multivariate analysis, preprocedural RWPT was found to be among independent predictors for NR (OR: 8.8, 95% CI: 1.8–43.3, P = 0.008). The predictive power of preprocedural RWPT was statistically non-inferior to ST-resolution (STR) (difference between area under curves= 0.029, P = 0.595).

**Conclusion.** RWPT is strongly associated with and significantly predicts the development of NR. This association was statistically non-inferior to the well-known association between STRs and NR.

**Keywords:** ST-elevation myocardial infarction, no-reflow

### PLASMA LEVELS OF CHEMERIN, LEPTIN AND PSORIASIN AS POTENTIAL MARKERS OF SUBCLINICAL ATHEROSCLEROSIS IN PSORIASIS PATIENTS

Nevein M. Al-sheikh1, Wafaa A. Shehata2, Shaimaa A. Hassanein3, Waleed A. Ibrahim3, 4

1 Department of Dermatology & Andrology, Faculty of medicine, Menofia University, Egypt; 2Department of Cardiology, Faculty of Medicine, University of Alexandria, Alexandria, Egypt; 3Department of Dermatology, Faculty of Medicine, University of Cairo, Cairo, Egypt; 4Department of Cardiology, Faculty of Medicine, Bony Sweif University, Cairo, Egypt

E-mail address: waleedabdou@yahoo.com (W.A. Ibrahim).

**Background and objectives:** Chemerin, leptin and psoriasis are pro-inflammatory and immune-modulatory proteins associated with psoriasis and displayed higher circulating levels. Their relation to atherosclerosis in psoriatic patients has been investigated in numerous studies with wide-ranging results. Therefore, the present study aimed to assess plasma levels of chemerin, leptin and psoriasis and evaluate their relationship with carotid intima-media thickness (CIMT) and epicardial fat thickness (EFT) as potential predictors for subclinical atherosclerosis in psoriasis patients.

1: The study included fifty psoriatic patients and forty age and gender matched healthy controls. Clinical severity of psoriasis was evaluated by Psoriasis Area and Severity Index (PASI). Fasting blood glucose and lipid profile were estimated. Plasma levels of high sensitivity-CRP (hs-CRP), chemerin, leptin and psoriasis were measured by ELISA. CIMT and EFT were assessed by Ultrasoundography and Echocardiography, respectively.

**Results:** Plasma levels of hs-CRP, chemerin, leptin and psoriasis as well as CIMT and EFT were significantly elevated in psoriasis patients compared to controls (P < 0.001). CIMT and EFT were significantly positively correlated with PASI, plasma hs-CRP, chemerin, leptin and psoriasis (P < 0.001). Moreover, significant positive correlation was demonstrated between PASI and plasma hs-CRP, chemerin, leptin and psoriasis (P < 0.001). Multiple linear regression analyses showed that chemerin, leptin and psoriasis were independently correlated with CIMT and EFT and exhibited high significance for predicting their values.

**Conclusion:** It can be concluded that chemerin, leptin and psoriasis might represent an important link between psoriasis and atherosclerosis. Measurements of plasma chemerin, leptin and psoriasis along with CIMT and EFT seem to be valuable potential markers of subclinical atherosclerosis in patients with psoriasis.

**Keywords:** soriain, leptin, Atherosclerosis

### GENDER-RELATED DIFFERENCES IN RISK FACTORS AND TREATMENT STRATEGIES IN PATIENTS WITH ACUTE CORONARY SYNDROME ACROSS EGYPT: PART OF THE CARDIO-RISK PROJECT

Ashraf Reda1, 2, Mohamed Ashraf3, Mahmoud Soliman1, Hany Ragy1, Ahmed Elkersh1, Waleed Abdou1, Tamer Mostafa4, Mohammed Hassan5, Elsayed Farag6, Hazem Khamsi7, Moheb Madgdy8, Atf Elbahr9, Sameh Salama10, Ghada Kazamell, Mohammed Sadaka11, Morsy Mostafa12, Akram Abd El-Bary13, Osama Sanad14, Samir Rafa15, Yaser Abd El-Hady16, Mohammed Selim17, Nabil Farag18, Helmy El-Ghwaly19, Hosam El-Abary20, Sameh Emil21, Morad Beshay22, Ahmed Shawky23, Mahmoud Yusef24, Mohammed Abd El-Ghany25, Awni Gamal26, Yaser Baghdaