), and leiomyosarcoma (1 cases). Bladder injuries were 10 patients and one patient (10%) with complication. Ureteral injuries were 26 patients and nine patients (35%) with complication. In all 26 cases of ureteral injury, 13 patients underwent end-to-end ureteroureterostomy, 8 patients underwent indwelling double-J ureteral stents, and 4 patients underwent transuretoureterostomy (table 1). Postoperative complications were hydrenephrosis (6 cases), ureteral stricture (2 cases), vesicointestinal fistula (1 cases), and peri-nephric urinoma (1 cases). There was no statistically significant difference between the surgery, the injured organ, and the presence of the tumor in univariate analysis.

CONCLUSIONS: Urological injuries occurred in abdominopelvic surgery, the treatments have been made in a variety of ways, and many types of complications occurred.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: Ureteral stents are essential tools in urology. Despite innovations, there is up to 76% morbidity. Stent-related discomforts include urinary symptoms, pain, general, work and sexual affection. There is limited evidence in this matter.

METHODS: We prospectively included patients that had undergone a kidney transplant from 2012–2013 in whom an ureteral stent was used for the ureteral implant. The stent was 4.7 fr and 14 cm long. A month after the surgery with stent in place, patients answered a validated Spanish version of the USSQ. The results were compared to non-transplanted patients with a ureteral stent placed for other reasons.

RESULTS: We included 18 kidney transplant patients and 38 controls. We did an analysis for each of the questionnaire headings. Statistically significant differences were found for urinary symptoms (p < 0.001, 95% CI 4.639 to 12.130), pain (p < 0.001, 95% CI 5.735 to 18.701) and general symptoms (p = 0.038, 95% CI 0.175 to 6.047). We did not find significant differences in terms of work related impact (p = 0.871, 95% CI -2.433 to 2.066) and sexual performance (p = 0.489, 95% CI -3.347 to 1.68). Interestingly, when we analysed each specific pain site, the only significant differences were found in suprapubic (p = 0.006) and lumbar pain (0.001). Suprapubic pain was found in 12/18 of the transplanted patients vs 15/38 of the controls (RR 1.69, 95% CI 1.012 to 2.433). We did not find significant differences in terms of work related impact (p = 0.038, 95% CI 0.175 to 6.047) and sexual performance (p = 0.489, 95% CI -3.347 to 1.68). Interestingly, when we analysed each specific pain site, the only significant differences were found in suprapubic (p = 0.006) and lumbar pain (0.001). Suprapubic pain was found in 12/18 of the transplanted patients vs 15/38 of the controls (RR 1.69, 95% CI 1.012 to 2.817).

CONCLUSIONS: In accordance with the reported literature, kidney transplanted patients have less bothersome symptoms compared to controls. Suprapubic pain is more prevalent in transplant patients. Work related impact is similar in both groups.

SOURCE OF FUNDING: None
coagulation are 90–120 W and 90 W respectively. The resection depth is mucosa or submucosa. If the ureteral orifice was involved, D-J stent should be indwelled preoperatively. If D-J stent could not be indwelled, electric coagulation should not be used around ureteral orifice intraoperatively. After resecting the follicle tissue, it is optimal to indwell D-J stent. If the orifice can not be seen, 20 mg furosemide was administered intravenously with postoperative urethral catheterization for 3–5 days.

RESULTS: With following up 3–24 months, no hydronephrosis were found in 24 cases. Cystoscopy demonstrated bladder mucosa normal in 10 case. The lesions reoccurred in 3 cases and underwent transurethral resection again.

CONCLUSIONS: Transurethral resection of glandular cystitis is a mini-invasive, safe and effective treatment.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: We report the results of simultaneous laparoscopic ureterolithotomy and pyelolithotomy using flexible nephroscope for large upper ureter stone and synchronous renal pelvis stones.

METHODS: Between March 2011 and May 2014, a total 17 patients underwent simultaneous laparoscopic ureterolithotomy and pyelolithotomy using flexible nephroscope performed by single surgeon. Mean patients age was 49 years and male to female ratio was 12:5. Mean size of ureter stone was 16.5 mm. Mean numbers and size of renal pelvis stone were 2.5 and 13.4 ml. The results were analyzed retrospectively.

RESULTS: All cases were performed without conversion to open surgery. Mean follow-up period was 20±16.3 months. Mean insufflation time was 105 minutes and average blood loss was 52 ml. Double J ureteral stent was inserted in two cases (1 patient with two ureterotomy and 1 patient with long ≥2.5 cm ureterotomy). Stone clearance rate was 100%. Mean postoperative stone free rate (SFR) was 76,47% (26/34). In the univariate analysis, small cumulative stone burden were significantly favorable predictive factor for the immediate post-operative stone-free rate (p=0.013). There was one patient (2.94%) had bleeding as post operative complication.

CONCLUSIONS: RIRS is a safe and effective treatment for renal stones. Stone free rate (SFR) of RIRS procedure is higher in cases with RIRS as primary treatment, stone located in upper pole, midpole, or renal pelvis, and smaller cumulative stone burden. RIRS should be considered as a primary treatment modality of renal stone in selected cases.


INTRODUCTION AND OBJECTIVES: Guidelines recommend PCNL and ESWL as a primary treatment modality in management of renal stones. However, several factors regarding efficacy and safety of the treatment need to be considered, such as stone location, stone free rate, and complication rate. Flexible URS offered an alternative for management of kidney stones. In this study, we evaluate outcomes and safety of RIRS procedure in our center.

METHODS: We retrospectively studied medical records of patients underwent RIRS procedure in Cipto Mangunkusumo Hospital and Asri Urology Hospital from January 2012-February 2014. We identified 34 RIRS procedure (33 patients, 1 patients with bilateral renal stones). Predictive factors for stone-free rate were evaluated.

RESULTS: Out of 34 renal stones, 7 stones (20,59%) were located in upper pole, midpole, or renal pelvis, and 27 (79,41%) were located in the lower pole with or without others, respectively. The mean cumulative stone burden was 18,18±1,1 mm. The immediate post operative stone free rate (SFR) was 76,47% (26/34). In the univariate analysis, small cumulative stone burden were significantly favorable predictive factor for the immediate post-operative stone-free rate (p=0.013). There was one patient (2.94%) had bleeding as post operative complication.

CONCLUSIONS: RIRS is a safe and effective treatment for renal stones. Stone free rate (SFR) of RIRS procedure is higher in cases with RIRS as primary treatment, stone located in upper pole, midpole, or renal pelvis, and smaller cumulative stone burden. RIRS should be considered as a primary treatment modality of renal stone in selected cases.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: To compare the benefits of transurethral resection (TUR) under narrow band imaging (NBI-TUR) with TUR under conventional white light imaging (WLI-TUR) for non-muscle-invasive bladder cancer (NMIBC).

METHODS: The subjects were 127 patients with NMIBC who were followed for more than 1 year after TUR and received no additional postoperative treatment. In the WLI-TUR group (n=78), systematic intravesical observation under WLI was followed by multiple site biopsy, after which detected lesions were resected completely under WLI. In the NBI-TUR group (n=49), similar observation under WLI was followed by systematic intravesical observation under NBI. After multiple site biopsy under NBI, TUR was performed for all detected lesions under NBI. The sensitivity, specificity, positive-predictive value (PPV), negative-predictive value (NPV), and accuracy in the NBI-TUR group were calculated using results from cystoscopy and pathology of multiple site biopsy samples under WLI and NBI. The tumor recurrence rate was analyzed in both groups.

RESULTS: Background factors did not differ significantly between the WLI-TUR and NBI-TUR groups, except for the observation period. The procedure under NBI had significantly higher sensitivity (94.6% vs. 69.6%, p<0.01) and NPV (96.5% vs. 82.5%).
INTRODUCTION AND OBJECTIVES: Obstructive pyelonephritis secondary to a ureteral stone is a surgical emergency necessitating decompression with nephrostomy tube (NT) or ureteral stent (US). There is sparse evidence regarding the comparative effectiveness of these treatments for this life-threatening condition.

METHODS: Retrospective chart review was performed for all patients who underwent either NT or US in the setting of fever (T > 100.4) and obstructing stone from 2009–2012 at neighboring private and public hospitals.

RESULTS: Seventy-four patients were identified, 26 of whom undergoing NT had significantly longer hospital lengths of stay (100.4) and obstructing stone from 2009–2012 at neighboring private and public hospitals.

CONCLUSIONS: Despite similar baseline clinical demographics, comorbidities and degree of infection, patients undergoing NT had significantly longer hospital lengths of stay and days to normalization of leukocytosis. Although not captured, we believe that this likely leads to a significant increase in cost for the NT group. Further investigation is necessary to help determine the reason for these differences and investigate the potential financial and clinical ramifications of these discrepancies.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Stent permanence can be affected by voiding and storage symptoms. The aim of the study is to assess the potential role of aporphine, an adrenoreceptor 1a antagonist, in the management of stent related symptoms.

METHODS: Fifteen patients with a ureteral stent previously inserted for urolithiasis (within 1 to 2 months) were considered prospectively. Patients were asked to fulfill I-PSS questionnaire and to answer on open question about stent related pain. Subsequently, they were administered aporphine 250 mcg for 12 days; at the end of the therapy, patients underwent the same questionnaire compilation. Data collected before and after aporphine treatment were inserted in an apposite data base and analyzed by means of paired samples t test.

RESULTS: IPSS score before and after the treatment significantly improved from 14.5 +/- 6.9 to 9.2 +/- 5.3 (p = 0.05). In detail, the domains related to urinary frequency, urgency, straining and nocturia turned out to be the mostly improved ones (p = 0.06, p = 0.05, p = 0.00 and p = 0.00 respectively). The quality of life and stent related abdominal pain had not been affected by the therapy. None of the patients reported side effects related to aporphine therapy.

CONCLUSIONS: Ureteric stents cause significant urinary symptoms that may be related to smooth muscle spasm. Alpha-adrenoceptor blockers, reducing smooth muscle activity, are currently used as a medical expulsive therapy and have been suggested to reduce stent related symptoms. Aporphine can be regarded as a promising drug in the treatment of stent related urinary symptoms and discomfort; further studies are required to confirm those outcomes.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Transitional cell carcinoma (TCC) of the upper urinary system traditionally has been managed by nephroureterectomy with the excision of the ipsilateral ureteral orifice and bladder cuff, which has been regarded as the standard treatment. With the development of small calibre telescopes with improved optics and the development of small calibre instruments and laser fibers, Percutaneous therapy becomes a good choice for a select patient population with a solitary kidney or bilateral disease. Percutaneous therapy is to evaluate the technique and effect of the percutaneous approach to the renal pelvic transitional cell carcinoma.

METHODS: from 2008 to 2014, 9 cases with the renal pelvic transitional cell carcinoma were treated by the percutaneous approach with average age 61.2 years old (52–73), with solitary kidney 4 cases, renal function insufficiency 3 cases, bilateral renal pelvic carcinoma 2 cases, with diameter from 0.5 to 3.5 cm. The pathology is transitional cell carcinoma. Pirarubicin were regularly instilled into the bladder after the operations. The patients were individually followed-up with one case dead, 2 cases recurrence.

CONCLUSIONS: The percutaneous resection of transitional cell tumor may be considered as an efficient treatment for the patients with solitary kidneys and a risk of chronic renal failure who are willing to abide by a strict and lengthy follow-up.

SOURCE OF FUNDING: No

INTRODUCTION AND OBJECTIVES: Those receiving US (7.8 vs. 2.5 days, p <0.01) compared to that under WLI. The 1-year recurrence rate in the NBI-TUR group was significantly lower than that in the WLI-TUR group (22.4% vs. 39.7%, p = 0.033).

CONCLUSIONS: NBI-TUR is more advantageous than conventional WLI-TUR for patients with NMIBC.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: The category, papillary urothelial neoplasm of low malignant potential (PULMP), was introduced in the 2004 WHO classification in order to avoid the cancer label in patients with benign lesion. We investigated the recurrence rate and progression rate of histologically proved PULMP patients to evaluate if PULMP is really benign lesion.

METHODS: This retrospective study included 40 patients with newly diagnosed primary non-muscle-invasive bladder cancer (NMIBC) and PULMP. They were treated with transurethral resection (TUR) and intravesical instillation of bacillus Calmette-Guerin (BCG). We evaluated differences between NMIBC group and PULMP group in recurrence rate and progression rate.

RESULTS: The mean observation period was 27.2 ± 14.3 months. The NMIBC group and PULMP group comprised of 31 patients (77.5%) and 9 patients (22.5%), respectively. During the observation period, recurrences were found in 15 (37.5%) patients in total; 11 (35.5%) patients in NMIBC group and 4 (44.4%) patients in PULMP group (p > 0.05). Among the 15 patients with recurrences, 5 patients went through progression as seen by increase in T stage and/or WHO grade. For the two groups, we found no statistically significant difference (p > 0.05). We also found that three patients with low grade urothelial carcinoma experienced downgrading to PULMP and there was a patient with PULMP who progressed to low grade urothelial carcinoma.

CONCLUSIONS: There was no statistically significant difference regarding recurrence and progression rate between NMIBC group and PULMP group. As can be seen above, we may not be able to classify PULMP as benign lesion. However, confirmatory larger prospective randomized study is required.

SOURCE OF FUNDING: None

MP28-24 COMPARISON OF TREATMENT RESULTS BETWEEN HOLMIUM LASER ENDOURETHROTOMY AND COLD KNIFE ENDOSCOPIC INCISION OF URETHRAL STRICURE

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INTRODUCTION AND OBJECTIVES: We comparatively evaluated urethral stricture treatment outcomes, efficacy, using either endoscopic laser endourethrotomy or optical internal urethroty.

METHODS: During 2003–2011, 79 men aged 17–75 years were divided into two groups, group A (39 patients) and group B (40 patients), who were treated using either endoscopic laser endourethrotomy or optical internal urethroty, respectively. An evaluation took maximum flow rate (Qmax), postvoid residual (PVR), and degree of satisfaction into consideration. Treatment results were evaluated after 3, 6, and 12 months, respectively.

RESULTS: Total 79 cases with the treatmen of endoscopic laser endourethrotomy or optical internal urethroty had been reported to have better result than before, but there was no significant difference between the two groups (p > 0.05).

CONCLUSIONS: The degree of efficacy between endoscopic laser endourethrotomy or optical internal urethroty for urethral stricture revealed nosignificant difference. We found both laser and conventional urethrotomies to be safe and effective modes of treatment.

SOURCE OF FUNDING: None

MP28-25 PERCUTANEOUS RENAL ENDOSCOPY FOR THE MANAGEMENT OF LARGE VOLUME UPPER TRACT UROTHELIAL CARCINOMA

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INTRODUCTION AND OBJECTIVES: Percutaneous renal endoscopy for the management of stones is a well established practice; however, in the management of upper tract urothelial carcinoma (UTUC), this is a less recognized option and one for which there is limited published outcomes and guidelines. Tumor burden >1 cm can be managed successfully with percutaneous endoscopic resection.

METHODS: A retrospective review of all cases performed by a single surgeon over a five year period was performed. Demographic and statistic analysis of the patient variables as well as surgical outcomes was also undertaken.

RESULTS: One patient who underwent resection of 10 cm upper tract tumor had a complicated post-operative course necessitating completion radical nephro-ureterectomy on post-operative day nine due to renal infarction. Final pathology demonstrated no residual tumor. Of the remaining 28 patients in this series, 21 were confirmed to have Low Grade (LG) UTUC on final pathology, two patients were upstaged with Hight Grade UTUC on final pathology necessitating completion radical nephroureterectomy, and five patients had LMP. Tumor size range was 1.5 cm to 10 cm, with a median tumor size of 2.5 cm. Follow-up time 1 month to 55 months Male 8; Female 16 Age range 42–79 Recurrence rate LMP 0/5 LG UTUC 5/17 Tract tumor seeding not observed.

CONCLUSIONS: Low risk UTUC can be effectively managed with percutaneous endoscopic tumor resection. Patients that are found to have characteristics of high grade UTUC may be best managed with completion radical surgery. Resection within the renal collecting system carries different risks and challenges that can be overcome with experience.

SOURCE OF FUNDING: None

MP28-26 COMPLETE RESOLUTION OF HUGE ANTERIOR CALYCEAL DIVERTICULUM CASE REPORT

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INTRODUCTION AND OBJECTIVES: Calyceal diverticulum is rare (incidence rate 0.2%-0.6%) and usually related with stone formation, gross hematuria, and infection. Calyceal diverticulum is usually treated by laparoscopic or percutaneous renal access approach. Percutaneous renal access approach is traditionally applied for small calyceal diverticulum (<2 cm). Laparoscopic approach is usually introduced for larger or anterior calyceal diverticulum, but its postoperative morbidity is not as good as percutaneous method.

METHODS: A 60 years old female presented with intermittent gross hematuria, right flank pain and image revealed a large 7.3 x 5.3 cm sized calyceal diverticulum in lower anterior portion of right kidney. Under general anesthesia, the patient was placed in prone position for percutaneous renal access surgery. First, whole surface of calyceal diverticulum was fulgurated with bipolar resectoscope and the narrow infundibulum was incised by Holmium-YAG Laser.
the collecting system, double J stent was placed antegrade. Finally, 24 Fr nephrostomy tube was inserted into collecting system for decompensation.

RESULTS: The operative time took for 185 min and estimated blood loss was less than 50 ml. Nephrostomy tube was placed for one month and double J stent was placed for 2 months. This help to remain low intrapelvic pressure and provide sufficient time to let the huge calyceal diverticulum sealed. MRI on postoperative three months showed huge calyceal diverticulum had complete resolution.

CONCLUSIONS: Percutaneous renal access for huge anterior calyceal diverticulum is also possible to achieve complete resolution like laparoscopic approach but without the related morbidity from laparoscopic method.

SOURCE OF FUNDING: None

MP28-27 SAFETY AND EFFICACY OF URETEROSCOPY FOR STONE DISEASE IN OBESE PATIENTS: RESULTS FROM A UNIVERSITY TEACHING HOSPITAL
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INTRODUCTION AND OBJECTIVES: Obesity, accompanied by stone disease is on the rise. We review our outcomes for ureteroscopy and laser stone fragmentation (URSL) in obese patients.

METHODS: All obese patients (BMI>30) who underwent URSL between March 2012 and February 2014 were included. Stone free status(SFR) was determined by endoscopic stone clearance and/or a follow-up imaging in 3 months.

RESULTS: 25 patients, with a mean age of 54 years, had 27 URSL procedures for renal/ureteric stones. The clinical presentation was with loin pain(18), UTI/urosepsis(6) and haematuria(1). Five patients had positive urine culture pre-operatively (E.coli-3, pseudomonas-2). The stone location was in the lower pole (n=7), PUJ (n=4), VUJ (n=3) and a combination of renal and ureteric stones in other patients. The stone number varied from 1 to 7 (mean 1.7) with a mean stone size of 9 mm (5–25 mm) and a combined stone size of 13 mm (5–60 mm). The mean operative time was 54 minutes (25–103 minutes). Twenty-four patients (96%) were stone free with 2 patients needing more than one procedure. The stone composition was uric acid (n=5), struvite (n=4) and calcium oxalate (n=10). Twelve procedures were done as a day case with a mean hospital stay of 0.8 days (0–7 days). One patient with a pre-operative pseudomonas urine culture needed antibiotics for a week and a second patient had an early stent removal for stent irritation. There were no other complications.

CONCLUSIONS: Ureteroscopy is a safe technique in obese patients with a good stone clearance and a low complication rate with a majority of patients discharged within 24 hours.

SOURCE OF FUNDING: Nil

MP28-28 A NETWORK META-ANALYSIS OF THERAPEUTIC OUTCOMES AFTER NEW IMAGE TECHNOLOGY-ASSISTED TRANURETHRAL RESECTION IN PATIENTS WITH NON-MUSCLE INVASIVE BLADDER CANCER: 5-AMINOLAEVULINIC ACID FLUORESCENCE VERSUS HEXYLMINOLEVULINATE FLUORESCENCE VERSUS NARROW BAND IMAGING
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INTRODUCTION AND OBJECTIVES: This study included a network meta-analysis of evidence from randomized controlled trials (RCTs) to assess the therapeutic outcome of transurethral resection (TUR) in patients with non-muscle-invasive bladder cancer assisted by photodynamic diagnosis (PDD) employing 5-aminolaevulinic acid (5-ALA) or hexylaminolevulinate (HAL) or by narrow band imaging (NBI).

METHODS: Relevant RCTs were identified from electronic databases. The proceedings of relevant congresses were also searched. Fifteen articles based on RCTs were included in the analysis, and the comparisons were made by qualitative and quantitative syntheses using pairwise and network meta-analyses.

RESULTS: Seven of 15 RCTs were at moderate risk of bias for all quality criteria and two studies were classified as having a high risk of bias. The recurrence rate of cancers resected with 5-ALA-based PDD was lower than of those resected using HAL-based PDD (odds ratio (OR) = 0.48, 95% confidence interval (CI) [0.26–0.95]) but was not significantly different than those resected with NBI (OR = 0.53, 95% CI [0.26–1.09]). The recurrence rate of cancers resected using HAL-based PDD versus NBI did not significantly differ (OR = 1.11, 95% CI [0.55–2.1]). All cancers resected using 5-ALA-based PDD, HAL-based PDD, or NBI recurred at a lower rate than those resected using white light cystoscopy (WLC). No difference in progression rate was observed between cancers resected by all methods investigated.

CONCLUSIONS: The recurrence rate of some bladder cancers can be decreased by the implementation of either PDD- and NBI-assisted TUR; in real settings, clinicians should consider replacing WLC as the standard imaging technology to guide TUR.

SOURCE OF FUNDING: None

MP28-29 THE EVALUATION OF EXTRACORPOREAL SHOCKWAVE LITHOTRIPSY (ESWL), RETROGRADE INTRARENAL SURGERY (RIRS) AND MICRO PERCUTANEOUS NEPHROLITHOTOMY (MPCNL) TREATMENTS IN KIDNEY STONES SMALLER THAN TWO CENTIMETERS
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INTRODUCTION AND OBJECTIVES: In 2013 European Association of Urology guidelines first choice of treatment for kidney stones smaller than 2 cm reported as ESWL or other endourologic approaches. If there is no suitability for ESWL for 10–20 mm lower calyx stones endourologic initiatives are recommended as the first choice.

METHODS: We evaluated hospitalization times, stone-free rates, X-ray duration that patients were exposed during the
VP01 LAPAROSCOPIC SURGERY UPPER TRACT

VP01-01 LAPAROSCOPIC IVC THROMBECTOMY FOR LEVEL 2 THROMBI

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INTRODUCTION AND OBJECTIVES: Renal cell carcinoma has the unique feature of associated malignant thrombus extension. Such thrombi, when involving the inferior vena cava, have often precluded minimally invasive approach to associated radical nephrectomy. Herein we describe our experience with two patients who underwent laparoscopic radical nephrectomy and IVC thrombectomy in 2013.

METHODS: Video of both cases were reviewed and edited to demonstrate the procedure.

RESULTS: Two patients underwent laparoscopic right radical nephrectomy with IVC thrombectomy for level 2 thrombi at our institution in 2013. The first patient underwent a hand-assisted approach, the second a pure laparoscopic approach. Attempts at utilizing Rummel clamps were with limited success. Laparoscopic bull-dog vascular clamps are safe and effective for occlusion of the IVC and contralateral renal vein, though two clamps may be required for the infra-renal IVC. As with open cases, such cases can be associated with significant hemorrhage.

CONCLUSIONS: Laparoscopic right radical nephrectomy and IVC thrombectomy is feasible for level 2 thrombi. However, such cases should only be performed by highly skilled laparoscopic surgeons with adequate vascular surgery support.

SOURCE OF FUNDING: None

VP01-02 ROBOTIC ASSISTED PARTIAL NEPHRECTOMY AFTER PREVIOUS IPSILATERAL PARTIAL NEPHRECTOMY

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INTRODUCTION AND OBJECTIVES: Local recurrence of a small renal mass after nephron sparing surgery occurs at a rate of 1–2%. The objective of this video demonstrates the feasibility of repeating partial nephrectomy after ipsilateral partial nephrectomy. This treatment was chosen in an attempt to preserve renal function in the patient.

METHODS: A 45 year old male presented with a T1a right kidney tumor (nephrometry score: 5p), identified as renal cell carcinoma, clear cell type. The posteromedial mass was resected with negative margins. At the two year mark, antemoderal recurrence was noted in the ipsilateral kidney (nephrometry score: 8a). In this video we demonstrate a repeat partial nephrectomy performed to excise the recurrence.

RESULTS: The resection was performed without any intra-operative complications, and no complications were noted at the 1 month follow-up. Creatinine levels were stable both pre- and post-operatively.

CONCLUSIONS: Robotic-assisted partial nephrectomy after previous ipsilateral partial nephrectomy can be used as a treatment for local recurrence of renal cell carcinoma. This is beneficial, as partial nephrectomy is associated with oncological outcomes similar to those seen in total nephrectomy, yet carries a significantly lower risk of chronic renal dysfunction.

SOURCE OF FUNDING: None

VP01-03 LAPAROSCOPIC NEPHRECTOMY FOR EX-VIVO CORRECTION OF RENAL ARTERY ANEURISM AND AUTO TRANSPLANT

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INTRODUCTION AND OBJECTIVES: Renal artery aneurism are a rare condition, with a prevalence of 0.009% of the population. The outcomes and clinical management of this patients depend on the presence of symptoms and subsequent risk of rupture. Most patients are managed by endovascular techniques, but difficult cases may present a challenge to urologists.

METHODS: We present a case of a 35 year old female, history of high blood pressure with the diagnosis of a left renal artery aneurysm with a diameter of 27 mm. The patient was evaluated by vascular surgery, was unsuitable for endovascular treatment.
INTRODUCTION AND OBJECTIVES: Current guidelines state that partial nephrectomy achieves similar oncological outcomes of radical nephrectomy for clinically localized renal tumors and studies comparing laparoscopic partial nephrectomy and open partial nephrectomy found no difference in progression-free survival and overall survival in centers with laparoscopic expertise. However, vascular complications including injury to major vessels occur despite all cautions during the procedure. In this video we present how we manage the renal segmental artery injury.

METHODS: Laparoscopic partial nephrectomy was performed for a 52 year old patient with a 25 mm right renal middle pole mass. During the dissection of renal segmental arteries, a segmental branch of main renal artery was injured. After controlling the bleeding from the segmental artery using a bull-dog clamp, the injured segment was repaired using 6/0 PDS. The revascularization of the parenchyma was demonstrated using indocyanin green. The procedure was completed without controversy to open surgery.

RESULTS: The operation time was 130 minutes. The warm ischemia time during injured segmental artery repair was 7 minutes and segmental artery which supplied tumor bed was clamped for 12 minutes additionally. Hemoglobin level dropped from 12.4 mg/dl to 11.3 mg/dl. No postoperative complications were noted and the patient was discharged on 3 th postoperative day.

CONCLUSIONS: Injury to main segmental artery during laparoscopic partial nephrectomy is one of the catastrophic complications. However, it can still be managed laparoscopically by the experienced surgeons.

SOURCE OF FUNDING: None
VP01-08 LAPAROSCOPIC URETERIC REIMPLANTATION WITH PSOAS HITCH FOR URETERIC INJURY

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INTRODUCTION AND OBJECTIVES: Ureteric injury presenting as urinary ascitis is uncommon. We present of ureteric reimplantation with psosas hitch for a patient who had iatrogenic ureteric injury with urinary ascitis.

METHODS: 32 year old female presented with complaints of abdominal distension associated with abdominal pain and fever for 2 days. She had underwent diagnostic laparoscopy 1 month back for infertility and suspected to have endometriosis. She was evaluated and found to have urinary ascitis with right hydro-ureteronephrosis on USG. CT urogram showed right hydronephrosis with urine leak form right lower ureter. Under GA, in trendelenberg position, using 4 ports (2x 10 mm and 2x 5 mm) right colon was mobilised medially and ureter identified above the pelvic brim. The uretero was traced distally till the ovary. The ureter was found adherent in the pelvis surrounded by necrotic material. Ureter was divided. Bladder mobilised from the left side and the dome in the right lateral aspect sutured with psosas muscle using 2-0 vicryl. Cystotomy was made and ureter sutured with cystotomy using 3-0 vicryl in 2 layers over a stent. Drain was placed.

RESULTS: The operative time was 100 minutes and blood loss was 50 ml. Patient was started orally on day 1 and drain removed by day 5. Urthral catheter removed on day 14 and stent removed after 6 weeks.

CONCLUSIONS: Laparoscopic psoas hitch ureteric reimplantation is an effective and better alternative to open procedure in patients with ureteric injuries.

SOURCE OF FUNDING: None
inserted in the subumbilical area in the midclavicular line at the level of iliac crest. Renal pedicle was clamped using Satinsky clamp. Tumour was dissected from the renal parenchyma. During manipulation, satinsky clamp slipped resulting in extensive bleeding from renal parenchyma. Attempts at re-application failed. Additional satinsky clamp was not available and bulldog clamps could not be inserted due to pooling of blood. Hence assistant hand was inserted through 6 cm right hypochondrial incision and renal pedicle compressed by tactile recognition. Hand was also helpful to manipulate the kidney orientation to facilitate comfortable suturing. Tumour was dissected from the renal parenchyma. Satinsky clamp. Tumour was dissected from the renal parenchyma.

RESULTS: Operating time was 220 minutes. Blood loss was 720 ml. Post operatively patient was started on oral diet on 2nd day and drain removed on 5th day. The tumour margins were negative.

CONCLUSIONS: Hand assisted laparoscopy can sometimes act as an effective salvage option before embarking to open conversion in select situations.

SOURCE OF FUNDING: None

VP01-11 MULTIPORT LAPAROSCOPIC ADRENALECTOMY FOR CONN’S SYNDROME

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INTRODUCTION AND OBJECTIVES: Patients with resistant hypertension have a higher incidence of secondary causes of hypertension compared with the general hypertensive population. It is important to screen such patients for secondary causes of hypertension. One common cause of secondary hypertension, often associated with hypokalemia, is primary hyperaldosteronism or Conn syndrome. We presented a case of transperitoneal laparoscopic adrenalectomy for primary hyperaldosteronism with normokalemia.

METHODS: A 57-year-old lady presented with uncontrolled blood pressure for a year despite using multiple combinations of 3 different anti-hypertensive drugs. Blood electrolytes were normal including potassium. Transabdominal ultrasonography showed a solid mass of 2.1 × 2.8 cm in the right adrenal gland confirmed by abdominal CT scan. Extensive work-up was done by Department of Endocrinology which revealed elevated aldosterone concentration to plasma renin activity. Multi port laparoscopic adrenalectomy was performed under infusion of Brevibloc (Esmolol). Vessel controls were provided by metal clips for the main vein and Ligasure vessel sealing instrument for the minor vessels.

RESULTS: Her postoperative stay was uneventful. On the 2nd day, the patient was shifted back to the ward for further management. She did need less anti-hypertensive(2) after surgery.

CONCLUSIONS: The surgical cure rate for primary hyperaldosteronism is high although it may take more than a year for the hypertension to resolve. The best response appears to be associated with: presence of an adenoma, with or without hyperplasia, age less than 50 years and a positive response to pre-operative spironolactone. Laparoscopic adrenalectomy is feasible and safe and has been performed as an outpatient procedure when the necessary surgical experience and optimal anesthesia were both available.

SOURCE OF FUNDING: None

VP01-12 WHICH SYSTEM IS BETTER FOR BEGINNERS’ LAPAROSCOPY TRAINING? GLASSES BASED FULL-HD 3D MONITOR SYSTEMS OR STANDARD (FULL-HD 2D) MONITOR SYSTEMS

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INTRODUCTION AND OBJECTIVES: Laparoscopy training is one of the main parts of urology residents’ and beginners’ education. After training box processes and animal laboratory, laparoscopic renal cyst decortication is accepted preliminary procedure for beginners. For this preliminary procedure we would like to discuss which one of the following monitor systems is better: glasses- based 3D full HD monitor systems or just full HD monitor system for the benefit of both patients and residents.

METHODS: We have performed 4 laparoscopic cyst decortication operations using glasses-based 3D full HD monitor system and just full HD monitor system; one trans-peritoneal and three retro-peritoneal. To understand which monitor system is better for beginners we observed the eye-hand coordination of trainer and complications of operations. All operations were under the close-control of an experienced surgeon. We used same laparoscopic working instruments for all operations.

RESULTS: Eye-hand coordination was better in 3D full HD monitor system according to the responsible experienced surgeon. No complications were noted in any operation. All urethral catheters were removed 12 hours later after operations. All drains were removed 24 hours later after operations. All patients were discharged first or second postoperative days.

CONCLUSIONS: As a result of 3D images eye-hand coordination is improved, learning curve in training residents is accelerated and adaptation to the retro-peritoneal or trans-peritoneal anatomy is facilitated compared to operations using 2D full HD monitor system. For residents and beginners it is safe and effective way to start laparoscopy training with glasses- based 3D full HD monitor system following laparoscopic training boxes and animal laboratory trainings.

SOURCE OF FUNDING: laparoscopy training, renal cyst decortication, 3D full HD system.
VP02 LAPAROSCOPIC SURGERY LOWER TRACT

VP02-01 TRICKS TO PREVENT PSEUDORECURRENCES AFTER LAPAROSCOPIC REPAIR OF DIRECT INGUINAL HERNIA

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INTRODUCTION AND OBJECTIVES: Laparoscopic inguinal hernia repair has advantages of fast recovery and less postoperative pain. Postoperative remains or development of a groin lump distressed the patient and medical staff. It is most likely due to seroma accumulation and increased abdominal pressure, causing the abdominal wall to bulge out instead of true recurrence of hernia. It is termed as pseudorecurrence. We introduced some tricks to prevent pseudorecurrence after laparoscopic repair of direct inguinal hernia.

METHODS: We treated three patients who had direct types of inguinal hernia. They all received laparoscopic total extra-peritoneal herniorrhaphy (TEP). We repaired and closed the abdominal defect by different methods: fascia needle technique, V-Loc sutures with Hem-o-lok clips, and ProTack anchoring. After primary repair of the defects, non-absorbable meshes were covered onto the abdominal defect in all cases.

RESULTS: All three patients fared well postoperatively without immediate development of inguinal lumps. They were all discharged the next day and returned to normal daily activities.

CONCLUSIONS: Unlike indirect type inguinal hernia, direct type hernia has an abdominal wall defect and has a higher chance of recurrence if repaired only by placing a mesh onto the abdominal defect. We directly suture closed the defects and reinforced them with meshes, resulting in a satisfactory postoperative outcome.

SOURCE OF FUNDING: None

VP02-02 A STEPWISE APPROACH TO THE POST-TURP BLADDER NECK IN RALP

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INTRODUCTION AND OBJECTIVES: Robotic Assisted Radical Prostatectomy (RARP) is a widely accepted minimally invasive treatment for prostate cancer, and is increasingly performed under adverse conditions. Patients that have had prior surgery for BPH are likely to have anatomy that varies from normal both as a consequence of the process of BPH as well as from post-surgical changes which can further complicate the performance of an oncologically and anatomically successful operation. We present here guidelines and a stepwise approach to optimizing outcomes in these challenging patients, illustrated here with an index patient in video format.

METHODS: Anatomically-based descriptive technique to achieve accepted landmarks and demonstration of real-time intra-operative problem solving in difficult RARP.

RESULTS: Successful achievement of negative margins and rapid return of continence in this patient.

CONCLUSIONS: We suggest an organized approach that differs from our standard anterior approach for this subset of patients. Steps includes a posterior-first dissection, separate anterior fixation of the catheter to the abdominal wall to allow a free “fourth arm” and optimized retraction, and a laterally-initiated dissection at the location of the original bladder neck. We believe these steps facilitate the achievement of negative surgical margins while allowing rapid return of continence.

SOURCE OF FUNDING: None

VP02-03 LAPAROSCOPIC ANTERIOR EXENTERATION FOR GARTNER’S DUCT CYST ADENOCARCINOMA

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INTRODUCTION AND OBJECTIVES: Malignancy from Gartner’s duct cyst is very rare. Management of such tumours is anterior exenteration. We present the video of laparoscopic anterior exenteration for Gartner’s duct adenocarcinoma.

METHODS: A 42 years old lady presented with complaints of severe dysuria with voiding and symptoms. On examination she had a hard mass in the anterior vaginal wall overlying the urethra. MRI pelvis showed a T2 hyperintense mass in the anterior vaginal wall involving the urethra and bladder neck. Cystoscopy showed an infiltrative growth involving the urethra and bladder neck. TUR biopsy of the lesion was reported as adenocarcinoma. Under GA, Trendelenberg position, through 5 ports, laparoscopy was done. Urachus was clipped and cut and Retzius space developed. Dissection continued till the urethra. Peritoneum incised lateral to the iliac vessels and both ureters dissected and cut close to the bladder. The lateral pedicles of the bladder were dissected, clipped and cut. Peritonotomy was made in the pouch of Douglas and uterus dissected from rectum. Uterine pedicles were clipped and cut. Bilateral iliac lymph node dissection was done. Vagina opened and specimen retrieved through the vagina. Through 5 cm subumbilical incision heterotopic Studer neo-bladder was constructed with appendix as cathetrisable stoma.

RESULTS: The operating time was 380 minutes and blood loss was 250 ml. Patient started orally on day5 and drains removed on day10. SPC was removed on day21 after cystogram. Patient is on clean intermittent catheterisation now.

CONCLUSIONS: Laparoscopic anterior exenteration is effective alternative to open surgery for selected patients with organ confined bladder and urethral tumours.

SOURCE OF FUNDING: None

VP02-04 LAPAROSCOPIC RADICAL PROSTATECTOMY: 10 YEARS EXPERIENCE

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INTRODUCTION AND OBJECTIVES: We assessed the perioperative outcomes, morbidity, functional results and oncologic follow-up of our LRP experience performed in 10 years.
METHODS: Three hundred and seventy two patients, underwent extraperitoneal LRP between March 2004 – January 2014. Oncological outcomes were assessed by pathological examination and postoperative PSA levels. Functional outcomes, including continence and potency were assessed from patient questionnaires.

RESULTS: Mean operative time was 156 minutes (65–570 min), the mean catheterization time was 9.1 days (7–20), mean hospitalisation time was 3.8 days (1–22). Mean blood loss was 142 cc (30–450). Pathologic stage was pT2 in 61.5% (229 patients) of cases and pT3 in 36.5% (136 patients). 12 of 229 patients (5.2%) with pathologic stage T2 and 32 (23.5%) of 136 patients with pathologic stage T3 received adjuvant radiotherapy because of positive surgical margin. Biochemical recurrence was 8.3% (31 patients) at a mean follow up time of 34 months. There was no mortality due to prostate cancer. At the first year follow-up 88% of the patients had continence, 7% presented minimal stress incontinence (1 pad/day). 15 (4%) patients were performed a artificial genitourinary sphincter implantation (AGUS) because of stress incontinence. Sixtyfive % of patients exhibited potency which was preoperatively sufficient for potency.

CONCLUSIONS: LRP is a technically well-defined procedure that provides good oncological and functional results.

SOURCE OF FUNDING: Continence, laparoscopic radical prostatectomy, potency

VP02-05 LAPAROSCOPIC SIMPLE PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: We reviewed our Laparoscopic Simple Prostatectomy (LSP) experience and present a video exhibiting the surgical technique of LSP.

METHODS: Between March 2008 and September 2013, laparoscopic simple prostatectomy was performed in 39 patients whose prostate volumes were over 80 ml. All the patients were operated with transvesical method. Preoperative comorbidity status, perioperative and third postoperative month data were recorded and evaluated.

RESULTS: Means age of patients was 69 ± 7.9. The mean prostat volume was 142 ± 34.7. The median operation time, blood loss, duration of drain placement and duration of urethral Foley catheter were 140 minutes (75–330 minutes), 150 ml (50–1000 ml), 2 day (1–7 days) and 6 day (6–7 days) respectively. Only one patient required intraoperative blood transfusion. One patient’s pathology reports was noted as leiomyoma, all others were noted as benign. The mean of International Prostate Symptom Score which was 17.4 ±5.0 before the operation was decreased to 8 ±1.1 in postoperative months 3 (p=0.001). The mean of Maximum urinary flow rate which was 6.9 ±4.9 ml/sec before the operation was increased to 22.5 ±6.0 ml/sec in postoperative months 3 (p=0.001) No significant differences were observed in terms of International Index of Erectile Function score postoperatively.

CONCLUSIONS: Laparoscopic simple prostatectomy is a feasible method with low morbidity and improved postoperative outcomes.

SOURCE OF FUNDING: Laparoscopic simple prostatectomy

VP02-06 PROTRUDING HEM-O-LOK CLIP IN THE BLADDER WITH STONE FORMATION AFTER LAPAROSCOPIC RADICAL PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: Hem-o-Lok clips (Weck Surgical Instruments, Teleflex Medical, Durham, NC, USA) are widely used in minimal invasive surgery because of their easy application and secure clamping. To date, there have been some reports of intravesical migration of these clips causing urethral erosion, bladder neck contractures, and subsequent calculus formation. We report the case of projecting Hem-o-Lok clip with stone formation after laparoscopic radical prostatectomy.

METHODS: In this movie we present the development and removal of protruding Hem-o-Lok clip in the bladder in a 65 year old man suffering from gross hematuria after laparoscopic radical prostatectomy. The migration of Hem-o-Lok clip into the bladder occurred after holding the hemostatic suture in left neurovascular bundle area.

RESULTS: Gross hematuria began 6 month after surgery. Protruding Hem-o-Lok clip in the bladder and multiple bladder stone were found out under cystoscopy. Projecting clip was removed by bipolar resectoscope. Also, cystolithotripsy was done using the holmium laser. After complete removal of clip and stone, hematuria was stopped.

CONCLUSIONS: During the robot assisted or pure laparoscopic radical prostatectomy, using the Hem-o-Lok clip nearby vesico-urethral anastomosis should be avoided. If intravesical migration of Hem-o-Lok clips occurs after inevitable use of the clips, transurethral removal will be best option.

SOURCE OF FUNDING: None

VP02-07 LAPAROSCOPIC PROSTATE-SPARING RADICAL CYSTECTOMY; CASE REPORT

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INTRODUCTION AND OBJECTIVES: Prostate-sparing radical cystectomy improves functional and clinical results such as potency and continence in the patients with muscle-invasive bladder cancer.

METHODS: 56 years old man, suffering from high grade muscle invasive transitional cell carcinoma of the bladder, underwent laparoscopic prostate sparing cystectomy. PSA was 0.6 mg/dl and digital rectal exam was normal. After pneumoperitoneum induction and the positioning of five trocars, the ureters were clipped and transected, the vas deferens were identified and transected. Cystectomy was performed with vascular pedicles transection by ligasure. The reconstruction of the bladder was obtained through a 7 cm longitudinal periumbilical incision using 50 cm of ileus and an orthotopic neobladder re- alized outside the abdomen.

RESULTS: No major complications were recorded. The surgical time was 270 minutes. Cystectomy and simple prostatectomy time was 90 minutes. Blood loss was 200 ml. Oral intake was postoperative second day. Drain was removed after 10 days and the patient was discharged after 11 days. The patient was fully
VP02-08 ANASTOMOSIS WITH SINGLE V-LOC SUTURE IN LAPAROSCOPIC RADICAL PROSTATECTOMY
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INTRODUCTION AND OBJECTIVES: METHODS: RESULTS: CONCLUSIONS: SOURCE OF FUNDING: None

VP02-09 PRE-PERITONEAL PARTIEL CYSTECTOMY WITH GUIDED CYSTOSCOPY
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INTRODUCTION AND OBJECTIVES: METHODS: RESULTS: CONCLUSIONS: SOURCE OF FUNDING: None

VP02-10 LAPAROSCOPIC EXTENDED PELVIC LYMPH NODE DISSECTION "SPLIT-ROLL TECHNIQUE"- IN RADICAL CYSTECTOMY
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INTRODUCTION AND OBJECTIVES: In view of steep learning curve, laparoscopic extended pelvic lymph node dissection (LEPLND) is seldom practiced after Laparoscopic Radical Cystoprostatectomy (LRC). This procedure is anticipated to lead to further miniaturization of open surgery left only for urinary diversion.

METHODS: We studied the feasibility of LEPLND after LRC and describe the technique of “Split and roll” method to achieve the same. The essential steps include, steep 45 degree Trendelenberg patient position, camera assistant standing on the ipsilateral side to the operating surgeon, bowel mobilization before LRC, incision along the iliac vessels and genito-femoral nerve, clipping of the proximal and distal ends of lymph node boundaries, and rolling of the entire pelvic node packet to deliver en bloc lymph nodes.

RESULTS: We performed this technique in 23 cases and could complete the procedure in all cases. The right hand dissection laparoscopic port was placed on the prefixed ileostomy skin site. The procedure required placing four ports to complete the entire procedure. All patients underwent extracorporeal ileal conduit formation through a mean 8 ± 1.2 cm pfannensteil incisions. The mean additional OR time required for LEPLND was 112 ± 22 mins. There was no intra operative complication.

CONCLUSIONS: This procedure is technically safe and efficacious in expert hands. The addition of this procedure after LRC adds to complete the entire urinary ileal conduit diversion through a small pfannensteil incision.

SOURCE OF FUNDING: None
RESULTS: Operative time was 170 minutes with an estimated blood loss of 50 mL. There were no intra or postoperative complications. Histopathology showed pT2bN0 well differentiated adenocarcinoma of bladder with both surgical margins and all 20 lymph nodes negative. The patient resumed oral intake after a day and was discharged after 3 days. Another patient operated similarly had an uneventful postoperative course with pT2aN0 transitional cell carcinoma on histopathology. Both patients have no loco-regional or distant metastases at 3 months followup.

CONCLUSIONS: Simultaneous cystoscopic visualization during laparoscopic partial cystectomy is safe and facilitates dissection to achieve negative surgical margins without any additional morbidity or operative time.

SOURCE OF FUNDING: None

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**VP03 LAPAROSCOPIC SURGERY UPPER TRACT 2**

**VP03-01 GLASSES-BASED 3D FULL HD MONITOR SYSTEM: CONSIDERABLE PRELIMINARY TRAINING CHOICE FOR RESIDENTS AND BEGINNERS; LAPAROSCOPIC RENAL CYST DECORICATION**

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INTRODUCTION AND OBJECTIVES: As will be appreciated by all, laparoscopy training is one of the main parts of urology residents’ education. After training box processes, laparoscopic renal cyst excision is accepted preliminary procedure for beginners. For this preliminary procedure we recommend glasses-based 3D full HD monitor systems for the benefit of both patients and surgeons.

METHODS: 68-year-old female patient applied to our clinic with left sided pain localized to the flank region. Urinary system ultrasound imaging performed and a 88.9*88.3 mm cyst detected on the upper pole of left kidney. There have been 3 trocars inserted into the retroperitoneal space; one 12 mm trocar for the telescope and two 5 mm trocar for working instruments. We used LigaSure (Covidien) 5 mm 44 cm laparoscopic instrument to dissect upper pole of left kidney and the cyst on it. Laparoscopic scissors and the LigaSure used to excise the cyst wall.

RESULTS: 42 minutes operation time was recorded from the beginning of first trocar insertion. Urethral catheter and the drain removed 12 and 24 hours later after the operation, respectively. Excised 4*3*5 cm cyst wall reported as a “simple cyst” by our hospital’s pathology clinic.

CONCLUSIONS: As a result of 3D images eye-hand coordination is improved, operation time is shorten, risk of complications are reduced, learning curve in training residents is accelerated and adaptation to the retroperitoneal anatomy is facilitated compared to 2D-image-operation. For residents and beginners it is safe and effective way to start laparoscopy training with glasses-based 3D full HD monitor system after laparoscopic training boxes.

SOURCE OF FUNDING: laparoscopy training, renal cyst decortication, 3D HD system

**VP03-02 LAPAROSCOPIC ADRENALECTOMY FOR A LARGE ADRENAL MYELOLIPOMA: SURGICAL TECHNIQUE**

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**VP03-03 LAPAROSCOPIC PARTIAL NEPHRECTOMY: ULUDAĞ UNIVERSITY EXPERIENCE**

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INTRODUCTION AND OBJECTIVES: A laparoscopic approach is the standard of care for most adrenal tumours. Large adrenal tumours >10 cm can present unique challenges. We present a video of a unique case of a benign 13 cm adrenal lesion that was safely managed with a right laparoscopic adrenalectomy and then went on to have a laparoscopic cholecystectomy concurrently.

METHODS: A 61 year old male was referred having presented with right upper quadrant pain. Ultrasound and then subsequent CT revealed cholelithiasis and an incidental finding of a large fat containing mass in the right adrenal gland 135 mm by 132 mm consistent with an adrenal myelolipoma. Functional adrenal studies were negative. Under general anaesthesia and in a modified right lateral position we used a 4 port transperitoneal laparoscopic technique. The patient then underwent laparoscopic cholecystectomy utilizing some of the original ports and then specimens were retrieved through a right iliac fossa incision.

RESULTS: The patient made an uneventful recovery. Operative time for the laparoscopic adrenalectomy was 90 minutes and estimated blood loss was 50 mL. The histopathology revealed a benign 828 g myelolipoma of the right adrenal gland.

CONCLUSIONS: Large adrenal tumours are challenging to manage with most cases requiring open surgery. This case video demonstrates how a laparoscopic approach was performed to manage this large, benign non functioning right adrenal mass.

SOURCE OF FUNDING: None
55). In 18 renal units we performed partial nephrectomy without pedicle clamping. Retroperitoneal approach was performed for 5 patients. We converted to laparoscopic radical nephrectomy due to profuse hemorrhage in 2 patients, and surgical margin invasion by the tumor in 1 patient. We converted to open surgery at 1 patient. The mean blood loss was 180 ml (10–800). Nine patients needed transfusion for blood loss, tree patient required DJI stent placement because of prolonged urine leakage. Pathology revealed renal cell carcinoma in 103 renal units and benign pathology in 13 renal units. Surgical margin was positive in 6 patients. At follow-up period of 13 months, no recurrence was observed.

CONCLUSIONS: LPN is a minimal invasive, nephron-sparing technique with acceptable surgical and oncological outcomes and should be considered among the treatment options in stage T1 renal tumors.

SOURCE OF FUNDING: laparoscopic partial nephrectomy, minimal invasive, stage T1 renal tumors

VP03-04 LAPAROSCOPIC RETROPERITONEAL LYMPH NODE DISSECTION; ULUDAG UNIVERSITY EXPERIENCE

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INTRODUCTION AND OBJECTIVES: To present the experience of our clinic on Laparoscopic retroperitoneal lymph node (RPLND).

METHODS: Tree patients who underwent RPLND between may 2010 and march 2014 were evaluated retrospectively.

RESULTS: Mean total operative time was 150 (120–180) minutes. Mean blood loss was 186 ml (150–270) and None of the patients was necessary intraoperative blood transfusion. Mean postoperative hospitalization was 3 (2–7) days. No intraoperative complication was experienced and conversion to open surgery has never happened. All lymph nodes in three patients were reported as negative malignancy. Within a mean time period of 13 months, 100% of patients were alive.

CONCLUSIONS: Our clinical experience confirms that RPLND can be performed safely without compromising the oncological principles.

SOURCE OF FUNDING: Laparoscopy, lymph node dissection

VP03-05 SUCCESSFUL LAPAROSCOPIC NEPHRECTOMY IN A PATIENT WITH ILEAL CONDUIT. BY: RYAN HALILI, MD AND JOSE BENITO ABRAHAM, MD

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INTRODUCTION AND OBJECTIVES: We present our experience of a successful laparoscopic left nephrectomy on a 27 year-old female patient who had previously undergone a cystectomy and ileal conduit creation for an inflammatory pseudotumor of the urinary bladder last September 2010. The challenges present when performing laparoscopic nephrectomy in a patient with ileal conduit are as follows: 1) Previous extensive abdomino-pelvic surgery which may lead to intraabdominal adhesions which can make dissection difficult. 2) Absence of classical landmarks which may be used to guide dissection in a traditional manner. 3) How does one insufflate the abdomen in a safe manner? Veress insufflation or Hasson technique? 4) How the subsequent trocars be positioned and placed? 5) How does one avoid the potential risk of injury to the ileal conduit?

METHODS: Two years after the cystectomy, she developed severe left hydronephrosis secondary to a ureteroileal anastomotic stricture. We present relevant and challenging issues related to abdominal insufflation, trocar placement, planes of dissection and exteriorization of the specimen.

RESULTS: The total intraoperative time was 250 minutes, intraoperative blood loss was 300 cc and the length of hospital stay was 3.5 days. There were no intraoperative and postoperative complications.

CONCLUSIONS: We were able to demonstrate that laparoscopic nephrectomy is a feasible minimally invasive option in a complex situation such as a patient with an ileal conduit.

SOURCE OF FUNDING: None

VP03-06 LAPAROSCOPIC TRANSPERITONEAL HEMINEPHRECTOMY IN ADULTS WITH DUPLICATED RENAL COLLECTING SYSTEMS

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INTRODUCTION AND OBJECTIVES: To share our experience of laparoscopic transperitoneal heminephrectomy.

METHODS: Between November 2009–March 2014, 2 patients (21 year old female, 64 year old male) with urinary tract duplex anomalies underwent laparoscopic heminephrectomy using a transperitoneal approach. The sites of surgery consisted of 2 left lower pole heminephrectomy. Before laparoscopy ureteral catheter was placed. Follow up included routine ultrasound and urinalysis.

RESULTS: Operative times were 120 and 180 minutes. Estimated blood losses were 50 mL, and hospital stays were 2 days. All patients underwent laparoscopic surgery successfully. No conversion to open surgery was needed. No major complication was observed. On mean follow-up time, no disturbing symptoms or episodes of urinary tract infections were detected.

CONCLUSIONS: Laparoscopic transperitoneal heminephrectomy for duplex kidneys is safe, less postoperative pain and better cosmetic result.

SOURCE OF FUNDING: None

VP03-07 LAPAROSCOPIC ADRENALECTOMY: ULUDAG UNIVERSITY EXPERIENCE

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INTRODUCTION AND OBJECTIVES: To present our laparoscopic surgery experiences on the treatment of adrenal masses.

METHODS: We evaluated retrospectively the data of 193 patients (117 female and 76 male) who underwent 201 laparoscopic adrenalectomy (LA) between March 2004 and March 2014.

RESULTS: No conversion to open surgery was needed. LA was performed retroperitonoscopically in one case and
transperitoneally in the rest of the patients. Mean age of the patients was 50.67±11.82 years. Adrenalectomy side was right in 89 patients, left in 96 patients and bilateral in 8 patients. Mean adrenal mass size was 71.45±19.38 mm. Mean operation time was 114.38±55.2 minutes and mean blood loss was 64.09±64.9 mL. In operative distal pancreatic injury was occurred in one case. No other major complication was seen. Mean hospital stay was 3.19±3.07 days and mean follow-up period was 24.12±12.2 months. Neither early nor delayed postoperative complications were observed. Pathological evaluation revealed adenoma in 106 patients, adrenocortical hyperplasia in 9 patients, pheochromocytoma in 24 patients, adrenocortical cancer in 3 patients, metastatic adenocarcinoma in 22 patients, oncocytoma in 8 patients, myelolipoma in 5 patients, adrenal cyst in 9 patients, ganglioneuroma in 2 patient, malign pheochromocytoma in 1 patient, granulomatous inflammation in 2 patient and normal adrenal gland in 2 patient.

CONCLUSIONS: LA is a safe and minimally invasive method for the treatment of the adrenal masses with it slow morbidity, acceptable oncological and surgical outcomes.

SOURCE OF FUNDING: Adrenal gland neoplasms; adrenalectomy; laparoscopy; transperitoneal

VP03-08 LAPAROSCOPIC TRANSPERITONEAL HEMINEPHRECTOMY IN HORSESHOE KIDNEY

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INTRODUCTION AND OBJECTIVES: Horseshoe kidney is the most common renal fusion anomaly. Ablerrant vessels, renal isthmus, and abnormal location are all unique features of horseshoe kidney. These features make laparoscopic management of horse kidneys challenging. We report the management of surgical technique of a case of symptomatic nonfunctioning left horseshoe kidney.

METHODS: A twenty-one years old female patient was admitted with complaints of abdominal pain. As a result of the tests performed in patient left nonfunctional horseshoe kidney was revealed. After that the patient hospitalized for laparoscopic left heminephrectomy. The isthmus, which had 2 cm of functioning parenchyma, was divided using the Endo GIA (Covidien). No additional hemostatic agents were used during the procedure.

RESULTS: Total operative time was 120 minutes with an estimated blood loss of 60 mL. The length of stay in hospital was one day. There were no acute or delayed complications. Pathologic examination of the specimen confirmed as chronic pyelonephritis.

CONCLUSIONS: Laparoscopic heminephrectomy is an effective, comfortable alternative for nonfunctioning horseshoe kidneys in experienced hands.

SOURCE OF FUNDING: None

VP03-09 HYBRID LAPAROSCOPIC URETERONEOCYSTOSTOMY FOR MANAGEMENT OF LOWER URETERIC STRICTURES

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INTRODUCTION AND OBJECTIVES: Traditionally, open ureteric reimplantation with or without psoas hitch has been the gold standard for such strictures. However, as the urologists’ experience with laparoscopy grows, there has been a dramatic increase in the laparoscopic applications for management of diseases of the ureter. The antireflux nipple valve was done extracorporeally can save the time.

METHODS: We present our experience with hybrid laparoscopic ureteroneocystostomy for the management of lower ureteric strictures. (The antireflux nipple valve was done extracorporeally)

RESULTS: All operations (three cases) were successfully completed without any need for conversion to open. Non-refluxing status was determined by micturition cystograph.

CONCLUSIONS: Laparoscopic ureteroneocystostomy is a safe and effective procedure, with inherent advantages of laparoscopic surgery.

SOURCE OF FUNDING: None

VP03-10 LAPAROSCOPIC LIVE-DONOR NEPHRECTOMY WITH TRANSVAGINAL GRAFT EXTRACTION

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INTRODUCTION AND OBJECTIVES: Since the introduction of laparoscopic live donor nephrectomy in clinical practice there has been a steady increase in the number of kidney transplantations from a living donor. In major cases the organ is extracted through an incision made in the suprapubic region. However, this small defect can be an obstacle for a certain number of potential donors.

METHODS: Since 2012, three female patients with a median age of 42 years underwent laparoscopic live donor nephrectomy with transvaginal extraction of the kidney. Median BMI was 27.4. In 2 cases a right-sided live donor nephrectomy was performed and in 1 case – a left-sided donor nephrectomy. The first step consisted of standard mobilization of the kidney. Next, we performed a posterior colpotomy. The incision was enlarged to match the size of the kidneys, then an Endocatch bag was introduced. After that we transected the ureter and the renal vessels, placed the kidney into the bag and delivered it through the extraction incision. The posterior colpotomy incision was repaired laparoscopically.

RESULTS: No intraoperative complications occurred. Mean operative time was 240 min. Mean blood loss equalled 140 mL. Mean warm ischemia time was 5.1 min. No surgical complications were seen in the donors or in the recipients. All grafts had immediate function. Mean length of hospital stay for donors was 7.3 days.

CONCLUSIONS: Laparoscopic nephrectomy with transvaginal graft extraction is a safe and feasible procedure associated with low levels of pain, early discharge and early return to physical activity. Graft function is comparable to traditional laparoscopic nephrectomy.

SOURCE OF FUNDING: None

VP03-11 LAPAROSCOPIC RADICAL NEPHRECTOMY WITH INFERIOR VENA CAVA THROMBECTOMY

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VP04 LAPAROSCOPIC SURGERY UPPER TRACT 3

VP04-01 THE USE OF MONOPOLAR AS SINGLE ENERGY SOURCE DURING LAPAROSCOPIC NEPHRECTOMY: FEASIBLE AND INEXPENSIVE

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INTRODUCTION AND OBJECTIVES: To demonstrate the technical aspects of the use of the hook with monopolar as only single energy source during laparoscopic nephrectomy.

METHODS: Monopolar generator is set at high energy settings, the hook is holded in a penshaped manner to avoid tremors, back side of hook is used for clean cut of scissors and the hooking end for coagulation. The video demonstrates the technique in a teenage girl with 14 cm right renal angiomyolipoma scheduled for nephrectomy.

RESULTS: Storz monopolar generator AUTOCON® II 400 ESU with 70 watts pure coagulation current settings and STORZ® dissecting L Hook electrode was used in all cases. Clips were used judiciously for securing vessels. We performed this technique in 7 and 5 radical and simple nephrectomies with mean OR time of 145 ± 65 minutes, Hb drop of 1.1 ± 0.5 g/dl, and no intra operative complications.

CONCLUSIONS: Hook is versatile instrument. The advantages its use is lower cost and avoidance of frequent instrument changes. The limitations are low vessel sealing capacity. The recommendation’s are always respect anatomical planes and avoid in tissues with acute inflammation.

SOURCE OF FUNDING: Nil

VP04-02 PURE LAPAROSCOPIC PARTIAL NEPHRECTOMY FOR RIGHT RENAL HILAR ANGIOMYOLIPOMA

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INTRODUCTION AND OBJECTIVES: This is a 61-year-old male patient presented to our clinic for right flank pain in the past one year. He also had gross hematuria on and off in this year. On physical examination, there is right flank knocking pain noted. CT showed a right renal tumor (7.4*6.5 cm) near renal hilum with intra-pelvic protrusion, which demonstrates as macroscopic fat (< -20 HU). Angiomyolipoma (AML) is impressed. Due to persisting hematuria and tenderness, he underwent pure laparoscopic partial nephrectomy for right renal hilar angiomylipoma.

METHODS: As laparoscopic partial nephrectomy, we explore this renal tumor carefully step by step. We use miniretractor to protect the renal vessels. Thus, we clump the renal pedicle by bull-dog. The tumor was extracted by endoscissors. Floseal and Surgicel were used for hemostasis. Then the tumor space was sutured with 2-0 vicryl. The warm ischemic time is 29 minutes.

RESULTS: This is a difficult laparoscopic partial nephrectomy because of the bad location of renal tumor. It is in high-risk of renal pedicle injury. We use the miniretractor to protect the renal pedicle and complete this surgery in pure laparoscopic surgery.

CONCLUSIONS: Pure laparoscopic partial nephrectomy for right renal hilar angiomylipoma is relatively difficult even for experienced surgeon. We share this procedure video for appreciate.

SOURCE OF FUNDING: None

VP04-03 RETROPERITONEOSCOPIC PARTIAL NEPHRECTOMY WITH SEGMENTAL ARTERY CLAMPING: A VERSATILE TECHNIQUE FOR BOTH ANTERIOR AND POSTERIOR RENAL TUMOURS

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VP04-04 LAPAROSCOPIC RESECTION OF IPSILATERAL ADRENAL METASTASIS AFTER LAPAROSCOPIC PARTIAL NEPHRECTOMY FOR RENAL CELL CARCINOMA: A CASE REPORT

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INTRODUCTION AND OBJECTIVES: Segmental artery clamping is a novel technique in partial nephrectomy that converts global ischaemia to regional ischaemia by clamping only the segmental arterial branch that supplies the tumour. It aims to reduce the ischaemic insult to kidney, and help to preserve renal function. The retroperitoneoscopic approach is commonly preferred only for posterior renal tumours but not anterior ones. We present our operative techniques of retroperitoneoscopic partial nephrectomy with segmental artery clamping, and show that it is a surgical approach that is not only feasible for posterior, but also versatile for anterior renal tumours.

METHODS: Two cases of retroperitoneoscopic partial nephrectomy with segmental artery clamping are presented, one case of posterior, and another case of anterior renal tumour, with their corresponding target segmental arterial branch located on the posterior and anterior aspect of renal hilum respectively.

RESULTS: We demonstrate the step-by-step techniques of retroperitoneoscopic partial nephrectomy with segmental artery clamping for both anterior and posterior tumours, with highlights on the tips and tricks from port placements, to clamping of segmental arterial branch, and renorrhaphy.

CONCLUSIONS: Retroperitoneoscopic approach is a versatile surgical approach for partial nephrectomy with segmental artery clamping, which is suitable not only for posterior, but also anterior renal tumours. By utilizing regional ischaemia, segmental artery clamping minimize the ischaemia insult to kidney and may help to preserve renal function.

SOURCE OF FUNDING: None

VP04-05 LAPAROSCOPIC PARTIAL NEPHRECTOMY IN A HORSESHOE KIDNEY: A VIDEO PRESENTATION

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INTRODUCTION AND OBJECTIVES: Laparoscopic partial nephrectomy on patients with horseshoe kidneys can be technically challenging due to variable anatomy of the renal pelves as well as an aberrant and complex blood supply. In this video, we demonstrate the laparoscopic techniques that were used for partial nephrectomy in a horsehoe kidney.

METHODS: Our patient was a 28 year old morbidly obese gentleman who underwent a Laparoscopic Roux En Y gastric bypass 4 years ago. He had a history of previous cerebrovascular accident with good functional recovery, diabetes mellitus and chronic renal impairment. He was incidentally found to have a 2.3 x 2.6 x 2.5 cm heterogeneously enhancing mass in the upper pole of the right moiety of the horseshoe kidney, which was indenting the adjacent calyx. Renal veins were patent.

RESULTS: The video demonstrates approach to the upper pole vasculature and dissection of the hilar vessels in close apposition to the tumor. Selective clamping of renal arteries was done, preserving flow in the lower pole arteries. Following cold excision of the mass, closure of defect was facilitated with absorbable clips, deep continuous suturing and interrupted sutures. Warm ischemic time was 51 minutes. Operative time was 271 minutes. Histology of the resected specimen was a Fuhrman grade 2 clear cell RCC with clear margins.

CONCLUSIONS: The laparoscopic approach to urologic disease of the horseshoe kidney is an effective and minimally invasive alternative to traditional open surgery. Anatomic variations in renal vasculature, location of the lower poles and ishiumus, make careful pre-surgical planning and intra-operative maneuvers crucial for success.

SOURCE OF FUNDING: N/A

VP04-06 RETROPERITONEOSCOPIC URETEROLYSIS AND RECONSTRUCTION OF RETROCAVAL URETER: EXPERIENCE OF 2 CASES

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INTRODUCTION AND OBJECTIVES: To present our initial experiences on retroperitoneoscopic ureterolysis and reconstruction of retrocaval ureter and explore its safety and probability.

METHODS: 2 patients, age 50 and 55 ys in our hospital who were diagnosed with retrocaval ureter underwent retroperitoneoscopic ureterolysis and reconstruction of retrocaval ureter from January 2014 to March 2014. Four trocars were used in our operation. The inferior vena cava and ureter were identified and the ureter was dissected and freed with Harmonic scalpel. The dilated upper ureter was transected and transposed anterior to the inferior vena cava. Reconstruction was carried out laparoscopically with 3-0 vivryl suture. The posterior wall was first closed in an running suture. The anterior wall was closed followed by an double-J stent placement.

RESULTS: Both of the operations were sucessfully finished without any conversion. The operative time were 112 and 110 minutes. The estimated blood loss was 10 and 15 ml. No intra-
VP04-07 LAPAROSCOPIC RADICAL NEPHRECTOMY FOR SYNCHRONOUS ADRENAL AND RENAL TUMOUR

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INTRODUCTION AND OBJECTIVES: Synchronous adrenal and renal tumours are rare. Laparoscopic radical Nephrectomy is the treatment of choice for renal tumours. We present the video of laparoscopic radical nephrectomy for synchronous adrenal and renal tumour.

METHODS: A 60 year old gentleman presented with incidental detection of right adrenal and renal tumours. His serum creatinine was 1.1 mg% and rest of blood investigations were normal. Under GA, using 5 ports, right line of Toldt was incised and the right colon was mobilised medially. The right ureter and gonadal vein were dissected. Gonadal vein was clipped and divided. Dissection was carried along the anterior aspect of Inferior venacava till the renal vein. The renal vein was dissected and clipped all around. Renal artery identified posterior to the renal vein, dissected, clipped and cut. Renal vein was clipped and cut. Kidney was mobilised outside the Gerota’s fascia. Inferior vena cava traced proximal to renal vein and adrenal vein clipped and cut. Adrenal arteries cauterised and cut and adrenal mobilised completely. Ureter clipped and cut and specimen removed through right iliac fossa incision. Penrose drain placed and port sites and wound were closed.

RESULTS: The operating time was 150 minutes and blood loss was 50 ml. Postoperatively patient was started orally on post op day 1 and drains were removed on post op day 2. The histopathology of the renal tumour was clear cell carcinoma (T1) and the adrenal tumour turned out to be myelolipoma.

CONCLUSIONS: Laparoscopic radical Nephrectomy can be utilised as an effective option in patients with synchronous adrenal and renal tumours.

SOURCE OF FUNDING: None

VP04-08 INJURY AND IMMEDIATE REPAIR OF URETER OR OBTURATOR NERVE DURING LAPAROSCOPIC RADICAL PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: The surgeon must be aware of injuries of adjacent structures other than the rectum and repair methods during laparoscopic radical prostatectomy.

Herein, we report our experience of immediate laparoscopic repair of ureteral or obturator nerve injury.

METHODS: (Case 1) A 65-year-old man with intermediate-risk prostate carcinoma underwent laparoscopic radical prostatectomy and pelvic lymphadenectomy. The left obturator nerve was transected intraoperatively by Enseal® during pelvic lymph node dissection. Immediate laparoscopic re-approximation was performed using 7-0 nylon sutures. (Case 2) A 70-year-old man with low-risk prostate carcinoma underwent laparoscopic radical prostatectomy with a posterior approach. The right ureter was partially transected and repaired with 4-0 vicryl suture. A 6F double J stent was placed in a retrograde fashion laparoscopically.

RESULTS: (Case 1) At 3 months postoperatively, the functional deficit had mostly resolved. (Case 2) The stent was removed after 8 weeks, and radiological studies showed no evidence of hydronephrosis.

CONCLUSIONS: Laparoscopic repair was feasible for the treatment of obturator nerve as well as ureteral injury.

SOURCE OF FUNDING: None

VP04-09 ROLE OF HAND-ASSISTED LAPAROSCOPIC RADICAL NEPHRECTOMY FOR RENAL CELL CARCINOMA IN THE MODERN ERA

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INTRODUCTION AND OBJECTIVES: Laparoscopic radical nephrectomy (LRN) is the standard of care in the treatment of renal cell carcinoma (RCC). Hand-assisted laparoscopic radical nephrectomy (HALRN) was used to bridge the gap for surgeons proficient in open surgery who were learning laparoscopic techniques. In the modern era, the role of HALRN has been decreasing due to the increased expertise of laparoscopic urologists. In this video, we present a series of three cases of HALRN for RCC and see its relevance in the contemporary era of advanced laparoscopy.

METHODS: A retrospective analysis was performed for patients undergoing HALRN by a single surgeon from August 2012 to August 2013. Indications for HALRN were large tumours which required an extraction incision greater than 7.5 cm or complex tumours such as presence of renal vein tumour thrombus. Gelport (Applied Medical, CA) hand-assist device was used in all cases through a 7.5 cm incision in the midline.

RESULTS: Out of 15 cases of laparoscopic nephrectomy performed for RCC, five cases were performed with hand-assistance. The mean tumour size from the five HALRN was 10.7 cm (SD2.1 cm), mean blood loss was 255 ml (SD125 ml), and the mean operative time was 197 min (SD18 min). Two of the cases in the video were large right renal tumours (>10 cm) and the third case was a 10 cm left renal tumour with level one renal vein tumour thrombus.

CONCLUSIONS: HALRN for RCC is a relevant skill in the armamentarium of modern day laparoscopic urologists. It offers patients with large, complex renal tumours the benefits of minimally-invasive surgery, avoiding the morbidity of open surgery.

SOURCE OF FUNDING: None
VP04-10 PERFORMING A PURE LAPAROSCOPIC RIGHT HEMINEPHROURETERECTOMY FOR UROTHELIAL CARCINOMA OF RENAL PELVIS IN A HORSESHOE KIDNEY

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INTRODUCTION AND OBJECTIVES: There are few reports about the pure laparoscopic nephroureterectomy for pelvic cancer in a horseshoe kidney. This report is about a case in which we performed a pure laparoscopic heminephroureterectomy.

METHODS: Rotating the 3DCT angiography image indicated an artery was branching out from the inferior mesenteric artery to the horseshoe kidney. A pure laparoscopic right heminephroureterectomy was performed under general anesthesia. Four ports were setup in the right abdominal region as the patient lied in the left lateral position. Since the vicinity of the isthmus was not clear, it was set aside and we started with the right kidney’s hilus to obtain its mobility. Performing an ultrasonography during surgery revealed a strong arterial blood flow in the planned dissection area for the Isthmus. After carefully inspecting the branching of the inferior mesenteric artery, branching to the isthmus was identified. The isthmus was cut with LigaSure, and a continuous Vicryl suture was performed on the cut off section.

RESULTS: Operation time: 296 minutes. Amount of bleeding: 100 ml. The day after the operation the patient could walk. Pathology: Urothelial carcinoma, grade 2. A year after the surgery, no tumor was recognized by CT. 3DCT angiography and US during surgery was useful in identifying the arteries. The structure around isthmus of horseshoe kidney is very complicated, but After cutting vessels and obtaining mobility, dissecting the isthmus could be easily completed.

CONCLUSIONS: Identifying the aberrant vessels to the isthmus is the key to success of completing a pure laparoscopic heminephroureterectomy for renal pelvic cancer in a horseshoe kidney.

SOURCE OF FUNDING: None

VP04-11 COMPLETE OFF-CLAMP ZERO ISCHEMIA PARTIAL NEPHRECTOMY UNDER NORMAL BLOOD PRESSURE, DIFFERENT LAYERS OF INCISION FOR CLEAR CELL CARCINOMA AND FOR PAPILLARY CARCINOMA

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INTRODUCTION AND OBJECTIVES: Zero Ischemia partial nephrectomy (ZIPN) is a novel approach, which can avoid unnecessary renal damage during procedure. Among several different approaches of ZIPN, complete off-clamp ZIPN is the most challenging technique especially under normal blood pressure. We demonstrate different layer of incision for clear cell carcinoma and for papillary carcinoma.

METHODS: Subjects are a 59 year old male with T1a clear cell carcinoma at mid portion and an 83 year old male with T1b papillary carcinoma in solitary kidney. RENAL nephrometry score were 8 and 6 respectively. Both tumors are removed by complete off-clamp ZIPN.

RESULTS: Both tumors were successfully removed with minimum blood loss. Enucleation layer was selected for clear cell carcinoma, but the incision was made in renal parenchyma with safety margin for papillary carcinoma because no obvious tumor capsule was observed in CT scan. All procedures were done under normal blood pressure.

CONCLUSIONS: We have already experienced complete off-clamp ZIPN. ZIPN can be safely done for the tumor with capsule. Dissecting enucleation layer may contribute less blood loss and accurate removal of tumor, but enucleation may be difficult for the tumor without capsule especially for papillary carcinoma. We used different layer for papillary carcinoma in ZIPN under complete off-clamp situation. Complete off-clamp partial nephrectomy under normal blood pressure could be proposed for various renal tumors even without tumor capsule.

SOURCE OF FUNDING: None

VP05 PCNL

VP05-01 TOTALLY FLUOROSCOPIC GUIDED PRONE PERCUTANEOUS NEPHROLITHOTRIPSY: TECHNIQUE STEP BY STEP

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INTRODUCTION AND OBJECTIVES: To document with a video a standardized technique for prone PNL followed in our department, to present its outcomes and reveal tips to increase its safety and efficacy.

METHODS: prospectively selected perioperative and follow-up data of 137 consecutive prone PNL cases operated in 2012 are being analyzed. In total, 84 single, 41 multiple and 12 staghorn stones were treated with a mean stone surface of 209.6 ± 199.4 mm². Patients were placed in prone position and a fluoroscopic guided prone PNL was performed as presented in the video. Treatment success was defined as stone-free status of the patient or the presence of residual stones ≤3 mm.

RESULTS: Mean operative time was 48.13 ± 14.80 min. Patients with single, multiple and staghorn stones had stone-free rates of 89.2%, 80.4% and 66.7% after PNL, respectively. Significant complications requiring additional interventions accounted for only 1.4% of the cases and included one urinary fistula and one pseudoaneurysm. An overall stone free rate of 99% was achieved after the successful employment of shock wave lithotripsy or ureteroscopy during the first 3 months. The descriptive nature of current study represented a limitation.

CONCLUSIONS: A standardized prone PNL technique in conjunction to specific tips and tricks provided excellent results which
justifies the acceptance of the technique for the years to come. Morbidity related to the procedure is low and the stone-free rates are high.

**SOURCE OF FUNDING:** None

**VP05-02 BMI BEST PREDICTS OUTCOME OF URETEROSCOPY-ASSISTED RETROGRADE Nephrostomy (UARN) FOR PCNL**

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**INTRODUCTION AND OBJECTIVES:** Several clinical series of retrograde nephrostomy for PCNL have been published over the past 30 years demonstrating good outcomes. We previously reported our adaptation of the Lawson technique, wherein we deploy the puncture wire through a flexible ureteroscope. We herein aim to clarify the performance characteristics of this nephrostomy creation technique.

**METHODS:** UARN procedure was performed as described previously. Data was collected prospectively. Multiple patient and operative factors were evaluated for association with UARN success and nephrostomy creation time: BMI, skin-to-stone distance (SSD), Guy’s score, CROES nephrolithometric score, hydronephrosis, stone burden, location of nephrostomy, exit from a stone-bearing calyx, and use of holmium laser to access calyx.

**RESULTS:** Nephrostomy was successful in 49/52 UARN procedures (94%). Only single access was placed: upper -18, mid -27, and lower -7. Median BMI was 29 kg/m2 and median time for nephrostomy creation was 39 minutes. Fluoroscopy time for entire PCNL was 84 and 16 seconds for cases #1–25 and 26–52, respectively. By stepwise linear regression, variables correlating with nephrostomy creation time were BMI (r2=0.219), stone burden (r2=0.094), and use of holmium laser to access calyx (r2=0.104), total r2 linear=0.416.

**CONCLUSIONS:** UARN is an intuitive, safe procedure, offers dramatic reductions in fluoroscopy times. Upper pole access is commonly performed subcostally to navigate the puncture wire through a flexible ureteroscope. We herein aim to clarify the performance characteristics of this nephrostomy creation technique.

**SOURCE OF FUNDING:** None

**VP05-03 REVERSE THERMOSENSITIVE GEL PREVENTS ANTEGRADE MIGRATION OF FRAGMENTS DURING PERCUTANEOUS NEPHROLITHOTRIPSY: A FEASIBILITY STUDY**

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**INTRODUCTION AND OBJECTIVES:** Ureteric migration of stones during Percutaneous Nephrolithotomy (PCNL) may necessitate secondary procedures and increase healthcare costs and morbidity to patients. Here we show demonstrate a novel method to prevent antegrade migration of stones down the ureter during a PCNL.

**METHODS:** A reverse thermosensitive polymer (Backstop) which is administered via a catheter inserted in a retrograde fashion up to the pelviureteric junction prior to stone lithotripsy. The polymer is injected via the catheter into the pelviureteric junction and prevents the antegrade migration of stones during PCNL into the ureter. At the end of the procedure after stone clearance the gel was washed away with cooled saline. Stone migration to the ureter was verified by direct endoscopy or XRay after the procedure.

**RESULTS:** To date we have used Backstop gel in 5 cases of PCNL. There were no incidences of antegrade migration of stones, no injuries to the pelviureteric junction and the gel dissolved in all instances.

**CONCLUSIONS:** Reverse thermosensitive polymer successfully prevents antegrade migration of kidney stones to the ureter during PCNL and none of our cases experienced complications with the use of the gel.

**SOURCE OF FUNDING:** None

**VP05-04 INFUNDIBULOPLASTY OF CALYCEAL DIVERTICULA USING MODIFIED PERCUTANEOUS TECHNIQUE**

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**INTRODUCTION AND OBJECTIVES:** Calyceal diverticula require a high index of suspicion by the treating urologist. They may predispose to stone formation, chronic pain, or recurrent infection. Failure to identify this condition may result in inappropriate treatment selection with a high risk of persistence of the cavity and its symptoms. Multiple approaches have been described including ureteroscopic, percutaneous, and laparoscopic.

**METHODS:** A 50 year old man presented with acute left renal colic, and CT scan revealed a 1.5 cm conglomeration of renal calculi characteristic of a calyceal diverticulum, as well as two small ureteral calculi. The patient failed medical expulsive therapy and was referred for endourologic consultation. Due to the size of the patient’s total stone burden, the decision was made to undergo percutaneous approach for definitive treatment to render the patient completely stone-free.

**RESULTS:** Fluoroscopically guided renal access was obtained directly into the diverticular cavity using standard triangulation method and Seldinger technique. The tract was dilated to 24 Fr access and a nephroscope without outer sheath was used for the principal portion of the procedure. All calculi were removed and balloon dilation infundibuloplasty of the diverticular neck was performed. The epithelial lining of the cavity was ablated using electrocautery. Operative time was 126 minutes and the procedure was well-tolerated without intraoperative or post-surgical complication.

**CONCLUSIONS:** This video demonstrates that a percutaneous approach with 24 Fr access can safely and efficiently be used for nephrostomy creation in appropriately selected patients.

**SOURCE OF FUNDING:** None

**VP05-05 ROAD TO X-RAY LESS PERCUTANEOUS NEPHROLITHOTRIPSY**

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INTRODUCTION AND OBJECTIVES: Traditionally, X-ray is an important tool in PCNL procedure. However, X-ray is well known to have various potential hazards despite usage of protective apron or shield in long term exposure. Although ultrasound (USG) guided track creation was used to avoid X-ray exposure, the quality of the imaging is usually suboptimal to guide the needle puncture and X-ray is still required to guide track dilatation.

METHODS: Navigation USG is used to guide the target site puncture in single pass. The depth of the needle was marked. Subsequent fascial dilators were passed with reference to the needle mark on the shaft. Once dilated to Fr 10, ureterorenoscope (URS) was inserted and guide wire was manipulated into the ureter. Subsequent metallic telescopic dilators were passed safely and consistently to the depth based on the needle mark reference until Fr 24 up to Fr 28 Amplatz sheath placed. Subsequent stone fragmentation showed no difference to the traditional PCNL.

RESULTS: X-ray is not used at all during track creation and dilatation steps. Puncture was created precisely in single pass under navigation USG. As guide wire was subsequently passed precisely into the ureter, tract dilatation was safely and precisely created. The role of X-ray is to check stone clearance status in selected cases.

CONCLUSIONS: Obviously avoidance of X-ray usage is the best solution. The usage of navigation and URS is useful to achieve this. Most importantly, it is easy to learn and yet safe.

SOURCE OF FUNDING: Nil

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VP05-06 ULTRA-MINI-PERCUTANEOUS NEPHROLITHOTOMY OF UPPER URETERAL IMPACTED STONES. OUR INITIAL EXPERIENCE

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INTRODUCTION AND OBJECTIVES: To assess the efficacy and safety of ultra–mini-percutaneous nephrolithotomy (UM-PCNL) using 6 Fr ureteroscope in the treatment of impacted ureteral stones.

METHODS: Method: We retrospectively analyzed the records of 25 patients with impacted upper ureteral stones less than 20 mm who underwent UM-PCNL using 6 Fr ureteroscope through a 10 Fr metal sheath between January 2010 and January 2013. A successful outcome was defined as the patient being stone free on radiography 1 month after treatment. Pneumatic lithotripters were used for stone fragmentation. The safety, efficacy, and outcome were analyzed.

RESULTS: UM-PCNL using 6 Fr ureteroscope were performed successfully in all patients. Mean age of patients was 48.2 years (range 9 to 68). The mean stone size was 13.5 mm (range: 9–20). Mean operating time from taking access to removing ureteroscope was 47 min (range: 25–65). Mean postoperative hospital stay was 1.5 days (range: 1–3). The stone-free rate in all patients was 95% up to 30 days after procedure. Low grade fever occurred in 2 patients. No major complications like urosepsis, significant hemorrhage, perforation or organic injury were observed during the operation or postoperatively. No auxiliary procedures were required.

CONCLUSIONS: Miniaturization of instruments, exactly decrease the PCNL morbidity along with high success rate, so can be recommended as a first-line treatment for selected impacted ureteral stones. Randomized studies are still needed to confirm these findings.

SOURCE OF FUNDING: None

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VP05-07 “MINI-PERC” TECHNIQUE AND PERCUTANEOUS LASER INFUNDIBULOTOMY FOR UPPER POLE CALYCEAL DIVERTICULAR STONE: A TECHNICAL CHALLENGE

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INTRODUCTION AND OBJECTIVES: Renal calyceal diverticular stones, especially upper pole ones with a pinhole infundibulum, pose technical challenges to the access for stone treatment and different approaches have been described. We describe a “mini-Perc” technique of percutaneous nephrolithotomy together with percutaneous laser infundibulotomy after stone clearance.

METHODS: A 55-year-old Indonesian housemaid presented with back pain for two years and an opacity over right renal shadow area on X-ray. An intravenous urogram and later a computed tomography suggested a 1.8 cm right upper pole calyceal diverticular stone with very narrow infundibulum. After general anaesthesia and insertion of an occlusion balloon catheter into the ureteropelvic junction, ultrasound-guided direct puncture to stone was performed and a “mini-Perc” technique was adopted using a 18 Fr peel-away sheath, 12.5 Fr paediatric nephroscope and Lithoclast for stone fragmentation. The pinhole infundibulum was identified by retrograde injection of contrast mixed with methylene blue and a double-flexible super-stiff guidewire was passed to ureter in antegrade manner. The infundibulum was dilated with ureteric fascial dilators and ablation of fibrotic tissue was performed percutaneously using Holmium laser. A 7 Fr 26 cm double-J stent was inserted across the infundibulotomy site and a 10 Fr malecot nephrostomy drain was inserted.

RESULTS: Operation time was 2 hours 25 minutes and the procedure was uneventful. The malecot drain was removed on Day 2 and patient was discharged on the same day. Patient recovered well with double-J stenting for 6 weeks as planned.

CONCLUSIONS: “Min-Perc” technique combined with percutaneous infundibulotomy is a feasible option in treating calyceal diverticular stones.

SOURCE OF FUNDING: Nil

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VP05-08 HIGH POWER HOLMIUM-YAG LASER COMBINED WITH SUCTION FOR PERCUTANEOUS NEPHROLITHOTOMY (PCNL) IN LARGE BULK RENAL CALCULUS

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INTRODUCTION AND OBJECTIVES: Both laser and pneumatic lithoclast are equally efficient energy sources for PCNL. The laser fragments stone efficiently however significant time is lost in retrieving gravel created by laser. The goal of this study was to evaluate the efficacy of high power laser combined with suction for PCNL in large bulk renal calculus.

METHODS: After institutional ethical committee approval high power laser with suction was used for PCNL in patients with large bulk renal calculi of size more than 2 centimeters. Exclusion
VP05-09 MICROPERC IN AN 11 MONTH OLD INFANT WITH NEPHROLITHIASIS

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INTRODUCTION AND OBJECTIVES: Microperc is an evolving technique of performing percutaneous nephrolithotomy offering the dual advantages of single step renal access with decreased morbidity of a smaller tract size. In this video we demonstrate a stepwise approach to performing Microperc in an infant. We also intend to study the safety and efficacy of this modality in treating pediatric nephrolithiasis.

METHODS: Microperc was performed in 15 pediatric patients with the youngest one aged 11 months. It was carried out under general anesthesia and in prone position. USG guided access was obtained with a 16G (4.85 F) “all seeing needle”. Lithotripsy was done with a 272 μm holmium:YAG laser fibre utilizing either the same 4.85 F or a 8 F sheath. Perioperative outcomes and stone clearance at 1 month were assessed.

RESULTS: The mean age was 8.5 ± 4.4 years (11 months-15 years). Average stone size was 13.3 ± 4.7 (7.5–24.9) mm. One patient had extravasation which was managed with nephrostomy drainage. Mean hemoglobin drop and hospital stay were 0.5 ± 0.8 days respectively. Two patients (13.3%) had Clavien grade 1 complication in form of fever and flank pain. 14 (93.3%) children were stone free at 1 month with the youngest one aged 11 months. It was carried out under general anesthesia. The thermometer was took out under cystoscopy. The acupuncture needle had migrated to the right kidney by computed tomography (CT) scan (see video). Three-dimensional reconstruction of CT showed the thermometer in bladder and the acupuncture needle in right kidney area (see video).

CONCLUSIONS: Microperc is a technically feasible, safe and efficacious modality in treating renal calculi in the pediatric population.

SOURCE OF FUNDING: None

VP05-10 ULTRASOUND GUIDED PCNL LEADS TO BETTER STONE FREE RATES AND DECREASED NEED FOR RE-INTERVENTION

Foo Cheong Ng1, Sey Kiat Lim1, Wai Loon Yam1

INTRODUCTION AND OBJECTIVES: To compare the operative and post-operative outcomes and complication rates of ultrasound-guided versus conventional fluoroscopy-guided percutaneous nephrolithotomy (PCNL).

METHODS: A total of 156 consecutive patients who underwent PCNL from July 2008 to September 2013 were identified from our PCNL database. 53 patients underwent ultrasound-guided PCNL (US-PCNL) and 103 fluoroscopy-guided PCNL (F-PCNL).

RESULTS: The patients were similar in age, gender, race and ASA score. There was no statistical significance in the mean largest stone diameters, side of PCNL, number of stones and the degree of hydronephrosis between both groups. There were higher rates of upper pole (7.6% vs 3.9%), mid pole (11.2% vs 1.9%) and multiple pole puncture (3.8% vs 0%) in US-PCNL compared to F-PCNL (p=0.008). Although US-PCNL had a statistically insignificant better stone free rate (49.1%) compared to F-PCNL (36.9%) (p=0.159), US-PCNL required less secondary procedures (19.9%) vs F-PCNL (38.8%) (p=0.029). On multivariate analysis, the need for secondary procedures (p=0.045) and a shorter mean length of hospitalization (p=0.020) remained statistically significant, favouring US-PCNL. There were no significant differences in blood loss and complication rates between the two groups.

CONCLUSIONS: US-PCNL is a safe and effective approach leading to possibly better stone-free rates and reduced need for re-intervention when compared to F-PCNL. With more structured training and data from prospective studies, ultrasonography may one day replace fluoroscopy in PCNL in the near future.

SOURCE OF FUNDING: None
CONCLUSIONS: Travel through the whole urinary tract without causing significant injuries is surprising and still need explained. We concluded that the technique of percutaneous nephroscopy greatly facilitate removing the foreign bodies in kidney.

SOURCE OF FUNDING: None

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**VP06 ROBOTIC SURGERY UPPER TRACT 1**

**VP06-01 ROBOT ASSISTED URETERAL RECONSTRUCTION IN 3 PATIENTS**

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INTRODUCTION AND OBJECTIVES: Robot-assisted surgery has been commonly used as a minimally invasive approach for reconstructive urinary tract procedures in the last decade. In this video, 3 reconstructive ureteral procedures (2 ureteroneocystostomy and 1 ureteroureterostomy) are presented.

METHODS: First patient is a 48-year-old woman who had thermal injury of right distal ureter during robotic hysterectomy. Psosas hitch and ureteroneocystostomy was performed by using extravesical Lich-Gregoir technique. Second patient is a 74-year-old man who had left distal ureteral stricture occurred as a result of transurethral resection of bladder tumor around the ureteric orifice. Following unsuccessful ureteral catheterization, robot-assisted ureteroneocystostomy was performed. Last patient is a 70-year-old woman who had right ureteral ligature during open hysterectomy. The ureter was isolated proximally and distally. It was obstructed by a metallic clip at the level of the iliac bifurcation. The clip was removed, the obstructed segment was resected and robot-assisted ureteroureterostomy was performed. Double J ureteral stent was placed for 4 weeks in all patients.

RESULTS: Postoperative period was uneventful in all 3 patients. None of them required blood transfusion. Intravenous pyelogram and diuretic renogram revealed no obstruction and well-functioning kidneys in all patients.

CONCLUSIONS: Robot-assisted ureteral reconstruction is a safe and effective method. Recognition of ureteral injury during any robotic surgery allows early reconstruction with the advantage of vision on the console and robotic instruments.

SOURCE OF FUNDING: None

**VP06-02 TROUBLESHOOTING ROBOT-ASSISTED RADICAL NEPHRECTOMY WITH A LEVEL I VENA CAVAL TUMOR THROMBECTOMY: CONFIRMING VASCULAR CONTROL PREVENTS COMPLICATIONS**

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INTRODUCTION AND OBJECTIVES: Robot-assisted radical nephrectomy (RARN) with vena caval tumor thrombectomy is a safe and effective treatment for renal cancer with inferior vena caval (IVC) tumor thrombus. We present a case where ensuring complete vascular control prior to thrombectomy prevented complications.

METHODS: A 79-year-old man presented with abdominal pain, and on CT scan was found to have a 6.9 cm mass in his right kidney. MRI demonstrated the tumor extending through the renal vein and into the vena cava (Level I). Upon cross-clamping the suprarenal and infrarenal IVC as well as the left renal vein, distension of the vena cava segment was noted. Contributory factors were either a missed lumbar vein or renal artery. Further dissection determined that the renal artery had an early branch point, and only one branch had been controlled. After clamping the right renal artery at the ostia, distension was no longer noted and thrombectomy was safely performed.

RESULTS: Estimated blood loss was 400 mL. The patient was discharged after an unremarkable hospital course on post-operative day 3.

CONCLUSIONS: RARN with vena caval tumor thrombectomy for the appropriate patient can be done safely and effectively. By confirming complete vascular control prior to cavotomy, complications can be avoided.

SOURCE OF FUNDING: None

**VP06-03 COMPLEX ROBOTIC PARTIAL NEPHRECTOMY FOR HILAR MASSES**

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INTRODUCTION AND OBJECTIVES: Robotic partial nephrectomy is performed increasingly for complex renal masses. We present technique of addressing a right posterior hilar renal mass abutting the collecting system, as well as the renal hilum. Our objective was to demonstrate our technique for dissection and extirpation of a hilar mass using the robotic-assisted laparoscopic approach.

METHODS: The patient was diagnosed with a three centimeter posterior hilar mass found incidentally on a computerized tomography scan. The RENAL nephrometry score for the mass was 9h, demonstrating the significantly complex nature of the lesion. The video demonstrates our technique used to dissect the mass from the hilum and safely reconstruct the kidney without inadvertent injury to the adjacent structures.

RESULTS: Following dissection of the renal artery and vein, the kidney is mobilized in its entirety to align the posterior hilar mass to optimize reconstruction. Dissection into the renal sinus is
performed off clamp. In our experience with hilar lesions, only the renal artery is clamped while the renal vein remains open throughout the procedure. Reconstruction of the kidney is performed with care not to obstruct the renal pelvis postoperatively. **CONCLUSIONS:** Robotic-assisted laparoscopic partial nephrectomy is a safe and feasible option for the treatment of complex renal masses including hilar tumors. **SOURCE OF FUNDING:** None

**VP06-04 UTILTY OF INDOCYANINE GREEN IN ROBOTIC PARTIAL NEPHRECTOMY WITH SELECTIVE ARTERIAL CLAMPING**

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**INTRODUCTION AND OBJECTIVES:** Recent studies show that robotic partial nephrectomy using selective arterial clamping, in combination with near-infrared fluorescence imaging (NIRF) and indocyanine green dye (ICG), is a safe approach for resecting renal tumors. Our objective is to illustrate that this technique does not allow for visualization of renal vasculature that is not at the surface of the kidney.

**METHODS:** We used CT imaging to select two patients who were candidates for selective arterial clamping by identifying accessory renal arteries supplying the specific tumor territories. These accessory renal arteries in both cases were isolated and clamped, while the hilum was left unclamped to perfuse the remaining renal parenchyma. ICG was administered intravenously and NIRF was used to visualize the renal vasculature. The tumors, once confirmed to be in the avascular territory, were resected. Both cases were performed with robotic assistance.

**RESULTS:** Both cases were performed without complications. Blood losses in the first and second cases were 100 and 200 mL, respectively. Selective warm ischemia times for the first and second cases were 15 and 14 minutes, respectively. More bleeding occurred in the second case, but conversion to hilar clamping was not needed.

**CONCLUSIONS:** We conclude that robotic partial nephrectomy with selective arterial clamping, when used with near-infrared fluorescence imaging and indocyanine green, can be a safe approach to resecting renal masses if the patient’s vascular anatomy is favorable. A major drawback is that those vessels not at the surface of the kidney cannot be visualized with this technique and may result in excess bleeding during tumor excision. **SOURCE OF FUNDING:** None

**VP06-05 CONCURRENT ROBOTIC URETERAL RE-IMPLANT AND BUCCAL MUCOSA GRAFT URETEROPLASTY: A NOVEL TECHNIQUE FOR RECONSTRUCTION OF MULTIPLE URETERAL STRICTURES**

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**INTRODUCTION AND OBJECTIVES:** Management of two sites of obstruction in the ureter is a challenging problem. Transsection of the ureter at two locations would likely result in ischemia of the segment in the middle. Robotic buccal mucosa graft ureteroplasty is a minimally invasive option that allows for reconstruction of ureteral strictures without transection of the ureter.

**METHODS:** The patient is a 65-year-old male who presented with two iatrogenic ureteral strictures (a 2 cm distal stricture and a 1 cm proximal stricture). Endoscopic management was unsuccessful for the treatment of these strictures. Ureteral reimplant was first performed to treat the distal stricture. Intraoperative ureteroscopy was performed to identify the location of the proximal stricture. The ureter was incised lengthwise to open the strictured segment, and ureteroplasty was performed by placement of buccal mucosa graft as an onlay. Flaps of perirenal fat were used to provide backing for the graft.

**RESULTS:** The patient was discharged on post-op day 2. The stent was removed 6 weeks after surgery. Renal scan 2 months after stent removal demonstrated recovery of renal function, and no evidence of obstruction. At 8 months follow-up, the patient was doing well, and had no hydronephrosis on ultrasound.

**CONCLUSIONS:** Robotic buccal mucosa graft ureteroplasty is a novel option for reconstruction of multiple ureteral strictures. **SOURCE OF FUNDING:** None

**VP06-06 ROBOT-ASSISTED LAPAROSCOPIC EXCISION OF UNCOMMON RETROPERITONEAL MASSES**

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**INTRODUCTION AND OBJECTIVES:** As an expert of the kidney and adrenal gland, the urologist may be consulted for management of perirenal retroperitoneal masses. We present our experience with two uncommon retroperitoneal masses that were managed with robot-assisted laparoscopic excision.

**METHODS:** Both of our patients presented with incidentally discovered, asymptomatic, solid left perirenal masses on CT imaging and opted for robot-assisted laparoscopic excision. In both cases, trocar configuration was similar to that for robot-assisted left partial nephrectomy. Laparoscopic ultrasonography facilitated the identification of tumor margins.

**RESULTS:** In our first case, operative time was 3 hours with an estimated blood loss of 50 mL. The patient was discharged on post-operative day 1. Gross and histopathology was consistent with a 5.5 cm benign renal leiomyoma that was continuous with the renal capsule, but without invasion into the renal parenchyma. In our second case, operative time was 150 minutes and estimated blood loss was 50 mL. The patient was discharged on post-operative day 4. Final pathology revealed a 5.5 cm, pT3, grade 1 gastrointestinal stromal tumor arising from the fourth part of the duodenum. Surgical margins were negative.

**CONCLUSIONS:** Urologists are well suited to clinically address and manage retroperitoneal tumors due to our extensive familiarity of the retroperitoneal structures and anatomy. Although not appropriate for all cases, robot-assisted excision may be offered if percutaneous diagnostic biopsy is not feasible or safe. Depending on the pathology, further consultation with other medical or surgical disciplines may be necessary to optimize patient outcomes through a multidisciplinary approach. **SOURCE OF FUNDING:** None

**VP06-07 ZERO-ISCHEMIA ROBOT ASSISTED PARTIAL NEPHRECTOMY FOR HIGH NEPHROMETRY SCORE TUMOR**

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**INTRODUCTION AND OBJECTIVES:** Robotic-assisted partial nephrectomy (RAN) for high nephrometry score tumor is becoming one of the most popular techniques in contemporary urology. Robotic-assisted partial nephrectomies are becoming more popular because of the unique features offered by this technology. In this paper, we present our recent experience with 13 robot-assisted partial nephrectomies for high nephrometry score tumors.
INTRODUCTION AND OBJECTIVES: Zero ischemia robotic partial nephrectomy (PN) is considered a challenging procedure. We present here a video to explore the feasibility of off-clamp PN in high nephrometry score renal masses.

METHODS: A 40 years old woman was admitted to our department for a 6 cm right renal tumor predominantly endophytic. Padova Nephrometry score was 12. ASA score was 2. Preoperative sCreatinine was 0.87, preoperative eGFR was 77. The patient underwent robotic PN without hilar clamping. A transperitoneal approach was used. The right kidney was isolated and flipped in order to allow circumferential exposure of the tumor. A cuff of fatty tissue was preserved to facilitate exposure of the mass during resection. Renal parenchyma was incised and a dissection plane between healthy renal parenchyma and the tumor was found. Bleeding threatening surgical field was acceptable and good visualization was achieved after mild suction. During dissection specific vascular branches supplying the tumor were identified and treated with electrocautery without any need of clip ligation. A point specific hemostasis was performed and defined areas of bleeding were identified and sutured.

RESULTS: The procedure was successfully completed. Operative time was 120 minutes. Estimated blood loss was 300 cc. No intraoperative and postoperative transfusions were necessary. The patient was discharged 3 days after surgery. sCreatinine and eGFR at discharge were 1 mg/dl and 67 ml/min, respectively.

CONCLUSIONS: Off-clamp PN in high nephrometry score renal masses is feasible in expert hands. Further studies are necessary to evaluate the easy reproducibility of this procedure.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Refinements in the surgical technique of robot-assisted partial nephrectomy (RAPN) continue to be made to facilitate the procedure and improve perioperative outcomes. We describe our modification of the sliding clip renorrhaphy and report our outcomes.

METHODS: Between September 2010 and May 2013, 83 patients underwent RAPN by a single surgeon (DDE). Our renorrhaphy involves a two-layer kidney closure using a double armed barbed suture. The inner layer is closed with a running 6 inch 3-0 V-Loc suture. The bulldog clamp is removed prior to closing the outer layer. The outer layer is closed with a running horizontal mattress suture using a 12 inch 0 V-Loc suture.

RESULTS: Mean patient age was 62 years (range 29–86), BMI was 30.8 kg/m² (range 19.7–61.7), pathologic tumor size was 3.88 cm (range 0.9–15), RENAL Nephrometry score was 8.1 (range 4–11). Mean operative time was 120 min (range 52–229), warm ischemia time was 20.3 min (range 9–45), EBL was 163 mL (range 25–600), and length of stay was 1.5 days (range 1–8). There was one positive surgical margin. There was one intraoperative complication in which an upper pole segmental artery was lacerated and successfully repaired, and 3 postoperative complications of Clavien grade ≥2.

CONCLUSIONS: We believe that our technique facilitates renorrhaphy during RAPN as it is compatible with early vessel unclamping, allows for the ability to go back and place additional outer layer stitches using existing suture, and requires only two needles.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Robot-assisted partial nephrectomy for hilar tumors is relatively difficult because the tumor is close to the large vessels or collecting system, and also there is no or limited residual parenchyma for renorrhaphy. We expanded our institutional indications for RAPN into hilar tumors and confirmed its usefulness.

METHODS: 8 cases of RAPN for hilar tumors were performed at Kobe university hospital from June 2011 to November 2013. Perioperative outcomes were analyzed and videos for representative 3 cases will be presented.

RESULTS: 5 intraperitoneal and 3 retroperitoneal approach was used. Selective clamping of the renal artery was performed for 4 cases. Estimated blood loss was small in all cases and no transfusion was required. Mean warm ischemic time was 24.6 minutes. No surgical margins or complications was observed.

CONCLUSIONS: Robot-assisted partial nephrectomy for hilar tumors was safe and feasible.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Calyceal diverticula are rare, likely congenital outpouchings of the collecting system, often containing calculi. Management includes shockwave lithotripsy, ureteroscopy, percutaneous nephrolithotomy and minimally invasive or open surgery. When possible, minimally invasive surgery provides the potential benefit of decreased postoperative pain, quicker convalescence and improved cosmesis. We describe a patient who failed ureteroscopic management of his calyceal diverticulum. He opted for robotic surgical management. Robotic surgery has previously been described via a transperitoneal approach (Driscoll 2007). Laparoscopic surgery via a retroperitoneal approach has been described by multiple authors (Harewood 1996, Wyler 2005, others). To our knowledge, this is the first description of a retroperitoneal robotic-assisted laparoscopic calyceal diverticular ablation.

METHODS: A 47 year old male with recurrent flank pain was found to have a posterior right upper pole calyceal diverticulum containing a 1.1 cm calculus. Retroperitoneal access was obtained (see Gaur 1992). After docking and initial dissection, intraoperative ultrasound was used. The renal artery was clamped. The diverticulum was entered and the calculus extracted. The diverticulum was ablated with electrocautery and packed with
Surgical adrenalec-

tomy has been shown to improve survival in a variety of primary tumors with metastasis to the adrenal gland. We present a 57 year old woman with a 1.8 cm pulmonary lesion in the right upper lobe and a 5.4 × 3.2 cm mass in the right adrenal gland with retroperitoneal extension. Our objective is to assess the efficacy of performing a robotic assisted right adrenalectomy and retroperitoneal lymph node dissection in a patient with metastatic disease in the right adrenal gland.

METHODS: The operative video illustrates the integral steps of performing a right adrenalectomy and retroperitoneal lymph node dissection with robotic assistance. It shows how the adrenal mass is dissected from the liver, inferior vena cava, and renal structures in addition to circumferential dissection and mobilization of the inferior vena cava to permit paracaval and interaortocaval lymph node dissection.

RESULTS: Surgical time was 212 minutes and blood loss was 20 ml. The right adrenal mass with interaortocaval and paracaval lymph nodes was removed with no perioperative or postoperative complications. The adrenal mass was confirmed to be a metastatic carcinoma, however immunohistochemistry was indeterminate for the primary cancer origin. Seventeen interaortocaval and paracaval lymph nodes and three lymph nodes near the adrenal mass were all negative for malignancy.

CONCLUSIONS: Surgical adrenalectomy in patients with metastasis to the adrenal gland may help to improve survival. Robotic assisted adrenalectomy and retroperitoneal lymph node dissection for metastatic disease to the adrenal gland can be safely performed.

SOURCE OF FUNDING: None

VP06-11 ROBOTIC ASSISTED ADRENALECTOMY AND RETROPERITONEAL LYMPH NODE DISSECTION FOR METASTATIC LUNG CANCER

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INTRODUCTION AND OBJECTIVES: Surgical adrenalectomy has been shown to improve survival in a variety of primary tumors with metastasis to the adrenal gland. Seventeen interaortocaval and paracaval lymph nodes were removed with no perioperative or postoperative complications. The adrenal mass was confirmed to be a metastatic carcinoma, however immunohistochemistry was indeterminate for the primary cancer origin. Seventeen interaortocaval and paracaval lymph nodes and three lymph nodes near the adrenal mass were all negative for malignancy.

CONCLUSIONS: Surgical adrenalectomy in patients with metastasis to the adrenal gland may help to improve survival. Robotic assisted adrenalectomy and retroperitoneal lymph node dissection for metastatic disease to the adrenal gland can be safely performed.

SOURCE OF FUNDING: None

VP06-12 ROBOTIC-ASSISTED LAPAROSCOPIC RECONSTRUCTIVE SURGERY IN BILATERAL URETEROPELVIC JUNCTION OBSTRUCTION

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INTRODUCTION AND OBJECTIVES: Bilateral ureteropelvic junction obstruction is rare. We presented a robotic-assisted laparoscopic reconstructive surgery for this patient. Post-operation follow-up disclosed improvement of hydronephrosis and renal function.

METHODS: A 28-year-old man was diagnosed to have bilateral ureteropelvic junction obstruction with obstructive uropathy two years ago. Progressive flank pain with renal function deterioration developed recently. He then received bilateral Robotic-assisted laparoscopic pyeloplasty. Bilateral hydropelvis, suspect UPJO related and one lower pole renal artery crossed the right upper third ureter anteriorly was noted during the procedure. The operation time, from ducking to undocking time was 120 min (left), 180 min (right). Estimate blood loss was 60 ml. Totally 7 trocars (12-mmX3, 8-mmX4) were used.

RESULTS: The patient recovered smoothly and double-J stents were removed two months later. Post-operation follow-up disclosed improvement of renal function and resolution of hydronephrosis. Surgical wound pain was mild.

CONCLUSIONS: We conclude the robotic-assisted laparoscopic reconstructive surgery in bilateral ureteropelvic junction obstruction is effective and minimally invasive.

SOURCE OF FUNDING: None

VP07 ENDOUROLOGY 1

VP07-01 ROBOTIC FLEXIBLE URETEROSCOPY, SAFETY, EFFECTIVITY AND EARLY RESULTS OF A NEW CONCEPT

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INTRODUCTION AND OBJECTIVES: Despite the progress in the design of the ureterorenoscopes and accessories for Flexible Ureterorenoscopy (FURS), the surgeon has to perform this procedure with a suboptimal ergonomy. We aimed to search the safety and effectivity of the Roboflex for FURS, including the ergonomics and clinical results.

METHODS: Roboflex Avcinna (ELMED, Ankara, Turkey) can remotely controls all functions of the FURS. In addition it is possible to control the laser fiber. Deflection control is more
precise than manual. We aimed to use this robotic manipulator precisely dust the stone, while sitting on an ergonomic chair, out of the radiation zone, to protect the device and to treat larger kidney stones. We treated eighty one kidney stones by seven different urologists and recorded the time for docking, fragmentation and stone free rate. We used a validated questionnaire for ergonomics.

RESULTS: Mean time to dock the robot was 59.6 seconds. Mean fragmentation time was 46 minutes. Complete stone disintegration was accomplished in 79 patients (96%). Based on plain-X-ray and ultrasound evaluation, after 3 months 65 patients (80%) were stone-free, whereas 16 (20%) showed clinically insignificant residual fragments (<3 mm). Based on a questionnaire, we found a significant difference when comparing the ergonomics of classical versus robot-assisted flexible ureteroscopy.

CONCLUSIONS: The Avicenna Roboflex, provides a suitable platform for FURS with significant improvement of ergonomics. We could demonstrate safe and efficacious application of the device with a short learning curve by seven experienced endourologists. Future studies have to evaluate the impact of the device on clinical outcome of FURS.

SOURCE OF FUNDING: None

VP07-02 REMOVAL OF HEAVILY ENCRUSTED RETAINED DOUBLE J STENT WITH CONTRALATERAL KIDNEY STONES CAUSING ACUTE RENAL FAILURE
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INTRODUCTION AND OBJECTIVES: Retained ureteral stents may cause a heavy stone burden which requires complex procedures. We present combined endoscopic removal of retained ureteral stent for 4 years which have caused a large kidney, ureter and bladder stones.

METHODS: The patient admitted to emergency department with acute renal failure. Hemodialysis and bilateral percutaneous nephrostomy tube placement were performed. Computed tomography revealed 4 cm bladder stone surrounding the bladder part of the stent. Distal ureteral part of the stent was also encrusted. Proximal kidney part of the stent was heavily encrusted and surrounded by a 4 cm stone. There were 5–6 stones in the right kidney. They were 1 cm in diameter and one was obstructing ureteropelvic junction. In the first session the bladder stone and distal ureteral part of the encrusted stent were treated with holmium laser lithotripsy. In the second session, proximal part of the encrusted stent was pushed back into the kidney and percutaneous lithotripsy was performed. The contralateral kidney was treated by retrograde intrarenal surgery two weeks later.

RESULTS: Postoperatively <2 mm fragments were present in both kidneys. The stone composition was uric acid. Potassium citrate treatment was prescribed for urine alkalinization. Following first session, the patient had neuropathy of lower extremities which resolved completely in 2 months. The final creatinine level was 1.36 mg/dl and estimated GFR was 57 ml/min.

CONCLUSIONS: Retained ureteral stents causing a heavy stone burden may be successfully treated with various endoscopic approaches. The treatment of a large proximal stone may require more than one session.

SOURCE OF FUNDING: None

VP07-03 REMOVAL OF STONE ENCRUSTATED DOUBLE J STENT IN A SOLITARY KIDNEY WITH THE HELP OF URETERORENOSCOPY AND FLUOROSCOPIC GUIDANCE
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INTRODUCTION AND OBJECTIVES: We present a case of a forgotten DJ stent that was implanted for 1 year in a solitary kidney.

METHODS: Encrustation is a well-established complication of retained biomaterials in the urinary tract. Severe stent encrustation is a potentially serious complication of prolonged indwelling ureteral stenting often managed with open surgery when endoscopic techniques are unsuccessful. In the present case, a 40-year-old woman was admitted to our inpatient clinics with initial complaints of dysuria and flank pain. Her history revealed that she had been performed ureterorenoscopy for the removal of ureteral stone and placed double-J stent 1 year ago. After subsequent evaluations, previously forgotten stent has been determined to be the cause of complaints of the patient. We present a case of a stent encrustation managed with flexible ureterorenoscopy.

RESULTS: Operative time was 45 minutes and she was discharged from the hospital at second day.

CONCLUSIONS: Source of funding: double j stent, encrustation, fragmentation

VP07-04 DOES URETERIC CURVE MATTER?
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INTRODUCTION AND OBJECTIVES: Stones in anomalous kidneys are challenging to treat and endourologist should have few tricks up his sleeve. We describe one such case.

METHODS: A 63 year old obese diabetic and hypertensive had open pyelolithotomy six years ago. He presented with right loin pain of one month duration. Ultrasound and IVU showed 20 mm radiolucent stone in the pelvis of the right presacral kidney. Since patient choice was minimally invasive procedure, RIRS was planned. Semi rigid ureteroscope could not be passed beyond the lower third of ureter. Retrograde pyelogram revealed a tortuous mid ureter not evident in the preoperative IVU. Inspite of two guide wires one of which was fairly rigid ureter could not be straightened. Use of access sheath to straighten the curve also failed. Flexible ureteroscope was passed over a guide wire across this tortuous ureter but unable to see the stone in the pelvis due to difficulty in manipulating the distal tip. Indwelling DJ stent was placed. After discussion, laparoscopy assisted miniperc was done and stones were completely cleared. Procedure was continuously monitored under laparoscopic guidance and the whole procedure is shown in this video.

RESULTS: Follow up with plain CT at one month showed no residual fragments.

CONCLUSIONS: Curvaceous ureter always pose challenge to endourologists. Despite advances in flexible scopes we may have to resort to more invasive methods and at times have to club two techniques to clear the stones.

SOURCE OF FUNDING: None
ENDORSEMENT OF KERATINIZING SQUAMOUS METAPLASIA OF THE BLADDER WITH URETERAL OBSTRUCTION

INTRODUCTION AND OBJECTIVES: Keratinizing squamous metaplasia (KSM) of the urothelium is uncommon and affects the bladder more frequently than the upper urinary tract. The etiology is unknown but believed to be secondary to chronic infection and inflammation. The ureteral orifices are usually spared and ureteral obstruction has only rarely been documented. We describe the management of KSM of the bladder with ureteral involvement and recurrent obstruction.

METHODS: Between 1994 and 2013, one man and two women with a mean age of 62 years were treated at our institution with pathologically confirmed keratinizing squamous metaplasia of the bladder. Two of the patients carried a diagnosis of interstitial cystitis and recurrent urinary tract infections (UTI), while the third had a remote history of carcinoma in situ previously managed with intravesical chemo- and immunotherapy. All patients were surveilled with annual cystoscopy.

RESULTS: The mean followup was six years, and no patient developed urothelial malignancy during followup. Bladder lesions were treated transurethrally. In a single patient, lesions involved the right ureteral orifice and distal ureter causing recurrent obstruction, flank pain and renal compromise. After failing treatment with intermittent single ureteral stenting, the patient was managed ureteroscopically with extraction of keratinized slough, ureteral meatotomy and tandem indwelling ureteral stenting with resolution of symptoms and normalization of renal function. A single UTI was noted after tandem ureteral stenting.

CONCLUSIONS: Symptomatic KSM of the bladder and ureter can be effectively managed endoscopically. Associated ureteral obstruction can be safely treated with ureteroscopy, ureteral meatotomy and tandem ureteral stenting.

SOURCE OF FUNDING: None

THE APPLICATION OF NANosecond ElecTropULe LithoTRIPSY in the Management of complex ForMs of nephrolithiasIs

INTRODUCTION AND OBJECTIVES: Several seconds later, a large polypoid lesion extruded from the right ureteral orifice. The lesion extended 3 centimeters into the bladder, and retracted into the ureter with each peristaltic ureteral wave. The remainder of the bladder was normal.

CONCLUSIONS: Holmium laser is useful in excising the mass, and can be part of a successful endourologic approach to fibroepithelial polyps in the ureter.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: Endoscopic methods have gradually taken the lead in the treatment of urolithiasis, including its most complex forms (large, multiple and staghorn stones). However, despite the development of these techniques, removal of stones in complicated cases still remains a challenge. This work presents results of contact retrograde transurethral lithotripsy using the innovative nanosecond electropulse lithotripter (NEPL) under complex forms of nephroureterolithiasis.

METHODS: The study was performed on 65 patients having large pelvis, partial and full staghorn renal stones. Stone fragmentation was performed using the NEPL device. Minor laser radiation was occasionally applied preliminarily to the stone surface. Stone size varied from 25 to 70 mm with a density 960–1700 HU. The procedures were completed with placement of a stent (up to 4 weeks) and ureteral catheter (2–3 days) for kidney drainage. Control examinations of patients were carried out during the month.

RESULTS: The average operation time was 118 ± 21 min. The primary treatment was effective in 49 cases (76%). Repeat treatment associated with a residual fragment size greater than 4 mm and localized branching of staghorn calculi into difficult to access parts of the kidney was required for 16 patients. We did not observe serious intraoperative complications other than development of acute pyelonephritis in 6 patients, which was treated conservatively.

CONCLUSIONS: The usage of the NEPL device for retrograde transurethral access in intrarenal surgery for treatment of complex nephrolithiasis is a promising and effective method that allows significant success to be achieved during the relatively short primary procedure.

SOURCE OF FUNDING: None

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**VP07-09 THE SAFETY AND EFFICACY OF RETROGRADE INTRARENAL SURGERY IN THE TREATMENT OF “AVIATION PILOT RENAL STONES”**

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INTRODUCTION AND OBJECTIVES: To investigate the efficacy and feasibility of retrograde intrarenal surgery (RIRS) in the treatment of “Aviation pilot renal stones”.

METHODS: 32 cases (34 sides) of “Aviation pilot renal stones” were treated with RIRS and PCNL during 2010 and 2013. 16 cases of right and 18 cases left. 16 cases of single stone and 18 cases of multi stones. Patients are all male, with average age of 25.2 years old (Range from 19 to 44). Maximum diameter was 5 mm (Range from 3 mm to 11 mm). Ureteral stent was placed one week before surgery. Operations were performed under electron microscopy (STORZE) or percutaneous nephrolithotripsy (PCNL). Ureteral stent was placed one week before surgery. The safety, stone clearance rate and perioperative parameters were evaluated.

RESULTS: Patients were all underwent RIRS successfully except 2 cases of PCNL (multiple and complex stones). Mean operative time was 56 mins (Range from 30 to 135 mins). Postoperative hospital stay were 2.8 days (Range from 1 to 10 days). 29 cases received one stage operation and 3 cases needed two-stage surgery. PCNL was performed in two patients finally. Postoperative computed tomography was implemented. Residual stones were found in 3 patients when discharged from hospital. 2 cases were disappeared after 2 months of following-up. The general stone-free rate was 97%, and the rate of RIRS was 94%.

CONCLUSIONS: Retrograde intrarenal lithotomy for “Aviation pilot renal stones” is safe and efficacy. This technique can be used as the first therapy to due with this kind of stones in most cases.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: Hyperplasia (BPH) is a common condition affecting more than half of men by age of 60 years. Between modern minimal invasive procedures for BPH, GreenLight Vaporization and Holmium Laser Enucleation became the most widely use. Our objective was to show a combining enucleation/vaporization techniques using 180W XPS GreenLight.

METHODS: We present a video with a 68 years old patient with BPH (prostate 87 g.) in who we performed a combining enucleation/vaporization techniques using 180 W XPS GreenLight.

RESULTS: A 68-year-old man presented some challenges in the passage to the proximal saculation. The procedure presented some challenges in the passage to the proximal saculation of the neobladder, due to difficult communication and difficult angulation. The careful remotion of both calculus was atraumatic to the uretra. No postoperative complications were observed. The use of a 16 Fr flexible cystoscope with the aid of a Dormia basket, inserted through the urethra into the orthotopic neobladder, enabled mobilization and safe evacuation of both calculus. The procedure proved to be the best method of treatment.

CONCLUSIONS: The endoscopic technique described enabled avoidance of a more invasive surgical treatment and allowed for rapid return of the patient to complete health. In our experience proved to be the best method of treatment.

SOURCE OF FUNDING: None
RESULTS: A combining enucleation/vaporization techniques using a 180 W XPS GreenLight was feasible and performed without complications. The main steps of the procedure are shown in the video.

CONCLUSIONS: Combining enucleation/vaporization techniques using a 180 W XPS GreenLight was feasible and useful without complication in a patient with a large prostate gland.

SOURCE OF FUNDING: None

VP08-02 BIPOLAR ENucleATION OF PROSTATE versus LASER ENucleATION for BENIGN PROSTATE HYPERPLASIA: A SINGLE SURGEON RETROSPECTIVE COHORT STUDY

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INTRODUCTION AND OBJECTIVES: Laser enucleation for benign prostate hyperplasia (BPH) is a safer procedure with better postoperative outcome than traditional transurethral resection. However, the price is not attractive and it takes longer operation time. We report another feasible option, transurethral enucleation with bipolar (TUEB), for management of BPH.

METHODS: Between September 2013 and March 2014, forty-one patients with BPH underwent surgical intervention by a single surgeon in this institute were retrospectively reviewed. The procedures with bipolar or laser submitted to patients' choices. The operative processes were identical in both groups. The pre-operative and post-operative measures were collected via medical records.

RESULTS: Procedures with TUEB and laser enucleation were 20 and 21 cases, respectively. Pre-operative mean prostate volumes were 59.01 ± 21.81 ml in TUEB and 53.31 ± 16.22 ml in laser enucleation group. The mean age was slightly older in TUEB group (73.3 ± 10.9 versus 67.71 ± 9.9, p = 0.23). There were no statistically significance in operation time (103.6 ± 54.6 min versus 97.1 ± 35.6 min, p = 0.93), resection weight (17.16 ± 11.6 gm versus 18.23 ± 9.9 gm, p = 0.57), and the velocity of resection (0.19 ± 0.1 gm/min versus 0.20 ± 0.1 gm/min, p = 0.81). There is no significant bleeding complication in all patients. Catheterization duration was without statistical difference. Hospitalization duration is shorter in the laser enucleation group. (TUEB versus laser enucleation, 3.6 ± 1.32 days versus 2.5 ± 1.21 days, p = 0.001).

CONCLUSIONS: TUEB for BPH is a feasible procedure, and is not inferior to laser enucleation in efficacy and safety.

SOURCE OF FUNDING: None

METHODS: From May 2012 to May 2014, 61 male patients underwent thulium laser vapo-resection of the prostate. The following parameters were prospectively collected pre-operatively and at post-operative 3, 6 and 12 months intervals: international prostate symptom score (IPSS), quality of life (QoL) scores, uroflowmetry and transrectal ultrasonographic prostate size (TRUS).

RESULTS: The mean age of our patient cohort was 75 years (range 64–94). The indications for operation were: refractory retention of urine (49.2%); hematuria secondary to BPH (31.1%); emergency uncontrolled bleeding BPH (8.2%). The mean drop in serum hemoglobin level was 0.5 (+/- 1.4) g/dL. The mean change in serum sodium level was 0.2 (+/- 3.0) mmol/L. The mean pre-operative and 6-month post-operative transrectal ultrasonographic prostate sizes were 107.1 cc and 56.0 cc respectively (p = 0.00). The mean pre-operative and 1-year post-operative IPSS were 23.3 and 7.9 respectively (p = 0.027). The mean pre-operative and 1-year post-operative QoL scores were 4.3 and 1.6 respectively (p = 0.046). All of our patients who had refractory retention of urine before the operation were rendered catheter-free. For those who could void before the operation, the mean pre-operative and 1-year post-operative maximal flow rates were 7.1 ml/sec and 11.8 ml/sec respectively (p = 0.031). None of our patients required secondary procedure due to post-operative bleeding.

CONCLUSIONS: Thulium laser vapo-resection of the prostate was a demonstrably safe and effective option for patients with large-volume prostate.

SOURCE OF FUNDING: None

VP08-04 HOLEP: “EN BLOC” ENucleATION OF PROSTATIC ADENOMA. HOW WE DO IT

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INTRODUCTION AND OBJECTIVES: HoLEP technique has been described by P. Gilling in 1998. The video shows we can improve the technique modifying the original steps.

METHODS: A single longitudinal incision of the prostate at 5 or 7 starting from the bladder neck to the veru montanum that reaches the posterior prosthetic capsule. The apex of the adenoma is isolated at the side of the incision and the ipsilateral lobe is isolated. Dissected the bridge of tissue above the veru montanum we elevate the middle lobe and the contralateral lobe of the prostate. The entire adenoma is isolated anteriorly combining the two cleavage planes. Bladder neck is opened laterally leaving an anterior small bridge as a support. Anterior mucosa of the prosthetic apex is sectioned away from the external urethral sphincter and, cutted the bridge of bladder neck we left, the prostate “en bloc” can be pushed into the bladder.

RESULTS: We used this technique in 180 consecutive cases with clinical results comparable to previous series of 345 with an improvement (14 Pts 7,7% versus 51 Pts 14,7%) in post-operative temporary SUI (=/> 1 pad/day). Surgical time was reduced (~15% approximately). The technique seems easier to learn because the cleavage plane must be achieved only once.

CONCLUSIONS: The modification of the original HoLEP technique we propose is safer thanks to lower use of laser energy...
near the external urethral sphincter and easier to perform. Furthermore it can reduce the learning curve and surgical time.

**SOURCE OF FUNDING:** None

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**VP08-05 LASER-ASSISTED BIPOLAR TRANSURETHRAL RESECTION OF THE PROSTATE FOR PATIENTS WITH LARGE PROSTATE**

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**INTRODUCTION AND OBJECTIVES:** To evaluate the safety and efficacy of diode laser-assisted bipolar transurethral resection of the prostate (TURP) with an oyster procedure for large prostate glands (>80 mL).

**METHODS:** A total of 43 men who presented with lower urinary tract symptoms because of large prostate (>80 mL) obstruction were enrolled in our study. All of these patients underwent the oyster procedure. Measurements included the urinary flow rate, symptom score, duration of catheterization, length of hospital stay, and urinary flow rate. All patients were re-examined 3, 6, and 12 months after surgery.

**RESULTS:** The patients who underwent oyster procedures experienced good and durable subjective and functional outcomes for 1 year. Small changes in hemoglobin were noted, and no patients needed blood transfusions. No cases of TURP syndrome were noted. Bladder neck contracture was noted in 2 patients (Clavien-Dindo grade III) because of subtrigonal injury during prostate enucleation, and the other complications were minor (Clavien-Dindo grade I to II).

**CONCLUSIONS:** The oyster procedure is a safe and effective procedure for large prostates (>80 mL).

**SOURCE OF FUNDING:** None

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**VP08-06 SIMPLIFIED TWO-LOBE TECHNIQUE BASED ON THE ANTEROPOSTERIOR DISSECTION HOLEP METHOD**

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**INTRODUCTION AND OBJECTIVES:** To present the operative technique and tips of the modified procedures about simplified two-lobe technique based on anteroposterior dissection HoLEP (AP-HoLEP) and evaluate the feasibility and result of this technique. The unique point of this two-lobe technique is to separate the capsule and adenoma on the inferior prostate bed first, and then divide the two lobes. We show this technique on a video clip.

**METHODS:** First, urethral mucosa is bilaterally incised beside the verumontanum. Next, the transvers mucosal incision at distal verumontanum is made. Through these incisions, we can smoothly creep into the mid lobe. We continue this step from the middle prostate to near the bladder neck. Then, the incision is made at a 5 or 7 o’clock position depending the shape of the prostate, and the prostate is separated into two-lobes. An additional lateral mid-lobe enucleation is made. These approaches can avoid undermining the trigone. The procedures following this are performed through the original AP-HoLEP technique.

**RESULTS:** From June 2013 to April 2014, 25 cases performed by one surgeon (MS) were analyzed. The mean preoperative prostate volume, enucleated volume and enucleated time was 69.2 mL (range 30.7–211), 33.7 (4–152) grams and 37.0 (18.8–71.3) minutes, respectively. All surgeries were performed safely. Preoperative and postoperative hemoglobin level was 14.0 and 13.0 g/dL. There were no cases of patients requiring blood transfusion.

**CONCLUSIONS:** By adding a sophisticated and systematic AP-HoLEP technique, the simplified two-lobe technique provides an easier and safer approach into HoLEP.

**SOURCE OF FUNDING:** None

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**VP08-07 PROSTATE MORCELLATION AFTER TRANSURETHRAL PROSTATE ENUCLEATION: TECHNIQUE, TIPS AND TRICKS**

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**INTRODUCTION AND OBJECTIVES:** Morcellation of enucleated prostate tissue was developed as a means to remove large specimens transurethrally without the need for a separate extraction site. However, morcellation can pose a distinct challenge for the inexperienced. By following a few sound technical principles, morcellation can be performed safely and in a timely fashion.

**METHODS:** The aim of this educational video is to demonstrate safe and expeditious morcellation technique, while also detailing many commonly encountered technical difficulties and tested methods to overcome them. In particular, tactics to address limited visualization and poor tissue-morcellator attachment are illustrated. An introduction to morcellator instrumentation and operating room setup is also discussed.

**RESULTS:** In a review of 1080 patients undergoing thulium laser vaporenucleation of the prostate, median morcellation time was 11 minutes (8–20 minutes), median morcellation efficiency was 2.6 g/min (1.7–4 g/min), and median prostate volume was 51 ml (36–79 ml). Superficial bladder wall injury from morcellation requiring no treatment occurred in 15 (1.4%) patients and there were no bladder perforations. Incomplete morcellation occurred in 16 (1.5%) patients, and was completed during a second stage in all of these patients.

**CONCLUSIONS:** Following the herein described principles, morcellation can be efficiently and safely performed in patients with prostates of all sizes. The keys to morcellation success include keeping the bladder well distented, morcellating away from the bladder wall, being mindful of suction strength and systematically trouble-shooting the morcellator handle and suction when experiencing inadequate tissue-morcellator attachment.

**SOURCE OF FUNDING:** August Kurten Foundation

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**VP08-08 THULIUM VAPOENUCLEATION OF THE PROSTATE: SURGICAL TECHNIQUE FROM VAPORIZATION TO VAPOENUCLEATION**

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**INTRODUCTION:** Thulium vaporenucleation of the prostate (TVN) is becoming a popular alternative to HoLEP and other laser prostatectomy techniques. TVN offers the advantage of lower energy laser, which results in less tissue necrosis, lower thermal injury to the surrounding tissues, and reduced risk of formation of blood clots. Its use in prostate gland volume up to 150g has been demonstrated in the literature. However, in the United States, TVN is primarily used for prostate volume less than 80g.

**METHODS:** For patients with prostate volume between 80–150g, the TVN procedure is modified by adding the technique of transurethral anterior vesical neck incision (TVNI) for easy access to the posterior prostate. The TVNI is performed in the early stage of the procedure when TVN alone can not access the posterior prostate easily. This technique of TVNI helps to reduce the risk of incomplete enucleation and improves the efficiency of TVN in larger prostate glands.

**RESULTS:** For patients with prostate volume between 80–150g, the TVNI technique was used to perform TVN in 10 patients. All patients had successful TVN with no complications. The mean prostate volume was 105g (range 80–150g). The mean TVNI time was 45 minutes (range 30–60 minutes). The mean TVN time was 55 minutes (range 45–65 minutes). The mean blood loss was 80 mL (range 50–100 mL). There were no cases of transfusion.

**CONCLUSIONS:** The TVNI technique can be safely performed in patients with prostate volume between 80–150g. It improves the efficiency of TVN and reduces the risk of incomplete enucleation. TVNI can be performed in the early stage of the procedure when TVN alone can not access the posterior prostate easily. This technique of TVNI helps to reduce the risk of incomplete enucleation and improves the efficiency of TVN in larger prostate glands.

**SOURCE OF FUNDING:** None
INTRODUCTION AND OBJECTIVES: Thulium vaporenuclideation of the prostate (ThuVEP) is a minimally invasive, size-independent transurethral procedure for symptomatic benign prostatic enlargement (BPE). We have shown ThuVEP may be safely applied to almost all patients, and provides results similar to open prostatectomy and transurethral resection of the prostate. The aim of this video is to teach the steps necessary to execute ThuVEP safely.

METHODS: In this educational video we detail our surgical technique for ThuVEP and include advice on how to avoid complications. We emphasize a tested, systematic surgical learning algorithm beginning with vaporization, advancing to vaporsection, and ultimately progressing to vapoenucleation.

RESULTS: Our prior work has shown that by following the presented learning algorithm, proficiency at ThuVEP is attainable after 15 mentored-assisted cases, and even applies to urology residents with limited prior transurethral experience. In a review of 1080 patients undergoing ThuVEP between 2007 and 2012, median prostate volume was 51 ml (36 – 79 ml) with 25% of the prostate volumes larger than 80 ml, median enculement time was 32.5 minutes (22 – 50 min), median total operation time was 56 minutes (40 – 80 min), Clavien 3 or higher complications occurred in 72 (6.7%) patients, and 18 (1.7%) patients received a blood transfusion.

CONCLUSIONS: The learning algorithm presented for ThuVEP is safe and effective, and allows the trainee to gain surgical proficiency in a reasonable timeframe. Once surgical proficiency is achieved, ThuVEP should be considered a viable treatment option in all patients with symptomatic BPE, including those on anticoagulation and those with massive prostates.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Congenital ureteropelvic junction obstruction can lead to significant hydrourephrosis that presents as a challenge for minimally invasive surgery. We wish to share our experience with single incision laparoscopic nephrectomy for a massive hydronephrotic kidney. The patient is a 26 year old female patient first presented to the emergency room with right sided flank pain. On workup, she was found to have a hydronephrotic kidney measuring 23 cm × 14 cm × 10 cm.

METHODS: Using a 2.5 cm transumbilical incision, non-articulating laparoscopic instruments were placed through a Coviden SILS port. Hook electrocautery and Ligasure device were both utilized for dissection. After exposure, the hydronephrotic kidney was drained in order to create more working space. The hilum was stapled and the kidney removed through the SILS port.

RESULTS: Console time was approximately 2 hours. Estimated blood loss was 50 ml. Patient did well post operatively and was discharged on post operative day 2 in stable condition. Pathology report confirmed the initial diagnosis. On follow up at 2 weeks, patient was recovering well from the surgery without any complaints.

CONCLUSIONS: Single incision laparoscopic nephrectomy can be performed safely with good cosmetic results in patients with massive hydronephrotic kidney.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Laparoendoscopic single-site (LESS) surgery is proposed to be a major step forward in minimally invasive procedures. It aims to improve the cosmetic outcomes and patient satisfaction. We report our initial experience of LESS simple nephrectomy, focusing on our surgical techniques with highlights of specific maneuvers.

METHODS: 5 consecutive cases of LESS simple nephrectomy were performed in our institute for non-functioning kidney. All cases were performed successfully transperitoneally, with Octo single-port or Olympus Quadport. Straight instruments were utilized for all cases.

RESULTS: LESS simple nephrectomy were successfully performed in all 5 cases, without any additional port. We demonstrate the step-by-step surgical techniques, highlighting the difficulties in various steps of operation, and our corresponding maneuvers. We also show our techniques utilized in order to obtain an optimal surgical field exposure.

CONCLUSIONS: LESS simple nephrectomy is technically challenging, but with specific surgical techniques and maneuvers, it can be accomplished without compromising the quality and
safety of minimally invasive surgery. Moreover, it does provide a highly satisfactory cosmetic outcome to our patients.

**SOURCE OF FUNDING:** Nil

**VP08-12 RIGHT LAPAROENDOSCOPIC SINGLE SITE (LESS) LIVE DONOR NEPHRECTOMY— A STEP-BY-STEP OPERATIVE VIDEO DEMONSTRATION**

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**INTRODUCTION AND OBJECTIVES:** This video presents our step-by-step techniques of right laparoscopic single site (LESS) live donor nephrectomy (LDN). The majority of reported LESS-LDNs were cases of left nephrectomy. In some situations right LDN is favored— either to harvest a right kidney with less anatomical complexity for recipients, or to preserve a better left kidney for donors. There were limited reports of the right LESS-LDN operative technique.

**METHODS:** From May 2009 to March 2014, 34 patients undergoing right-robot-assisted laparoscopic partial nephrectomy for a primary renal mass. The resection margin was at least 5 mm. There were no statistically significant differences between the groups.

**RESULTS:** Renorrhaphy was successfully completed in all 34 procedures. There is no statistically significant difference between barbed and non-barbed groups in demographic, tumor characteristics, warm ischemia time and length of stay. Renorrhaphy time is significantly shorter in the barbed suture group (13.5 ± 4.9 min vs 8.9 ± 3.0 min, p = 0.031). No major complications were reported in both groups.

**CONCLUSIONS:** Use of simplified renorrhaphy with barbed suture improves surgical efficiency without adverse effect during robot-assisted laparoscopic partial nephrectomy. We demonstrate safety and feasibility of this simplified suture technique.

**SOURCE OF FUNDING:** None

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**VP09-01 SIMPLIFIED RENORRHAPHY WITH BARBED SUTURE DURING ROBOT-ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY**

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**INTRODUCTION AND OBJECTIVES:** Robot-assisted laparoscopic partial nephrectomy is widely used technique for nephron-sparing surgery. Barbed suture facilitates wound closure and improves efficiency of suture in a knotless manner. We present our experience of simplified renorrhaphy with barbed suture during robot-assisted laparoscopic partial nephrectomy in our hospital.

**METHODS:** From May 2009 to March 2014, 34 patients undergoing robot-assisted laparoscopic partial nephrectomy were retrospectively evaluated; 17 using glycolide/lactide copolymer suture (Polysorb) for renorrhaphy followed by 17 using the barbed suture (V-loc). Operative and post-operative outcomes potentially associated with barbed suture were recorded and analyzed.

**RESULTS:** Renorrhaphy was successfully completed in all 34 procedures. There is no statistically significant difference between barbed and non-barbed groups in demographic, tumor characteristics, warm ischemia time and length of stay. Renorrhaphy time is significantly shorter in the barbed suture group (13.5 ± 4.9 min vs 8.9 ± 3.0 min, p = 0.031). No major complications were reported in both groups.

**CONCLUSIONS:** Use of simplified renorrhaphy with barbed suture improves surgical efficiency without adverse effect during robot-assisted laparoscopic partial nephrectomy. We demonstrate safety and feasibility of this simplified suture technique.

**SOURCE OF FUNDING:** None

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**VP09-02 ROBOT-ASSISTED LAPAROSCOPIC NEPHRECTOMY FOR POLYCYSTIC KIDNEY DISEASE**

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**INTRODUCTION AND OBJECTIVES:** To present our technique of robot-assisted laparoscopic nephrectomy for a patient with prior nephrectomy and unilateral polycystic kidney disease.

**METHODS:** A 54-year-old man presented with a left-sided abdominal mass lasting for more than 20 years, and was found to have a 16-cm left polycystic kidney. He had a medical history of HCC partially resected. Definitive robot-assisted laparoscopic nephrectomy was indicated for a 1.8-cm soft-tissue mass within the multicycstic kidney. Physical examination demonstrated a large reverse-T scar and a palpable left upper quadrant abdominal mass. With the patient placed in the modified flank position, the operation was divided into two stages: laparoscopic adhesiolysis using a three-port approach and nephrectomy using a three-armed robotic approach with two 8-mm robotic ports, a 12-mm camera port, and two 12-mm assistant ports. Considering intraperitoneal adhesions, the open technique was used to...
establish pneumoperitoneum. A 12-mm trocar was placed over the left lower quadrant for the camera. The other ports were inserted as the video presentation. Greater omentum adhesive to the parietal peritoneum was dissected off the abdominal wall using monopolar electroyautery. The robot was successfully docked after completing adhesiolysis. Robotic nephrectomy was later performed using en bloc hilar ligation and cystic decompression to facilitate perirenal dissection.

RESULTS: The operative time was 275 minutes, and estimated blood loss was 100 mL. There were no intraoperative or postoperative complications.

CONCLUSIONS: Despite limited working space for manipulating the polycystic kidney disease, robot-assisted renal surgery is technically feasible, even in patients with previous abdominal surgery. Cystic decompression provides an easier dissection for minimally invasive surgeons.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Partial nephrectomy without hilar clamping avoids the detrimental effect of warm ischemia on renal function. We present here our technique of zero ischemia robot assisted partial nephrectomy (PN) in a patient with solitary kidney.

METHODS: The video shows off-clamp robotic PN in a patient with a 4.3 cm right renal tumor in solitary kidney.

RESULTS: Operative time was 90 minutes. Intraoperative blood loss was 200 ml. Pathologic evaluation revealed pT1b ccRCC with negative surgical margins.

CONCLUSIONS: In selected patients and in referral centers off-clamp robot assisted PN in solitary kidney is feasible and safe.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: This video contains two patients with T1b tumors to illustrate different methods of reconstruction based on tumor location after robotic partial nephrectomy.

METHODS: The first patient was a 52-year-old female who was found to have a 4 cm right renal mass in the hilar region of the right kidney. The second patient was a 70-year-old male who was found to have a 6.4 cm exophytic mass in the lower pole of the right kidney. A single layer renorrhaphy was used in the first case and a two layer renorrhaphy with selective clamping performed in the second case.

RESULTS: Both surgeries and their post-operative courses were uncomplicated with the first patient being discharged on postoperative day 3 and the second on postoperative day 2.

CONCLUSIONS: For large hilar tumors a two-layer renorrhaphy may not be required but meticulous closure of the collecting system and control of divided blood vessels is required. A two-layer renorrhaphy was performed in the second patient. In our experience, the superficial renorrhaphy could devascularize cortical tissue and adversely impact renal function.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Minimising renal ischaemia is a major challenge in doing robot-assisted partial nephrectomy (RaPN). Zero ischaemia by selective arterial clamping and pharmacologically induced hypotension is increasingly popularised worldwide. The technical difficulties, however, render this technique to be limited in high volume tertiary centres only. We would like to illustrate one case using selective arterial clamping in RaPN.

METHODS: A 54-year-old man with good past health, presented with a 2.5 cm left mid pole renal mass incidentally found on ultrasound. Contrast CT scan was performed and vascular anatomy of the kidney and tumour was carefully examined. Following mobilisation of left kidney, Gerota’s fascia was dissected to expose the renal capsule. Intraoperative ultrasound was done to identify the tumour. By hilar dissection and selective arterial clamping of an arterial branch with bulldog clamp, the tumour and a margin of parenchyma surrounding the tissue were made ischaemic. After tumour dissection, barbed sutures (V-Loc™) were used to repair the renal parenchyma in continuous manner, which were reinforced by polymer locking clips (Hem-o-lok).

RESULTS: Operation time was 4 hours 26 minutes. Estimated blood loss was 200 ml. Postoperative patient recovered uneventfully and his renal function remained stable with serum creatinine at 104 umol/L. Pathology was clear cell renal cell carcinoma, pT1a and Fuhrman grade 3. Margin was clear.

CONCLUSIONS: Selective arterial clamping is a technically challenging procedure. With careful preoperative planning and more experiences in robotic surgery, it can be safely performed with satisfactory early postoperative outcomes.

SOURCE OF FUNDING: No funding received

INTRODUCTION AND OBJECTIVES: Nephron sparing surgery is the gold standard for addressing small renal masses. We attempted a partial nephrectomy in a patient with a solitary renal remnant.

METHODS: An 64 year old female with a past medical history of hypertension was found to have bi-lateral large renal masses on CT scan in 2008. She underwent a staged right sided radical nephrectomy followed by an open left partial nephrectomy. After
5 years of no recurrence on imaging, she was found to have a 2.5 cm exophytic lesion in the lower pole of her solitary remnant.

**RESULTS:** Operative time was 185 minutes. EBL was 400 cc. There was essentially no ischemia time secondary to an unidentified posterior renal artery. Post-op the patient had no complications and was discharged on POD 3.

**CONCLUSIONS:** Although technically challenging, partial nephrectomy in a solitary renal remnant is a feasible intervention. Dedicated CT angiography is helpful to identify the vasculature of the kidney. Brisk bleeding encountered during tumor resection can be temporized with tamponade in order to avoid clamping and frank ischemia. Although not used in this case, 3D imaging and virtual surgical planning can be helpful in defining surgical approach.

**SOURCE OF FUNDING:** None

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**VP09-07 ROBOTIC DONOR NEPHRECTOMY**

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**INTRODUCTION AND OBJECTIVES:** Laparoscopic approach is standard of care for living donor nephrectomy. The objective of this study was to evaluate the technique of robotic donor nephrectomy.

**METHODS:** After written, informed and valid consent from living related voluntary kidney donor robotic donor nephrectomy was done with Da Vinci® Si (Intuitive Surgical Inc.). In two donors right and in one donor left donor nephrectomy was done. Three robotic 8 millimetres ports were placed. Two 12 millimetres ports, one for robotic camera and another for assistant were placed. 5 millimetres port was placed in right sided nephrectomy for liver retraction. Pfannenstiel retrieval incision was placed at the beginning of the procedure and deepened up to preperitoneal space. On right side additional 15 millimetres port was placed through the retrieval incision for application of the vascular stapler. The steps of transperitoneal nephrectomy included reflection of bowel, lifting up of the ureterogonadal packet, hilar dissection, upper polar dissection, cutting ureter with cold scissors, clipping and cutting of the artery and vein preserving maximum length of artery and vein towards graft, graft retrieval and check laparoscopically.

**RESULTS:** Donor’s total operative time, retrieval time, warm ischemia time, VAS score at 6 and 24 hours, hospital stay was 158 ± 53 minutes, 153 ± 42 seconds, 228 ± 78 seconds, 5.3 ± 0.6, 2.7 ± 0.6, 1.4 ± 0.2 grams/deciliter, 73 ± 1.2 hours respectively. There were no donor complications. Recipient’s serum creatinine one month post transplantation was 1.16 ± 0.3 milligrams/deciliter.

**CONCLUSIONS:** Robotic donor nephrectomy is safe and efficacious procedure. Multicentric randomised trials comparing robotic vs. laparoscopic approach for donor nephrectomy with long term graft function outcome evaluation are necessary.

**SOURCE OF FUNDING:** None

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**VP09-08 BILATERAL ROBOT-ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY IN A PATIENT WITH BILATERAL SYNCHRONOUS RENAL CELL CARCINOMA**

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**INTRODUCTION AND OBJECTIVES:** There are several management options for unilateral, clinically localised renal cell carcinoma (RCC). Bilateral synchronous RCC is rare but adds another layer of complexity to the management. Several additional factors should be considered including role of biopsy, hereditary predisposition, need to stage bilateral operations and sequence of surgery. We hereby present a video of a patient with bilateral Type I papillary RCC presenting with synchronous bilateral renal masses and treated with staged bilateral robot-assisted laparoscopic partial nephrectomy (RALPN).

**METHODS:** A 57 year old Chinese male presented with bilateral solid, enhancing small renal masses: 4.4 cm in the right upper pole (NS: 5p) and 2.2 cm (NS: 6p) in the left upper pole. Biopsies of both masses revealed Type I papillary RCC.

**RESULTS:** The patient first underwent right RALPN. Two renal cysts on the posterior surface were marsupialised and sent for frozen section at the same time. Left RALPN was performed six weeks later. He recovered well from both operations and was discharged on POD3 on both occasions. Ischaemia time was 24 and 22 min respectively. Histology showed Type I papillary RCC consistent with pre-operative renal biopsies.

**CONCLUSIONS:** We conclude that bilateral RALPN is a safe and feasible minimally invasive technique for bilateral synchronous RCC.

**SOURCE OF FUNDING:** None
INTRODUCTION AND OBJECTIVES: Ketamine cystitis is a newly described entity of the upper and lower urinary tract that occurs following recreational abuse of the dissociative anesthetic ketamine. The first case was described in 2007 and most commonly occurs in young adults who use the drug habitually in the nightclub setting. Here we present a cystoscopic video and associated clinical picture of the ‘ketamine bladder.’

METHODS: We present a 27 year old female with several months of progressive hematuria, frequency and suprapubic pain in the setting of a two year history of recreational ketamine use. The video highlights clinical, radiographic, cystoscopic and pathologic findings.

RESULTS: CT revealed bilateral hydrourereteronephrosis with ureteral strictures and dilatation. Cystoscopy and cystogram was significant for a small, contracted bladder with a 100 ml capacity. There were severe trabeculations with neovascularity and a small diverticulum. On pyelography, there was right ureteral reflux and a periureteral diverticulum. On cystoscopy, there were severe trabeculations and a small dome shaped diverticulum.

CONCLUSIONS: Ketamine cystitis is a newly described entity that occurs following recreational use of ketamine. It is associated with severe urologic complications and should be considered in the differential diagnosis of young adults with hematuria, frequency and suprapubic pain. Further studies are needed to clarify the pathophysiology and optimal management of this condition.

SOURCE OF FUNDING: None

VP10 ENDUROLOGY 3

VP09-10 RETROPERITONEAL ROBOT-ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY: SEGMENTAL ARTERY CONTROL

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INTRODUCTION AND OBJECTIVES: Robotic surgery has been widely adopted in assisting laparoscopic operations because of its superior visualization, stabilization, and improved ergonomics. In this article, we share our experience in performing robotic assisted retroperitoneoscopic partial nephrectomy with control of renal segmental artery instead of the main trunk of renal artery.

METHODS: A 69-year-old male had past history of chronic kidney disease. A 2.5 cm sized right renal tumor was found incidentally by ultrasound. Further computed tomography demonstrated this tumor located at middle pole of right kidney with contrast enhanced. Renal cell carcinoma was suspected. R.E.N.A.L score was 9x. Robotic assisted retroperitoneoscopic partial nephrectomy (with segmental artery control) was performed.

RESULTS: Total operative time was 195 minutes. Console time was 101 minutes. Total blood loss was 150 cc. Segmental artery clumping time was 23 minutes and 56 seconds. No blood transfusion was needed. Postoperative recovery was smooth and safety. Well surgical planning for individualized patient is a necessary factor of successful surgery. Robotic surgery brings us to a new field for conventional difficulty performed with laparoscopic surgery.

CONCLUSIONS: Robotic assisted retroperitoneoscopic partial nephrectomy with control of renal segmental artery is feasible.

SOURCE OF FUNDING: None

VP09-11 ROBOTIC AND HAND ASSISTED LAPAROSCOPIC RIGHT PARTIAL NEPHRECTOMY FOR GIANT ANGIOMYOLIPOMA

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INTRODUCTION AND OBJECTIVES: Giant Angiomyolipoma (AML) is an uncommon benign renal tumor that has an increased risk of spontaneous life-threatening hemorrhage. Surgical intervention should be considered. The literature of robotic assisted laparoscopic for huge AML is scarce. We reported our experience for one 49 years old female with huge AML over right upper pole of kidney. The maximum diameter of the tumor was 17.8 cm.

METHODS: We arranged arterial embolization before the day of non-clamped right partial nephrectomy to avoid excess bleeding. The patient was placed on right 30 degree elevation position. We set 3-trocar and 2 assisted trocar for robotic partial nephrectomy. We incised an 10 cm low midline wound as hand port for dissecting upper and posterior part of tumor. The tumor was removed from the low midline wound.

RESULTS: The operative time was 170 minutes and console time was 110 minutes. The estimated blood loss was 500 ml and no complication was noted. The patient recovered well and post-operative day 1 pain score was 3. She could tolerate diet on post-operative day 2 and discharged on day 5. The renal function was no change after 3 months follow up.

CONCLUSIONS: Robotic surgery for huge AML is feasible and safety. Well surgical planning for individualized patient is a necessary factor of successful surgery. Robotic surgery brings us to a new field for conventional difficulty performed with laparoscopic surgery.

SOURCE OF FUNDING: None
bilateral ureteral strictures. Pathologic review highlighted denudation of the urothelium and inflammatory infiltrate. The patient was started on analgesics and anti-inflammatory medications with plans for continued evaluation and treatment.

**CONCLUSIONS:** Ketamine cystitis is a newly described pathology of the urinary tract. It is important due to the prevalence among young adults and risk of permanent damage to the urinary tract. The natural history of the disease is as yet undefined but severe cases may require radical urinary tract reconstruction.

**SOURCE OF FUNDING:** None

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**VP10-02 ROBOTIC TRANSPERINEAL SATURATION BIOPSY: TECHNIQUE AND OUTCOMES**

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**INTRODUCTION AND OBJECTIVES:** Prostate biopsy is central to prostate cancer diagnosis and prognosis. The transperineal approach allows adequate anterior zone sampling and reduces the risk of sepsis. We demonstrate, in this video, our technique of robotic-assisted transperineal saturation prostate biopsy (rTPB).

**METHODS:** rTPB was performed in 249 patients from 2007 to 2012 via 2 transperineal punctures using our novel prostate biopsy device (Biobot Surgical, Singapore). The indications for biopsy were rising PSA despite prior negative transrectal biopsy in 199 patients, staging biopsy in 40 patients with low-intermediate risk prostate cancer, and active surveillance biopsy in 10 patients.

**RESULTS:** Mean time taken for procedure was 16.4 minutes (±8.0). Mean prostate volume was 31.2 ml (±14.0). Mean number of cores obtained was 29.4 (±5.4, range 15–53), with a total of 7251 cores obtained. Repeat biopsy was performed for 71 cores in 36 patients for cores having no tissue, being too short and/or being fragmented. Prostate cancer was detected in 485 cores in 112 patients, with 68 having Gleason ≤6, 28 Gleason 3 + 4, 12 Gleason 4 + 3 and 4 Gleason 8. The mean number of cores positive for those diagnosed with cancer was 4.3 (±3.6) and the median percentage core involvement was 15% (IQR 0.7–50). The rate of haematuria was 2.8%, sepsis 0.8% and urinary tract infection 0%. Twenty percent of patients with prostate volume larger than 50 ml had urinary retention requiring a urinary catheter for 2–7 days.

**CONCLUSIONS:** rTPB is a feasible procedure for prostate cancer diagnosis and prognosis with a low rate of complications.

**SOURCE OF FUNDING:** None

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**VP10-03 INTRAOPERATIVE PERIPROSTATIC NERVE ACTION POTENTIAL MONITORING DURING ROBOTIC PROSTATECTOMY**

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**INTRODUCTION AND OBJECTIVES:** Prostate cancer surgery balances extirpation of cancer, nerve sparing, and postoperative recovery of potency and continence. The complexity of periprostatic neuroarchitecture places microscopic nerves at risk of inadvertent injury. Better intra-operative detection of nerve location can improve nerve preservation. We present a video of an ongoing feasibility study to determine whether intraoperative nerve monitoring can identify nerves during robotic radical prostatectomy (RP).

**METHODS:** 28 patients with a Sexual Health Index for Men (SHIM) questionnaire score of 17 or higher were prospectively enrolled and received robotic RP with intraoperative nerve monitoring. A bipolar ball-tip probe directed by robotic needle drivers stimulated the periprostatic nerves. A modified Foley catheter with ring electrodes recorded the evoked nerve activity from within the urethra. The nerves were mapped circumferentially in the transverse plane of the prostate. Following mapping, spontaneous nerve activity during dissection was monitored with the modified Foley catheter.

**RESULTS:** All 28 enrolled patients underwent robotic RP and nerve monitoring. In 3 patients (11%), evoked nerve action potentials were noted in response to stimulation. In 26 patients (93%), spontaneous nerve activity was recorded from the modified Foley catheter as the surgeon progressed with dissection. Spontaneous nerve activity was found to increase following surgical steps involving cautery or traction.

**CONCLUSIONS:** To our knowledge, this is the first study in which nerve action potentials have been recorded directly from the periprostatic nerves. The demonstrated increase in spontaneous nerve activity following cautery and traction supports use of athermal and traction-free dissection techniques. Further research and improvements in technology are warranted.

**SOURCE OF FUNDING:** This feasibility study was sponsored and funded by Medtronic, Inc.
reach areas, and that fact that it remained in the patient at all times.

CONCLUSIONS: Use of the ROSI was found to be safe, simple to implement. Autonomy and flexibility led to superior surgical field visibility. As it remained in the patient throughout the surgery, the human-assistant devoted more time to other surgically related tasks.

SOURCE OF FUNDING: None

VP10-05 RETROPERITONEOSCOPIC URETEROLITHOTOMY WITHOUT USING GAUR'S BALLOON TECHNIQUE

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INTRODUCTION AND OBJECTIVES: We would like to share 10 years experience of our modified Retroperitoneoscopic ureterolithotomy (RPULT) without using Gaur’s balloon dissecting technique.

METHODS: 140 patients with impacted proximal ureteral (> 1 cm size, with no passage of contrast beyond the stone on IVP or CT KUB) who were treated at our institute between 2003 & 2013 were included. 4 ports were used. Retroperitoneal space was created by pushing the peritoneum & with finger from the primary 15 mm port opening after identifying the gerota’s fascia under vision. Fan retractor & CO₂ were used to maintain the retroperitoneal space. After removing the stone, ureterotomy was closed with intracorporeal interrupted 4-zero polyglactin sutures after placing a double J stent.

RESULTS: RPULT was performed as primary procedure for 96 cases. Other indications were failed ureteroscopic lithotripsy in 31 patients & 13 for failed ESWL. This method was successful in 129 patients. In 11 patients it was not possible due to obesity, previous abdominal surgeries which prevented dissection. Mean operative time was 84 (40–189) min. There was no major intra or postoperative complication. Most common complication of the procedure was inadvertent peritoneotomy in 6 cases which were converted to open & inability to pass stent in 9 cases due to slipped stone fragments which was managed by ureteroscopy. There were no cases of surgical emphysema. Mean hospital stay was 1–6 days with a mean of 1.8 days.

CONCLUSIONS: Retroperitoneal ureterolithotomy without using Gaur’s balloon is effective & feasible without an associated increase in the complication rate & minimum hospital stay.

SOURCE OF FUNDING: Nil

VP10-06 TRANURETHRAL HOLMIUM LASER RESECTION OF DISTAL URETER AND BLADDER CUFF: A 10-YEAR COMPARATIVE STUDY

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INTRODUCTION AND OBJECTIVES: To present innovative transurethral resection of the distal ureter and bladder cuff by Holmium laser, the per operative and oncological outcomes were compared retrospectively following radical nephroureterectomy by three different methods of managing the distal ureter and bladder cuff.

METHODS: From January 2002 to December 2012, 162 patients underwent excision of the distal ureter and bladder cuff by transurethral Holmium laser (32 cases, Group A), transurethral electric resection (51 cases, Group B) or open procedure (79 cases, Group C) combined with open or retroperitoneal laparoscopic resection of kidney and proximal ureter.

RESULTS: Group A and B showed statistically significant better results on the operative time (203.6 ± 31.5 min, 207.2 ± 24.3 min), blood loss (127.4 ± 63.2 ml, 135.0 ± 82.7 ml) and postoperative hospital stay (5.8 ± 1.3 d, 5.6 ± 1.2 d) than those of Group C (248.0 ± 42.9 min, 484.5 ± 217.7 ml, 8.7 ± 3.5 d) respectively (P < 0.01). 6 cases of obturator nervous reflex occurred in Group B, with 3 cases of bladder perforation and 2 conversion to open procedure. There were no differences in bladder tumors occurrence, retroperitoneal recurrence, seeding recurrence and cancer-specific survival among the three groups.

CONCLUSIONS: Our data validated the superiority of transurethral approach over conventional open procedure including per operative index and recovery and comparable oncologic outcomes with open group. Tumor staging is the independent factor of postoperative recurrence instead of surgical approaches of distal ureter and bladder cuff. Holmium laser demonstrated better non-quantization results including less complication, cleaner surgical vision and operating accuracy than that of electric resection. Transurethral Holmium laser resection of the distal ureter and bladder cuff proved innovative technically minimal invasive and oncologically safe method.

SOURCE OF FUNDING: Provincial medical scientific foundation (NO.2009A091)

VP10-07 THE URO DYNA-CT ENABLES COMPLEX 3D-PLANNED LASERGUIDED PUNCTURES

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INTRODUCTION AND OBJECTIVES: Standard imaging techniques to perform punctures in urology are ultrasound and fluoroscopy. Especially in complex cases cross sectional and 3D-imaging provides further information about surrounding structures and might enable safer procedures. Our aim was to assess the feasibility of 3D-planned and laserguided punctures in urology performed with the Uro Dyna-CT (Siemens Healthcare Solutions, Erlangen, Germany).

METHODS: Since 2011 17 punctures using the syngo iGuide system of the Uro Dyna-CT have been performed in the urological department in Mannheim. Patients with unclear ultrasound findings or suspicion of surrounding bowel were included. Image acquisition was performed using a customized 8s iGuide protocol of the Uro Dyna-CT. The puncture tract was planned with the dedicated workstation after 3D- and cross sectional image reconstruction. The puncture was performed supported by the laserguiding system.

RESULTS: 15 of 17 punctures have been performed successfully in a one-step procedure. No severe complications occurred. 1 puncture was aborted due to limited vision after extravasation of contrast agent and the second was switched to an ultrasound guided puncture due to extended motility of the kidney even during breath holding maneuvers by the anaesthesiologist.

CONCLUSIONS: We believe this puncture technique is an excellent additional instrument allowing the urologist to handle complex punctures intuitively. The image acquisition leads to
higher radiation doses than the standard fluoroscopy technique. However, it is in an acceptable range compared to alternative procedures such as CT-guided punctures with a multidetector computed tomography which is mainly used for complex cases. 

**SOURCE OF FUNDING:** None

**VP10-08 BILATERAL UPPER TRACT UROTHELIAL CANCER IN A PATIENT WITH ORTHOTOPIC NEO-BLADDER: CONSERVATIVE MANAGEMENT STRATEGY**

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**INTRODUCTION AND OBJECTIVES:** Upper tract urothelial cancers (UTUC) represent 5–10% of the urothelial neoplasms. Radical nephroureterectomy is the Gold-standard in the treatment. However, in the presence of bilateral disease, conservative management shall be considered. The present video shows a conservative management strategy in a patient with bilateral upper tract lesions.

**METHODS:** Patient with 66 years old, with antecedents of radical cystoprostatectomy with Camey II neobladder reconstruction in 1995 and negative follow up. The patient presented in the emergency room with a urosepsis. The CT scan showed left hydronephrosis secondary to a 14 mm stone in the upper ureter. In the excretory phase it was evident a bilatera filling defect, involving the lower calyx on the left and the renal pelvis on the right with suspicious lesions measuring 2 and 2,5 cm respectively. The management strategy was discussed with the patient and it was decided to perform a percutaneous resection of the lesions. The pathological examination revealed a low grade UTUC bilaterally (pTa on the left, pT1 on the right). The management was rediscussed with the patient, who decided to continue the conservative approach with straight follow up with bilateral retrograde flexible ureterorrenoscopy every 3 months. The video shows the percutaneous resection of the lesions as well as the first bilateral flexible ureterorrenoscopy with biopsy and fulguration of the tumor bed.

**RESULTS:** N/A

**CONCLUSIONS:** In centers with experience in percutaneous and retrograde intrarenal surgery, a conservative strategy is achievable in selected cases of UTUC.

**SOURCE OF FUNDING:** None

**VP10-09 USE OF KTP LASER FOR PHOTO-SELECTIVE VAPORIZATION OF THE PROSTATE AND BLADDER STONE LITHOTRIPSY: INITIAL CLINICAL EXPERIENCE WITH THREE CASES**

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**INTRODUCTION AND OBJECTIVES:** The use of KTP laser for lithotripsy has not been yet explored and this device is not currently marketed for that indication. However since it is the most powerful laser it may be useful for lithotripsy, one hypothesis in favour of this, is the cavitation bubble effect and another the high temperature, that may affect the stone’s chemical structure. To the best of our knowledge, its use for lithotripsy has not been reported. In this report we describe the use of KTP laser as a single procedure for the treatment of benign prostatic enlargement (BPE) and bladder stone lithotripsy in three patients.

**METHODS:** Prospective study from December of 2013 to February 2014, 3 patients with BPE and a single bladder stone were treated. Patients had complete clinical, laboratory and radiological evaluation. We used a 23 Fr. Storz cystoscope with a 30 degree lens, Moxi Fiber from AMS™ and XPS™ laser machine.

**RESULTS:** Average demographic and clinical results: age: 62.3 y, IPSS: 19.3, PSA: 2.2 ng/ml, prostatic volume: 58.3 cc, stone diameter: 2.43 cm, Hounsfield Units: 833.3, total energy: 393 333.3 Joules, laser fire time: 33.33 minutes, stone free state: 2 patients, complications: none. We used a fiber per case and encountered no difficulty during lithotripsy, the laser created a crater at the stone surface.

**CONCLUSIONS:** 1.- KTP laser is effective and safe as far as we have demonstrated in these two cases with bladder stones with less than 1000 HU. 2.- There is an urgent need for more studies to analyze the interaction between KTP and stones.

**SOURCE OF FUNDING:** None

**VP10-10 COMBINATION OF SUBURETERAL AND INTRAURETERAL INJECTION TECHNIQUES FOR A PATIENT WITH REFRACTORY HIGH-GRADE VESICO-URETERAL REFLUX**

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**INTRODUCTION AND OBJECTIVES:** Vesico-ureteral reflux (VUR) is a common urologic problem in children and young adults. Cystoscopic injection of bulking agents is used as the first line treatment of VUR. There are two techniques of infection: Subureteral and Intrareteral. Most common technique is subureteral technique. Intrareteral technique is reported for high grade VUR in some literatures. In this case, we applied the both techniques for a patient with refractory high grade VUR.

**METHODS:** The patient is a female and 20 years old. She had chronic kidney disease and a history of cystoscopic injections for bilateral VUR. Right grade 5 VUR was still persistent and previous injections had been done with subureteral technique. We firstly performed intrareteral technique and after that subureteral technique in the same operation with 2 ml DEFLUX. After 3 months, the patient was controlled with voiding cystourethrography.

**RESULTS:** VUR resolved after the combination of two techniques.

**CONCLUSIONS:** Combination of subureteral and intrareteral techniques can be used in refractory high grade VUR.

**SOURCE OF FUNDING:** No conflict of interest

**VP10-11 LAPAROSCOPIC URETEROLITHOTOMY WITH PNL THROUGH LAPAROSCOPIC PORT IN PATIENT WITH GIANT URETERAL STONE AND RENAL STONE**

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INTRODUCTION AND OBJECTIVES: Ureteral stones that are larger than 5 cm in size and/or weigh more than 50 g are referred to as giant ureteral stones. Giant ureteral stone in an incomplete duplicated ureter have never been reported. It can be difficult to remove giant stone, especially combined with renal stones.

METHODS: We report a case of giant upper ureteral stone of 8.6 × 1.8 cm in size, in a duplicated ureter of upper pole, along with 1.1 × 0.5 cm sized lower ureteral staghorn renal stone in the ipsilateral side. She has an incomplete duplication of ureter, giant ureteral stone of duplicated ureter was detected by left flank pain due to obstruction of single channel by lower ureteral stone. The transperitoneal laparoscopic ureterolithotomy was performed, the giant stone was identified as a bulge; the ureter was incised using a laparoscopic knife on the lower most portions of the stone and the stones were removed without fragmentation. And then Amplatz sheath was placed at the incised site of ureter. Rigid nephroscope was advanced to the collecting system through Amplatz sheath and staghorn renal stone was removed by ultrasonic lithotripter and stone forceps. Ureterotomy closure was performed by intracorporeal interrupted sutures.

RESULTS:

CONCLUSIONS: Laparoscopic ureterolithotomy combined with stone removal using rigid nephroscope and ultrasonic lithotripter through incision site of ureter, could be considered as treatment options in some case of the ureteral stone with ipsilateral upper pole renal stones.

SOURCE OF FUNDING: None

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INTRODUCTION AND OBJECTIVES: Urachal anomalies are rare and can lead to cyst formation, diverticulum, or even fistula. Patients can remain asymptomatic, or may present with a variety of complaints.

METHODS: The patient is a 34-year-old female with history of recurrent diverticulitis, status post laparoscopic sigmoid colectomy, who presented with right-sided worsening abdominal pain. She denied any documented fevers, nausea or vomiting. CT imaging showed irregular rim enhancing lesion extending from dome of bladder and into the right rectus abdominis muscle, compatible with an infected urachal remnant and associated abscess formation. She underwent a 4-week course of IV antibiotics and percutaneous drain placement into a subcutaneous periumbilical abscess. Cystoscopy and biopsy confirmed no evidence of malignancy. Robotic assisted laparoscopic partial cystectomy was performed, with the finding of a 3 cm bladder mass representing the urachal remnant with associated abscess. The urachus was excised with a wide margin from the umbilicus to the bladder. A portion of the posterior rectus sheath associated with the abscess was excised with the specimen. The patient was discharged on postoperative day four. Imaging two weeks after surgery confirmed that the abscesses had been completely drained, and the percutaneous drain was removed without complication.

RESULTS:

CONCLUSIONS: Robotic assisted laparoscopy is useful in the treatment of symptomatic urachal remnants, even in the presence of abscess formation and inflammation.

SOURCE OF FUNDING: None

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INTRODUCTION AND OBJECTIVES: We would like to share our experiences on dorsal vein ligation during robotic assisted laparoscopic radical prostatectomy procedure.
METHODS: In our practice dorsal vein ligation follows posterior dissection of prostate (vas deferens and seminal vesicle). Retzius space dissection, endopelvic fascia dissection and anterior prostatic fat dissection. One suture ligation is put in place distally. This suture provides the necessary hemostasis. The suture (vicryl 2-0 polyglactin 910) passes under the dorsal vein complex and anterior to the urethra. The traction of urethral catheter is performed by assistant to control the needle during this procedure. A total of four square knots are used. We use sliding suture technique for the first two knots.

RESULTS: Anterior prostatic fat dissection provides better visualization of puboprostatic ligaments. Securing the dorsal vein complex as far away from the prostatic apex as possible helps to minimize iatrogenic entry into the prostatic apex. Following division of the dorsal vein complex will be successful. Bladder neck transection and urethral dissection will be safer and easier by successful ligation as the further part of this operation. Reaching time to the next steps of the operation will be safer and faster.

CONCLUSIONS: Posterior bladder neck transection will be safer and easier by the quality of the dorsal vein ligation. Using sliding sutures shortens the operation time. Appropriate ligation affects blood loss, apical positive margins and recovery of urinary control.

SOURCE OF FUNDING: robotic radical prostatectomy, dorsal vein complex ligation

CONCLUSIONS: This study represents the largest reported cohort examining the efficacy of a single robotic approach for acquired bladder diverticula. We conclude this represents a viable surgical intervention for symptomatic bladder diverticula with good outcomes and no post-surgical complications observed during intermediate follow up.

SOURCE OF FUNDING: None

VP11-05 ROBOTIC EXTRAPERITONEAL RADICAL PROSTATECTOMY: TAIPEI CITY HOSPITAL EXPERIENCE

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INTRODUCTION AND OBJECTIVES: We report our experience with daVinci robot assisted extraperitoneal laparoscopic radical prostatectomy.

METHODS: Operative steps: We using a 5-port technique. A 2.5 cm umbilical incision is made. After finger swept extraperitoneal space, Spacemaker™ Balloon dilator was introduced to the extraperitoneal space to the level of the pubic symphysis in the midline. We use a 0-degree camera lens the procedure. Isolation and coagulation of the DVC with PKS™ forceps. The bladder neck is dissected off of the prostate using the bipolar grasper PKS™ and monopolar scissors. The plane between bladder and prostate is identified by 16 Fr Foley catheter. After cautering the perivesicular fatty tissue stretching from the anterior bladder neck to the prostate, transect the bladder neck. Downward the bladder neck, seminal vesicles and vas deference were identified and dissected. Then elevate up the prostate and separate the lower aspect of prostate. Dissect Pedicles and Neurovascular Bundles which lay at lateral side of prostate then clamped with Hemolock and cut with scissors. We do not use cautery for dissection of peri-prostatic tissue. The neurovascular bundles are preserved regardless of potency status. After the prostate is freed from its lateral attachments, expose the apex and urethra then sharply cut the urethra. The prostate was pull back and retrogradely cut without cautery for the residual attachment. The vesicourethral anastomosis is done using running sutures (3-zero V-lock).

RESULTS: Patients who received robotic extraperitoneal radical prostatectomy have lower flatus time and less pain.

CONCLUSIONS: Robotic extraperitoneal radical prostatectomy could be performed without difficulty and has lower recovery time of patients.

SOURCE OF FUNDING: None

VP11-06 PRESERVATION OF THE ACCESSORY PUDENDAL ARTERIES DURING ROBOTIC-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: Accessory pudendal arteries (APAs) can be found in 4 ~ 30% of cases during open or
laparoscopic radical prostatectomy. Preservation of APAs improves post-operative erectile function. Robotic-assisted laparoscopic prostatectomy further facilitates this by improving the visualization of APAs through better imaging. There are numerous demonstrative videos for robotic-assisted radical prostatectomy, but due to the inconsistent occurrence of APAs, few videos have highlighted the preservation of the vessels.

METHODS: Two cases of robotic-assisted radical prostatectomy were performed with preservation of accessory pudendal arteries. The patients had localized prostate cancer with low risks of recurrence. Pre-operative erectile dysfunction was present in both cases. An anterior approach was used to open the endopelvic fascia for subsequent apical dissection and bladder neck transection. Bilateral APAs were preserved in the first patient, while only the left APA was noted in the second patient. Both patients received sparing of the neurovascular bundles as well.

RESULTS: The surgical margin was confirmed to be free in both cases by a uro-pathologist. The first patient reported a post-operative erection rigidity score of 2 out of 4, and had successfully experienced intercourse one month after prostatectomy. The second patient had recently been discharged, awaiting his first post-operative clinic follow-up.

CONCLUSIONS: We clearly demonstrated the preservation of the APAs during robotic-assisted laparoscopic radical prostatectomy. Surgeons should bear in mind the possibility of discovering APAs, which should be carefully preserved.

SOURCE OF FUNDING: None

**INTRODUCTION AND OBJECTIVES:** During appendicovesicostomy inevitably variable sizes of appendix are encountered. Herein, we introduce a modification to the previously described robotic assisted laparoscopic (RAL) approach in order to account for a shorter appendix by using the anterior bladder wall as the site of neocystostomy.

METHODS: Overall, nine patients with mean age of 10.5 years (±3.5) and equal gender distribution underwent the modified technique of extravesical anterior bladder wall neocystostomy. Consecutive cases were performed between 2008 and 2013 by a single surgeon. Preoperative assessment included renal ultrasound, voiding cystourethrogram, and videourodynamics. All patients had failure to empty type of bladder dysfunction with average residual urine volume of 678 ml (±387). The appendix was reimplanted on the anterior bladder wall applying the extravesical technique.

RESULTS: Mean operative time was 294 minutes (±68). In one case, a temporary suprapubic catheter was placed during hospital stay due to lack of drainage through the appendicovesicostomy channel. One patient developed postoperative ileus that resolved on conservative measures. Patients were discharged home on average between 3 to 4 days after the surgery. Clean intermittent catheterization was initiated 3 weeks after surgery while allowing for continuous drainage overnight. On a mean follow-up of 21 months (±14.5) no strictures of the channel were observed. Two patients developed leakage from the channel around 1 year after surgery due to mild detrusor instability which was controlled by anticholinergic therapy.

CONCLUSIONS: Modified RAL appendicovesicostomy using the anterior bladder wall as the implantation site is feasible. The technique might be advantageous because of technical ease while accommodating for shorter appendiceal length.

SOURCE OF FUNDING: None

**INTRODUCTION AND OBJECTIVES:** Urachal adenocarcinoma is a rare bladder malignancy associated with poor prognosis. An extended partial cystectomy with en bloc resection of the mass is the recommended treatment. Minimally invasive surgical management has been advocated to minimize postoperative morbidity. This video demonstrates our technique for robotic assisted partial cystectomy with augmentation ileocystoplasty. Our patient is a 60 year old women who was found to have a urachal cyst contiguous with an anterior bladder lesion on imaging. Biopsy during cystoscopy revealed adenocarcinoma.

METHODS: The patient underwent a robotic hemicystectomy with en bloc excision of the urachus and posterior rectus sheath. Bilateral extended pelvic lymph node dissection during this procedure included the obturator, external iliac and hypogastric lymph nodes. Multiple frozen sections were sent from the surgical margin prior to augmentation. The robotic EndoWrist stapler was used to isolate a segment of ileum used for the augmentation cystoplasty.

RESULTS: Console time was 312 minutes with 150 ml of blood loss. There were no perioperative complications. Frozen sections from the tumor margin were all negative. Final pathology revealed moderately differentiated adenocarcinoma with negative margins and lymph nodes (0/32). The patient was discharged home after postoperative day four. At her two week follow-up, the Foley catheter and suprapubic tube were removed. The suprapubic tube was removed two weeks later. The patient was emptying well with a low residual at four weeks.

CONCLUSIONS: Robotic approach to hemicystectomy with ileocystoplasty is a safe and feasible option.

SOURCE OF FUNDING: None
VP12 LAPAROSCOPIC SURGERY NEW TECHNOLOGY

VP12-01 LAPAROSCOPIC EXCISION OF A HUGE SEMINAL VESICLE CYST ASSOCIATED WITH IPSILATERAL RENAL AGENESIS

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INTRODUCTION AND OBJECTIVES: We report a case of huge congenital seminal vesicle cyst associated with ipsilateral renal agenesis, that were treated with laparoscopic approach.

METHODS: A 45 year-old man presented to emergency room with right flank pain and gross hematuria. He had long term history of dysuria and irritative voiding symptoms. On examination, his lower abdomen was distended along with right flank knocking tenderness. Transabdominal sonography revealed solitary right kidney with hydronephrosis and a huge pelvic cystic lesion. Abdominal computed tomography showed right ureterovesical junction stone with right hydroureretonephrosis, left renal agenesis and a 12.5 cm homogenous pelvic cystic lesion abutted prostate. Transperitoneal laparoscopic excision of the cyst and right ureteroscopic stone manipulation were performed. The patient was put in supine position and the laparoscopic surgery was performed in 5 trocar method. After the excision of seminal vesicle cyst, the patient was repositioned into a modified lithotomy position for endoscopic surgery.

RESULTS: A total of 1000 ml brownish watery fluid was drained out of the seminal vesicle cyst. The left hemitrigone was absent and a 0.5 cm yellowish stone was seen in right lower third ureter and it was fragmented with pneumatic lithoclast. The surgery lasted for 240 mins and the blood loss was minimal. There was no operative complication or transfusion. The patient was discharged on fifth postoperative day. The pathology report revealed left seminal vesicle cyst with calcification. He remained symptom-free with at 6 months follow-up.

CONCLUSIONS: Laparoscopic excision of seminal vesicle cyst is an effective treatment with rapid overall recovery.

SOURCE OF FUNDING: None

VP12-02 LAPAROSCOPIC MANAGEMENT OF NUTCRAKER SYNDROME WITH PLACING EXTRAVASCULAR STENT: CASE REPORT AND LITERATURE REVIEW

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INTRODUCTION AND OBJECTIVES: Nutcracker syndrome is rarely early diagnosed and dealt with by mini-invasive surgery.

METHODS: We reported a case of 38-year-old male who was diagnosed of Nutcracker syndrome treated with laparoscopy to placing of an extravascular stent, resection of the fibrous ring around the left renal outflow of the inferior vena cava and loosing it.

RESULTS: Analysis with conditions about post-operation CT imaging data and patient’s symptom remission.

CONCLUSIONS: we think that it is an available and effective surgery procedure for Nutcracker syndrome, whose reasons exist a fibrous ring around the left renal vein outflow of the inferior vena cava besides the commonly anatomic extrinsic compression on the left renal vein as it crosses between the superior mesenteric artery and the aorta.

SOURCE OF FUNDING: None

VP12-03 A NOVEL LAPAROSCOPIC TENCKHOFF CATHETER INSERTION VIA HYDRO-PERITONEAL TECHNIQUE IN PATIENTS WITH END STAGE RENAL DISEASE

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INTRODUCTION AND OBJECTIVES: Traditionally, for peritoneal dialysis (PD), the insertion of Tenckhoff catheter could be done by local anesthesia with blind method or general anesthesia with laparoscopic pneumo-peritoneum method. Herein, we introduced a novel Laparoscopic Tenckhoff Catheter Insertion via Hydro-peritoneal (LTCI-HP) technique that can offer direct vision and proper fixation of catheter under local anesthesia.

METHODS: From 2008 to 2013, a total of 62 patients with end stage renal disease (ESRD) underwent LTCI-HP with a 1-year follow-up period were recruited. In contract to traditional procedure, the stylet of the PD catheter is replaced by a 2.7 mm urethra-scope, which enable the catheter tip to reach the Cul-de-sac under direct vision after the hydro-peritoneum created by the injection of 1000 ml saline. The catheter is fixed to the midpoint of lower abdomen wall. All the procedures were done under local anesthesia with or without sedation by the same surgeon.

RESULTS: No primary catheter failure occurred within one month after the operation. However, one developed wound infection with subsequent incisional hernia. Four developed PD catheter migration with further mal-function. The patency rate of the PD catheter at 1 year is 91.8%. The mean operation time, including catheter function testing, was 58 minutes. Compared to the traditional method executed by the same surgeon, approximte 37% time-saving is achieved.

CONCLUSIONS: LTCI-HP technique is a safe and feasible method with excellent outcomes. It provides confidence to surgeon about “to see is to believe” and the economic efficiency of the out-patient surgery.

SOURCE OF FUNDING: None

VP12-04 A TECHNIQUE TO ENHANCE BLADDER NECK DISSECTION BY USING A FOLEY CATHETER DURING EXTRAPERITONEAL LAPAROSCOPIC RADICAL PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: A 45 year-old man presented to emergency room with right flank pain and gross hematuria. He had long term history of dysuria and irritative voiding symptoms. On examination, his lower abdomen was distended along with right flank knocking tenderness. Transabdominal sonography revealed left seminal vesicle cyst with calcification. He remained symptom-free with at 6 months follow-up.

CONCLUSIONS: Laparoscopic excision of seminal vesicle cyst is an effective treatment with rapid overall recovery.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: This video shows a novel technique to develop a bladder neck tract with a Foley catheter during extraperitoneal laparoscopic radical prostatectomy (LRP) to enhance bladder neck dissection, thereby improving patient and procedure outcomes.

METHODS: We employed a four-trocar approach to prostatectomy. This approach involved introducing a 1-0 Vicryl stitch into the extraperitoneal space with an endoclose needle to pull up the Foley catheter tip, enhancing the bladder neck. From June 2006 through November 2012, clinical and pathologic data were assessed from 71 patients who underwent four-port extraperitoneal laparoscopic radical prostatectomy (modified extraperitoneal LRP, group 1). Data from 22 patients (group 2: those accepted transperitoneal laparoscopic radical prostatectomy) were retrospectively compared with group 1 patients.

RESULTS: The two groups were comparable in terms of pathological staging and Gleason score. The operating time was significantly shorter (P < 0.05) and total blood loss amount was smaller in group 1 (P < 0.05). Bilateral or unilateral nerve sparing surgery was performed in 80.3% of group 1 patients and in 45.5% of group 2 patients. The immediate, 6 months and 1 year continence rates were 19.7%, 91.5% and 100% in group 1 and 18.2%, 86.4% and 95.5% in group 2 respectively. Potency rates were both 71.4%.

CONCLUSIONS: Improved bladder neck enhancement provides clearer vision during bladder neck dissection. Similar function results and cancer control rates are also encountered in modified extraperitoneal radical prostatectomy. This novel technique can be a feasible method to perform endoscopic radical prostatectomy under four ports rather than five ports.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: In management of upper urinary tract stricture, open ureteroureterostomy is the gold standard. More ureteral reconstruction is being performed with laparoscopic or robot-assisted methods. A drawback to minimally invasive procedure is the decrease or lack of tactile sensation. Here, we would like to demonstrate a simple way to identify ureter stricture during laparoscopic surgery.

METHODS: After anesthesia, the patient is then placed in lithotomy position for ureteroscopy. After the stricture site is identified, ureterotomy was performed using Holmium laser distal of the stricture site. Ureteroscopy was inserted into the puncture site extending into the retroperitoneal space. Retrograde catheter is then inserted into retroperitoneal space to help with identification of the stricture site. After securing the retrograde catheter to the Foley’s catheter, the patient is placed in lateral 45 degrees position and pneumoperitoneum is created. With the help of retrograde catheter extending the retroperitoneal space, we were able to identify the stricture site and proceed to ureter reconstruction.

RESULTS: This method was used on 8 patients with persistent ureteric stricture. Average operative time of 269 minutes with average blood loss of 50 cc. Average follow-up period of 28 months and three patients had recurring stricture.

CONCLUSIONS: Our method offers a simple and accurate way to identify ureteral stricture under laparoscopic or robot-assisted reconstruction. Using readily available catheters, our method is easily reproducible in hands of experience laparoscopic surgeon. Larger study with a control group would be needed to compare our method to conventional method.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: Ileal ureter is a suitable treatment option for patients with long ureteric strictures. Minimally invasive techniques have been shown to be as safe as open technique and superior in terms of post-operative recovery.

METHODS: We report the first case of laparoscopic totally intracorporeal replacement of ureter using whole-mount ileum in a patient with right-sided long ureteric stricture. Patient’s characteristics, perioperative data and functional outcomes as well as detailed description of surgical technique are reported in the attached video.

RESULTS: The operative time was 150 minutes and blood loss was minimal. The patient was progressed to diet on POD 1 with bowel movement on POD 2. There was no significant change in the pre and post-operative glomerular filtration rate (GFR). The surgical drain was removed on POD2 and catheter removed on POD 5 after a satisfactory cystogram showing no leak. The patient was discharged well on POD 6. There are no perioperative complications. The postoperative scan IVP showed no contrast extravasation. The double J stent was removed 6 weeks after surgery.

CONCLUSIONS: We have demonstrated the safety and feasibility of laparoscopic intracorporeal ileal ureter with possible advantage of shorter operative time compared to the robotic- assisted technique reported recently.

SOURCE OF FUNDING: None

INTRODUCTION AND OBJECTIVES: The popularity of LESS adrenalectomy is limited yet because of technical
difficulties including accomplishing optimal retraction of adjacent organs—especially, liver and spleen—because of the limited number of working instruments and small working space. We demonstrate our experience with the Internal Organ Retractor (IOR, Aesculap AG, Tuttingen, Germany) system and its feasibility in LESS adrenalectomy.

**METHODS:** IOR is an internally anchored retracting device. It is composed of atraumatic clip and silicone ring with anchoring needle. It is introduced into the abdomen through 12-mm port using the clip applier and applied directly to the structure for retraction. The anchoring needle is grasped with a needle holder and anchored to the abdominal wall. During adrenal surgeries, the IOR retract liver, spleen, pancreas. Total 12 patients who underwent LESS adrenalectomies between December 2012 and July 2013 were identified for measuring application/removal time of IOR and complications related with IOR.

**RESULTS:** IOR helped to maintain a consistent operation field with adequate retraction in all cases. Mean 1.8 ± 0.4 set of IOR was used for each surgery and Mean application and removal time for each IOR were 87.1 ± 38.2 seconds and 53.9 ± 27.0 seconds. There were no perioperative complications associated with IOR.

**CONCLUSIONS:** IOR provided satisfactory retraction during LESS adrenalectomy and its application/removal was very simple and easy. IOR system maintained optimal retraction throughout the operation and reduced necessity of additional laparoscopic ports for retractions. We think IOR system is an attractive retraction method in LESS adrenalectomy.

**SOURCE OF FUNDING:** None

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**VP12-08 STONE COBRA HEAD: URETEROCELES PRESENTING WITH MULTIPLE CALCULI**

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**INTRODUCTION AND OBJECTIVES:** Ureterocele is an abnormal congenital dilatation of the terminal portion of a single or more frequently (70–85%), the upper part of a duplex urinary tract, with normal or ectopic implantation. Ureteroceles in adults are typically single system, intravesical and orthotopic.

**METHODS:** A 35-year-old healthy male presented with mild dysuria, right flank pain and gross hematuria for years. Abdominal radiograph revealed right renal stone and distal ureteral calculi with cystic space occupying lesion. The radiological investigations of intravenous pyelography and computed tomography revealed right ureterocele and distal ureteral calculi with the characteristic appearance of “cobra head.”

**RESULTS:** Endoscopic ureterocele incision and stone extraction can be used to effectively treat adult orthotopic ureteroceles with calculi with minimal risk of iatrogenic vesicoureteral reflux given creation of an antireflux flap valve mechanism.

**CONCLUSIONS:** Adult orthotopic ureteroceles with calculi is a rare clinical entity amenable to endoscopic management.

**SOURCE OF FUNDING:** None

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**VP13 ROBOTIC SURGERY NEW TECHNOLOGY 1**

**VP13-01 ROBOTIC-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY-BLADDER NECK ANTERIOR WALL SUSPENSION**

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**INTRODUCTION AND OBJECTIVES:** Urinary incontinence is one of major morbidity after radical prostatectomy. Several surgeon developed technique for improving the postoperative continence rate. Here we presented a video about anterior wall suspension during Robotic-assisted radical prostatectomy.

**METHODS:** In the past, we made the traditional procedure about anastomosis using two V-loc sutures. Recently, we added the anterior wall suspension of vesico-urethra anastomosis. After the anastomosis developing, we elevated the anastomosis by suturing the remaining V-loc sutures to fascia of anterior wall.

**RESULTS:** In the past, we tried to remove the Foley more than one week after checking leakage under cystography. After adding anterior wall suspension technique, no urine leakage found on post-
operative day 6 and then the Foley was removed. Besides, the duration of post-operative transient incontinence is also shortened. **CONCLUSIONS:** We conclude that anterior wall suspension of vesico-urethra anastomosis is easily performed and is effect of improving continence rate. **SOURCE OF FUNDING:** None

**VP13-02 TOTALLY INTRACORPOREAL ROBOT ASSISTED VESCICA ILEALE PADOVANA (VIP): A STEP BY STEP TECHNIQUE**

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**INTRODUCTION AND OBJECTIVES:** To illustrate our technique for robotic, intracorporeal, orthotopic, Padua neobladder, using staples to entirely replicate established open principles of reservoir configuration.

**METHODS:** Surgical technique is showed in the accompanying video.

**RESULTS:** Robotic intracorporeal urinary diversion was successfully performed in 41 patients with a minimum 90-d follow-up. Mean estimated blood loss was 210 ml (SD 60), mean time to regular diet was 6 d (range: 5–21 d), mean hospital stay was 9 d (range: 6–45 d), and 30- and 90-d complications were Clavien grade 1–2 (n = 15 and 0), Clavien grade 3–5 (n = 12 and 9), respectively.

**CONCLUSIONS:** An intracorporeal technique of robot-assisted orthotopic neobladder was presented. This approach is showed to shorten totally intracorporeal urinary diversion. **SOURCE OF FUNDING:** None

**VP13-03 COMBINED OPEN AND ROBOTIC NEO BLADDER: ADVANTAGES OF BOTH APPROACHES**

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**INTRODUCTION AND OBJECTIVES:** To demonstrate an easy and reproducible technique to overcome the steep learning curve of total robotic cystectomy with intracorporeal ileal neobladder.

**METHODS:** da Vinci® Si robotic platform is used. Cystectomy and extended lymph node dissection is performed in extended trendelenberg position. Mini pfannenstiel incision is placed to remove the bagged specimens. Studer ONB is reconstructed in an extracorporeal fashion after delivering the bowels from the incision site with completed ileal ureter anastomosis. The distal end of the ONB is laid open for the urethral anastomosis. The bladder is placed intra corporeally and the incision closed. The Neo bladder-urethral anastomosis is performed with robot in a 15-degree Trendelenburg position.

**RESULTS:** Seven cases were performed with mean OR time 312 ±44 minutes, blood loss 132 ± 27 ml, hospital stay 11 ± 2.5 days. A single surgeon not having experience of complete robotic intra-corporeal ONB could perform all cases. Clavien I complication of fever and paralytic ileus was seen in one patient each. DJ stents and catheter were removed on 3rd post op week.

**CONCLUSIONS:** This technique enables the advantages of robotic approach of ergonomics and ease for pelvic surgery to be combined to that of speedy and reproducible open surgery to provide optimum results. This would be a gradual way for surgeons to overcome “holy grail” of complete robotic Cystectomy and intracorporeal ONB. **SOURCE OF FUNDING:** Nil

**VP13-04 A NOVEL APPROACH TO ROBOTIC SIMPLE PROSTATECTOMY USING THE INTUITIVE ENDOWRIST ONE VESSEL SEALER**

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**INTRODUCTION AND OBJECTIVES:** Historically, open simple prostatectomy is the “treatment of choice” for symptomatic benign prostatic hypertrophy for large glands (>100 cc). The open approach is associated with significant peri-operative morbidity. More recently, robotic assisted laparoscopic simple prostatectomy has been performed with similar functional outcomes as open simple prostatectomy but with a potentially lower risk of peri-operative complications.

**METHODS:** In the video, we present a novel approach to the robotic-assisted simple prostatectomy, which incorporates the use of the Intuitive EndoWrist One Vessel Sealer (VS) to perform the enucleation of the prostatic adenoma. The VS uses bipolar energy to mechanically transect and simultaneously coagulate large bundles of tissues that fit within its jaws as well as vessels up to 7 mm in diameter. The case is performed on a 70-year-old male with symptomatic BPH who has a 268 cc prostate gland.

**RESULTS:** As seen in the video, the VS allowed for efficient and complete transection of a large prostatic adenoma with minimal bleeding. The advantages of the VS, in our experience, relate to its enhanced wrist mobility, which allows for precise movement within the narrow pelvic space as well as its ability to simultaneously transect and coagulate tissue. The shape of the VS device also allows for blunt dissection of the adenoma, analogous to finger dissection during open surgery.

**CONCLUSIONS:** Combining the superior visualization of a robotic approach with the use of the Vessel Sealer, we believe that our novel approach to robotic-assisted simple prostatectomy leads to a safer and more effective management of large gland BPH. **SOURCE OF FUNDING:** None

**VP13-05 STEPWISE APPROACH TO ROBOTIC INTRACORPOREAL ORTHOTOPIC ILEAL NEOBLADDER WITH STRICT ADHERENCE TO PRINCIPLES OF OPEN ORTHOTOPIC NEOBLADDER CONSTRUCTION**

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**INTRODUCTION AND OBJECTIVES:** Robotic approach is gaining widespread acceptance for radical cystectomy however the concomitant neobladder is often constructed by open extracorporeal approach because constructing intracorporeal neobladder is considered technically challenging. In this video we
describe our stepwise approach to Robotic intracorporeal orthotopic ileal neobladder with strict adherence to the established principles of open orthotopic neobladder.

**METHODS:** Standard six port transperitoneal approach was used with all ports moved cephalad for better proximal ureteral mobilization and small bowel manipulation. Radical cystectomy was done. Standard steps of open surgery for orthotopic neobladder construction including detubularisation, posterior plate reconstruction, 90° counterclockwise rotation of pouch, uretheroenteric anastomosis, anterior pouch closure with cross-filling and bilateral ureteroenteric anastomosis were followed in that order. We observed that the fourth robotic arm, placed on the right, helps maintain bowel retraction toward the pelvis to enable efficient neobladder configuration. Also performing the urethral ileal anastomosis after constructing the posterior wall enables equal folding of the ileal segments and fixes the pouch in place to allow anterior closure without the need for repositioning or redocking. The use of barbed sutures helps reduce the need to maintain continuous traction on the suture line and helps create a watertight reservoir.

**RESULTS:** The operative time for the neobladder was 170 minutes with estimated mean blood loss of 50 ml. Postoperative period was uneventful.

**CONCLUSIONS:** Robotic intracorporeal orthotopic ileal neobladder is technically demanding but key technical modifications make it feasible and safe, while maintaining the principles of open neobladder surgery.

**SOURCE OF FUNDING:** None

**VP13-06 ROBOTIC ASSIST RECTAL GIST RESECTION WITH RADICAL PROSTATECTOMY**

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**INTRODUCTION AND OBJECTIVES:** Gastrointestinal stromal tumor (GIST) is the most common mesenchymal malignancy of the gastrointestinal tract. Retal GIST with prostate invasion is extremely rare. Tumor resection is suggested but is very difficult and technical for surgical margin and minimizing the blood loss. A good surgical view will let surgeon possible for the free margin and decrease the peripheral organ and nerve injury after using the da Vinci Surgical System. We report a unique case of rectal GIST with prostate invasion treated with robotic-assisted surgery.

**METHODS:** A 54-year-old male because of a rectally, fixed, and firmly bulging mass was palpated right laterally to prostate. Biopsy under CT guidance revealed GIST. After neoadjuvant target therapy (Gleevec) for 7 months, the mass had decreased in size. Therefore, he underwent robotic-assisted laparoscopic radical prostatectomy and partial excision of rectal wall with left nerve sparing.

**RESULTS:** The robotic docking time was 20 minutes. The console time was 5 hours and 30 minutes. The total operative time was 6 hours. The estimated blood loss was 100 ml and no complication. The patient recovered well and could tolerate diet on post-operative day 5 and discharged on day 8. The specimen showed no residual viable tumor and compatible of GIST. The surgical margins were all free of tumor. Prostatic tumor invasion was noted.

**CONCLUSIONS:** The robotic approach of rectal tumor with prostate invasion enables the surgeon to perform extensive surgery of rectum in a minimally invasive manner. The da Vinci Surgical System will make the surgery easier.

**SOURCE OF FUNDING:** None
CONCLUSIONS: At selected institutions robotic surgery for selected level I and II caval thrombi is feasible. Further, clinical experience is necessary to determine the appropriate place of robotic surgery in managing these complex patients with caval involvement.

SOURCE OF FUNDING: None

VP13-09 POSTERIOR APPROACH TO ROBOTIC SIMPLE PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: This video describes our novel technique for performing robotic simple prostatectomy (RSP) for benign prostatic hyperplasia (BPH).

METHODS: From May 2013 through February 2014, a single surgeon (DDE) performed RSP on 14 patients with symptomatic BPH using our posterior approach technique. This technique includes a posterior cystotomy, lateral retraction of the bladder via extracorporeal sutures and exclusion of the prostatic defect. The posterior cystotomy offers easy visualization of the enlarged gland without mobilization of the bladder. Closure of the prostatic defect is achieved by anastomosing the urethra to the bladder neck after adenoma removal, eliminating the need for post-operative bladder irrigation.

RESULTS: The mean patient age was 68 years (60–79) and mean prostatic volume was 133 cc via transrectal ultrasound (83–200). Mean pre-operative IPSS score and SHIM score were 21.6 (15–28) and 12 (1–24) respectively. Average console time was 155 min (98–297) and average EBL was 282 mL (range 50–1000). The mean weight of removed adenoma was 88.9 grams (34–153). The average length of stay was 1.2 days (range 1–3). There were no intraoperative or post-operative urologic complications and pathology confirmed BPH in all cases. Post-operatively, IPSS scores were significantly improved (Mean 4.2, range 0–12, p < 0.001). There were no adverse effects on the post-operative SHIM score (Mean 10.6, p = 0.60).

CONCLUSIONS: Our limited experience with this novel approach to RSP has been shown to be technically feasible and safe. Patients who underwent RSP had a short hospital stay with excellent post-operative improvement in lower urinary tract symptoms without compromising erectile function.

SOURCE OF FUNDING: None

VP13-10 OMITTING CORTICAL RENORRHAPHY DURING PARTIAL NEPHRECTOMY

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INTRODUCTION AND OBJECTIVES: Little is known about the effects of reconstruction during partial nephrectomy on postoperative renal function. Our objective is to assess the feasibility of omitting cortical renorrhaphy during partial nephrectomy.

METHODS: In 2013 we began routinely omitting cortical renorrhaphy during robotic partial nephrectomy for renal masses. A running base layer stitch is meticulously performed after resection with additional figure-of-eight stitches as needed after unclamping the renal hilum. Operative videos are presented for a large tumor in a solitary kidney and an endophytic tumor in a non-solitary kidney. Omission of the cortical renorrhaphy layer is detailed with tips on hemostasis and urine leak prevention.

RESULTS: Both cases were performed without any intra-operative or postoperative complications. The solitary kidney experienced minimal postoperative volume loss at 4-months (13%), and the GFR rebounded at 6-months back to 41 from a baseline of 42. Renal function data for the second case is pending follow-up.

CONCLUSIONS: Cortical renorrhaphy can be safely omitted when using a meticulously placed base layer renorrhaphy. This may be of particular benefit when treating a renal mass in a solitary kidney or near the renal hilum.

SOURCE OF FUNDING: None

VP13-11 NOVEL USE OF TACHOSIL IN HAEMOSTASIS IN NERVE-SPARING ROBOT-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY

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INTRODUCTION AND OBJECTIVES: Various nerve-sparing techniques are used in robot-assisted laparoscopic radical prostatectomy (RaLRP), with the aim to maximise postoperative erectile function and continence without compromising oncological control. Apart from interfascial dissection and preservation of neuromuscular bundles, avoidance of traction and electrocauterisation and are equally important, which could lead to suboptimal haemostasis. Recently, a novel fibrin sealant patch has been introduced (Tachosil®, Takeda Pharmaceuticals GmbH) to aid haemostasis. Herein we describe our initial experience of using this patch in haemostasis in nerve-sparing RaLRP.

METHODS: A 72 years old man complained of lower urinary tract symptoms. Prostate specific antigen (PSA) was elevated at 5.8 ng/ml. Transrectal ultrasound guided 12-core biopsies revealed adenocarcinoma of Gleason score 3+3 in one core. Transperitoneal RaLRC was performed with interfascial dissection and preservation of the right neuromuscular bundle (NVB). After removal of the prostate, a piece of fibrin sealant patch was placed near to the right NVB for haemostasis. The patch would stay attached to the tissue after activation. No additional haemostatic measure was required thereafter.

RESULTS: Operative time was 6.5 hours and estimated blood loss was 200 ml. Patient recovered uneventfully from the operation. Pathology showed pT2c adenocarcinoma of Gleason score 3+3 and a tertiary grade of 4. Three months after operation the PSA level was undetectable. He has no urinary incontinence and has not attempted any sexual activities yet.

CONCLUSIONS: The fibrin sealant patch aid effective haemostasis. With more operative experiences, this could be a useful device in nerve-sparing surgery in future.

SOURCE OF FUNDING: No funding received

VP13-12 ROBOTIC NEPHROURETERECTOMY WITH BLADDER CUFF EXCISION IN THE MORBIDLY OBESE PATIENT: TIPS FOR POSITIONING, PORT PLACEMENT AND DOCKING

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VP14 ROBOTIC SURGERY NEW TECHNOLOGY 2

VP14-01 ROBOTIC SIMPLE PROSTATECTOMY FOR MASSIVELY ENLARGED PROSTATE: A DESCRIPTION OF TECHNIQUE
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INTRODUCTION AND OBJECTIVES: Benign prostate hypertrophy (BPH) is a common entity that can typically be managed with either medical therapy or cystoscopic intervention. Patients with severe BPH, however, may not be amenable to these interventions and require surgical intervention with simple prostatectomy. Given the inherent reconstructive, EBL, and recovery advantages seen with robotic surgery, we present a case series with accompanying video of a patient undergoing a robotic simple prostatectomy for a massively enlarged prostate.

METHODS: Patients who underwent robotic simple prostatectomy for enlarged prostate were identified. Demographic and clinicopathological data were collected. All patients underwent prostate biopsy, urodynamic evaluation, and MRI of the pelvis preoperatively. Postoperatively, all patients underwent cystographic and urethrogramic evaluation, along with a trial of void.

RESULTS: Four patients have undergone this technique. A standard camera and port placement template was utilized in a fashion similar to that for robotic radical prostatectomy. Simple prostatectomy was successfully performed using the robotic approach and novel technique as shown in the accompanying video. The average OR time was 224 minutes and average EBL was 1,260 cc. The mean prostate weight was 373 grams (range 110–777 grams). One patient required a blood transfusion; otherwise, there were no complications.

CONCLUSIONS: Our case series, and specifically the accompanying video, demonstrates the largest gland in the literature treated with robotic simple prostatectomy for severe BPH. The technique used for this procedure is feasible for surgeons experienced with robotic prostatectomy and provides definitive surgical management for patients with a severely enlarged prostate non-responsive to first-line therapies.

SOURCE OF FUNDING: None

VP14-02 ROBOT-ASSISTED NEPHROURETERECTOMY AND BLADDER CUFF EXCISION WITHOUT PATIENT OR ROBOT REPOSITIONING: DESCRIPTION OF MODIFIED PORT PLACEMENT AND TECHNIQUE
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INTRODUCTION AND OBJECTIVES: Nephroureterectomy (NUx) with full bladder cuff excision is the gold-standard treatment for upper-tract urothelial cancer (UTUC). While minimally invasive techniques for NUx have demonstrated comparable outcomes to the open technique, the robotic technique is limited by the need for intra-operative patient repositioning and robot re-docking to manage the distal ureter and bladder cuff. We describe our novel technique of robotic NUx that allows for complete access to the kidney and full bladder cuff excision.

METHODS: This modified technique was performed on a consecutive series of patients undergoing robotic NUx for UTUC from August 2012–January 2014. Operative parameters and pathologic data were recorded and patients were followed for surveillance. After insufflation, the robotic trocars are placed in a standardized fashion allowing for a one-time switch of instruments to facilitate distal ureteral dissection and a wide bladder cuff excision without patient repositioning or robot re-docking.

RESULTS: Twenty-six patients have undergone NUx using our modified technique. Mean blood loss and operative time was 66 ml and 230 minutes, respectively. There were no intra-operative complications or open conversions and there were no positive surgical margins. The average follow up time was 7.8 months (range 2 – 17 months) and four cases of cancer recurrence in the bladder were identified.

CONCLUSIONS: This novel technique for robotic NUx offers a standardized and easy-to-implement approach for NUx that requires a minimal learning curve for an experienced robotic surgeon, while affording a comparable oncologic control without the need for patient repositioning or additional port placement.

SOURCE OF FUNDING: None
VP14-03 ROBOTIC ASSISTED LAPAROSCOPIC MEGA-BOARI URETERAL REIMPLANTATION–A NOVEL SURGICAL APPROACH TO LONG URETERAL DEFECTS

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INTRODUCTION AND OBJECTIVES: Long ureteral defects are often difficult to repair surgically. Psoas Hitch and Boari Flap can allow for treatment of mid to distal ureteral defects. Herein we describe the mega-boari technique, which allows for surgical treatment of long ureteral defects including pan-ureteral disease.

METHODS: Three patients underwent Robotic Assisted Laparoscopic Mega-Boari ureteral re-implantation or substitution in 2014. Video of such cases were reviewed and edited to provide a graphic description of this novel technique.

RESULTS: Three patients underwent RAL Mega-Boari ureteral reimplantation or substitution in 2014. All patients were able to undergo the procedure as planned. One patient had a pan-ureteral stricture and two patients underwent ureterectomy for upper tract urothelial carcinoma; all three patients had ureteral defects to the proximal ureter or UPJ. EBL for all three patients was less than 200 ml each. No intraoperative or postoperative complications were identified. Jackson-Pratt drains remained in place for 1 month in one patient and for 3 days in the other two patients. All three patients required foley catheter for 2 months, after cystograms demonstrated no extravasation.

CONCLUSIONS: Robotic Assisted Laparoscopic Mega-Boari ureteral reimplantation is a feasible technique for the treatment of long to complete ureteral defects.

SOURCE OF FUNDING: None

VP14-04 RETROPERITONEAL ROBOTIC PARTIAL NEPHRECTOMY FOR POSTERIOR RENAL TUMORS AS COMPARED TO THE TRANSPERITONEAL APPROACH

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INTRODUCTION AND OBJECTIVES: At NYU Langone Medical Center, we currently manage posterior renal tumors via a robotic retroperitoneal 4-arm approach if amenable to a minimally invasive partial nephrectomy (PN). We believe this technique improves anatomical access for posterior renal tumors posterior to Brodel’s line. This study compares our experience with the retroperitoneal approach to the transperitoneal approach for management of these posterior renal tumors.

METHODS: Using a prospectively maintained database, we all patients with posterior renal tumors who underwent PN, and divided them into 2 groups based on surgical approach (retroperitoneal vs. transperitoneal). We compared demographic, operative and postoperative variables. Pearson’s chi-squared test was used to assess significance of difference of categorical variables. ANOVA test was used to compare means of groups.

RESULTS: Between April, 2010 to October, 2013, 61 posterior masses underwent retroperitoneal robotic partial nephrectomy (RPN) and 58 underwent a transperitoneal RPN. Data is summarized in table 1. Despite more patients in the retroperitoneal cohort having high complexity nephrometry scores (p=0.048) and more solitary kidneys (2 vs 0, p=0.16), the mean operative time was significantly shorter (175 vs 202 min, p=0.015) and % of pts with any postop complications was significantly less (p<0.00001).

CONCLUSIONS: In our early experience, the retroperitoneal approach appears feasible and effective, and offers significant advantages over the transperitoneal approach for posterior tumors. It is currently our technique of choice to manage posterior renal tumors amenable to a minimally invasive partial nephrectomy.

SOURCE OF FUNDING: None

VP14-05 ROBOTIC REPAIR OF RECTOVESICAL FISTULA: COMBINED ANTERIOR AND POSTERIOR APPROACH WITH OMENTAL FLAP INTERPOSITION

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INTRODUCTION AND OBJECTIVES: Rectovesical fistulas are a rare but devastating complication of radical prostatectomy. Management can be challenging due to deep location in the pelvis and recent surgery. We present a case of a patient whose prostatectomy was complicated by unrecognized rectal injury and pelvic abscess. After diverting colostomy, he was referred for management of the resulting rectovesical fistula. The patient failed primary closure with a sliding rectal advancement flap.

METHODS: In this video, we demonstrate robotic repair of a rectovesical fistula. The fistula tract was first dissected posterior to bladder. Due to the location of the fistula, a transvesical approach was also required to identify the distal end of the fistula. Once the fistula was completely separated from the bladder, it was primarily closed. An omental flap was then mobilized and secured over the fistula site.

RESULTS: The patient underwent successful repair using minimally invasive techniques, preventing the morbidity of a large open procedure. The repair was confirmed with retrograde urethrogram and with CT with rectal contrast.

CONCLUSIONS: Robotic rectovesical fistula repair using a combined anterior and posterior approach is useful technique to allow complete visualization of the fistula tract and adequate separation of the rectum and bladder. The addition of an omental flap decreases recurrence and facilitates healing of damaged tissues. Using minimally invasive techniques the patient spared a large open reconstruction.

SOURCE OF FUNDING: None

VP14-06 ROBOTIC BUCCAL MUCOSA GRAFT URETEROPLASTY

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INTRODUCTION AND OBJECTIVES: Morbidity associated with traditional reconstruction of complex ureteral strictures has led to interest in applying the success of buccal graft urethroplasty...
to the ureter. Case reports suggest this is a feasible technique, but it has never been reported in a minimally invasive repair.

METHODS: We performed robotic buccal mucosa graft ureteroplasty in a 24 year-old female presenting with a 6 cm left proximal ureteral stricture, which occurred after traumatic ureteroscopy. Oral and abdominal procedures were performed synchronously. Positioning was a modified right lateral decubitus lithotomy with port placement similar to robotic pyeloplasty. The endotracheal tube was secured to the right side and the buccal graft taken from the left. The graft was sutured as a dorsal onlay and secured to an omental flap wrapped around the anastomosis. The flexible ureteroscope easily traversed the anastomosis. A double-J stent, periureteral drain, and Foley were placed.

RESULTS: Operative time was 298 minutes and blood loss 75 cc. Patient had an uncomplicated recovery and was discharged post-operative day 3. After 2 months, ultrasound showed mild pelvic tasis and 3-month diuretic renal scan revealed prompt drainage. Patient is 8 months post-procedure without pain or infection.

CONCLUSIONS: Buccal mucosa graft ureteroplasty is a promising option for complex proximal ureteral strictures. This technique is easily applied in minimally invasive surgery. Further study is needed to evaluate efficacy and morbidity compared to traditional techniques.

SOURCE OF FUNDING: None

VP14-07 RECTOVESICAL FISTULA: ROBOT ASSISTED LAPAROSCOPIC MANAGEMENT

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INTRODUCTION AND OBJECTIVES: Management of postoperative rectovesical fistulas following prostatectomy can be a challenge for the practicing surgeon. There have been numerous approaches suggested in the past, but all have high morbidity, extended convalescence, and recurrence can be common. Here we present a 68 year old male who had undergone a laparoscopic prostatectomy. He then developed a rectovesical fistula and large diverticulum, most likely from a posterior disruption of his anastomosis. He underwent several failed attempts at repair including a colonic diversion prior to being displaced by Hurricane Katrina and lost to follow up. He presented 9 years later for definitive treatment. Our objective is to demonstrate a novel and interesting use of robotic and minimally invasive techniques to minimize morbidity and decrease the risk of recurrence.

METHODS: After placement of ureteral catheters and a guidewire through the patients fistula, a robot assisted laparoscopic transvesical excision of the patient’s rectovesical fistula and bladder diverticulectomy was performed. This was done similarly to how one would perform a robot assisted laparoscopic simple prostatectomy providing excellent visualization of the diverticulum and fistula. Once excised, the fistula was closed in multiple layers. The mucosal lining of the diverticulum was then excised and the detrusor muscle was closed. The mucosa and detrusor were then closed; re-approximating the bladder neck into a normal anatomical position.

RESULTS: This patient has had no recurrence of his fistula, is continent, and scheduled for colostomy reversal.

CONCLUSIONS: With a creative mind, minimally invasive techniques can be utilized to treat these devastating complications successfully.

SOURCE OF FUNDING: None

VP14-08 ROBOTIC INTRACORPOREAL ILEAL CONDUIT USING THE INTUITIVE ENDOWRIST ONE ROBOTIC STAPLER

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INTRODUCTION AND OBJECTIVES: Utilization of robotic-assisted radical cystectomy (RARC) is increasing, and may potentially offer the benefits of decreased blood loss, smaller incisions and quicker recovery. Of the approximately 1000 RARC performed in the United States, only 3% were totally intracorporeal, due in large part to technical difficulty with this approach. Traditional use of a laparoscopic EndoGIA stapler for bowel reconstruction requires a skilled bedside assistant, and is limited by poor visualization of the tissue within the stapler due to inadequate articulation. The Intuitive EndoWrist One Robotic Stapler (EWORS) allows for precise control, improved visualization and console surgeon autonomy.

METHODS: Robotic assisted radical cystectomy with ileal conduit was performed via an intracorporeal approach with use of the Intuitive EWORS.

RESULTS: Port placement is similar to standard 4-arm radical cystectomy. The right robotic trochar was placed through the predesignated stoma site. The EWORS was placed through a 15 mm robotic port placed on the left side. Using the EWORS, bowel division and anastomosis were performed uneventfully without significant contribution by the bedside assistant.

CONCLUSIONS: Use of the EWORS during RARC can facilitate performance of intracorporeal diversions by allowing for safe division and anastomosis of bowel with minimal bedside assistance.

SOURCE OF FUNDING: None

VP14-09 THE FIRST REPORT OF ROBOTIC ASSISTED RADICAL NEPHRECTOMY WITH RETROHEPATIC VENA CAVAL TUMOR THROMBECTOMY (LEVEL III) AND EXTENDED RETROPERITONEAL LYMHP NODE DISSECTION

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INTRODUCTION AND OBJECTIVES: Less than handful of reports describe performing a robotic assisted radical nephrectomy with vena caval tumor thrombectomy for renal cell carcinoma (RCC). We describe the first report of a robotic assisted radical nephrectomy with Level III retrohepatic vena caval tumor thrombectomy (11 cm) and extended retroperitoneal lymph node dissection (RPLND) for RCC.

METHODS: A 52 year old female with large right renal mass, 11 cm (Level III) IVC thrombus, and negative metastatic workup presented to our clinic and was consented to undergo robotic assisted radical nephrectomy. Intraoperative US confirmed the presence of the retrohepatic tumor thrombus. After the division of the renal artery, the control of the inferior vena cava above and below the tumor thrombus and contralateral renal vein, a cavotomy was performed, the thrombus was removed, and the cavotomy was repaired. Additionally, an extended RPLND was performed with robotic assistance.

RESULTS: Total operative time was 6 hours and 6 minutes. Estimated blood loss was 1200 cc. The final pathology demonstrated 8.5 cm, Fuhrman grade 3, ccRCC with sarcomatoid
features and negative surgical margins. All 44 lymph nodes removed (hilar, paracaval, precaval, retrocaval, interaortocaval and preaortic) were negative for metastatic RCC. Final staging was pT3b, N0, M0. Patient was discharged to home 36 hours postoperatively and had experienced no perioperative or postoperative complications.

CONCLUSIONS: Robotic assisted radical nephrectomy with retrohepatic vena caval tumor thrombectomy and extended RPLND is technically feasible and has potential benefits. The robotic assistance may allow for improved intracorporeal repair of the IVC, shortened recovery time, while maintaining oncological principles.

SOURCE OF FUNDING: None

VP14-10 ROBOTIC TRAPDOOR PARTIAL NEPHRECTOMY FOR COMPLETELY ENDOPHYTIC TUMORS
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INTRODUCTION AND OBJECTIVES: Robotic partial nephrectomy (RPN) for entirely endophytic tumors has recently been shown to be feasible. Resecting a tumor involving the central sinus fat near the hilum results in a deep cavity that may complicate renorrhaphy. Failure to tightly close the defect may increase the possibility for postoperative bleeding. We describe a novel Trapdoor RPN technique for completely endophytic tumors that utilizes a flap of parenchyma overlying the tumor to facilitate tight closure of the defect.

METHODS: Our technique was performed on four patients by a single surgeon (DDE) between July and November 2013. After sonographic localization of the mass, the hilar vessels were clamped. Sharp dissection was then used to create our trapdoor, a ‘‘U’’ shaped flap of parenchyma overlying the surface of the tumor. The trapdoor was then propped open using a grasping retractor and the tumor was enucleated. Once the inner layer was closed and the hilum was unclamped, the trapdoor was incorporated into the outer layer closure.

RESULTS: The mean age and BMI were 54 years (45–65) and 32.5 (25–45) respectively. Mean tumor size was 2.3 cm (1.3–3.2) with 3 of 4 lesions having a RENAL Nephrometry score of 10 (9–10). Mean console time was 105 min (69–126) and mean warm ischemia time was 22 min (10–39). Average EBL was 125 mL (100–200) and all patients discharged on POD 1. There were no complications.

CONCLUSIONS: Our Trapdoor RPN technique for completely endophytic tumors utilizes a flap of parenchyma overlying the tumor to assist in tight closure of the defect.

SOURCE OF FUNDING: None

VP14-11 USE OF INDOCYANINE GREEN (ICG) FOR COMPLEX ROBOTIC RECONSTRUCTION INVOLVING BOWEL URINARY DIVERSIONS
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INTRODUCTION AND OBJECTIVES: Complex robotic reconstruction using bowel segments are challenging operative scenarios. We present our method for localization and reconstruction of ureteral-ileal anastomotic strictures with the assistance of Indocyanine Green (ICG) using near infrared (NIR) imaging.

METHODS: Our technique was performed on five patients operated on by a single surgeon (DDE) between August 2013 and February 2014. Intraoperative localization of ureteral-ileal anastomotic strictures involved retrograde and/or antegrade instillation of ICG.

RESULTS: Patient 1 with an ileal conduit underwent left-to-right transureteroureterostomy and right ureteral ileal anastomotic revision. Combined console time including parastomal hernia repair was 508 minutes. Estimated blood loss (EBL) was 150 mL. Length of stay (LOS) was 5 days. Patient 2 underwent reimplantation of the right ureter to neobladder. Console time was 138 minutes. EBL was 75 mL. LOS was 2 days. Patient 3 with a prior ileal ureter interposition underwent revision of an anastomotic structure. Console time was 193 minutes. EBL was 200 mL and LOS was 3 days. Patient 4 with an ileal conduit underwent revision of a left ureteroileal anastomatic stricture. Console time was 180 minutes. EBL was 50 mL. LOS was 7 days. Patient 5 underwent robotic repair of an ileal loop perforation and revision of bilateral ureteroileal anastomotic strictures. Console time was 176 min. EBL was 75 mL. LOS was 8 days.

CONCLUSIONS: Use of ICG during complex robotic reconstruction cases allows for localization and demarcation of bowel and ureteral segments. ICG provides a safe and feasible option for revision of ureteral-ileal anastomotic strictures.

SOURCE OF FUNDING: None

VP14-12 POSTERIOR RECONSTRUCTION WITH SUSPENSION TECHNIQUE TO IMPROVE EARLY CONTINENCE AFTER ROBOTIC-ASSISTED RADICAL PROSTATECTOMY
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INTRODUCTION AND OBJECTIVES: Urinary incontinence is a significant cause of morbidity after radical prostatectomy. We present our experience of posterior reconstruction with suspension technique to improve early continence after robotic-assisted radical prostatectomy.

METHODS: Between 2012 April till 2013 December, 42 patients underwent robotic-assisted radical prostatectomy. After the prostatectomy, the urethrovésical anastomosis was made through running continuous barbed suture with 3-0 monoviscryl sutures. Posterior reconstruction was enhanced by reapproximating Denovillier’s fascia and bladder neck & secured over pubic symphysis with 3-0 V-Loc suture. The continence was defined as no pad use in daily life.

RESULTS: The mean age was 66 year-old. The mean prostate size was 33 gm. The medium console time was 229 mins The 1 month continence rate was 58.5% & 3 month continence rate was 85.4%.

CONCLUSIONS: Posterior reconstruction with suspension technique after robotic-assisted radical prostatectomy is a feasible technique to improve early continence rate, thus decreasing patient’s postoperative morbidity.

SOURCE OF FUNDING: None
INTRODUCTION AND OBJECTIVES: To assess trends in urological surgical management of stone disease patients in Brazil over the past 15 years.

METHODS: We performed a retrospective database analysis of inpatient surgical treatment in the public health system of Brazil between 1998–2012 (urolithiasis-related procedure codes). Data was also analyzed separately for the five distinguish regions of the country. Patients managed in an outpatient basis or those from private care were not considered in the analysis. The absolute number of procedures per year and the incidence of each surgical modality adjusted for the number of patients hospitalized due to stone disease in the same period were noted.

RESULTS: The number of stone-related hospitalizations increased 15.7% (58165 to 67306), corresponding to 0.04% of the Brazilian population in 2012. In absolute numbers, the two most common modalities in 1998 were open/vedolaparoscopic (VLP) nephrectomy (2918; 5% of patients hospitalized due to stone disease), and open/VLP ureterolithotomy (2361; 4%) (figure 1); in 2012, ureteroscopy-URS (8725; 12.9%) followed by open/VLP ureterolithotomy (5822; 8.6%) were the most frequent. Between 1998–2012, percutaneous nephrolithotomy - PCNL (+791.8%) and URS (+607%) had the highest relative increase, while open/VLP pylolithotomy decreased (-47.4%) (figure 2). When considering a regional analysis, a significant increase of PCNL in the Southeast (+858%) and URS (+12467%) becomes evident. All regions experienced a significant decrease in the number of open/VLP pylolithotomy procedures.

CONCLUSIONS: Trends of stone disease surgical management in the public health system of Brazil follow worldwide tendencies towards less invasive treatment modalities characterized by a significant increase in the number of URS and PCNL.

SOURCE OF FUNDING: None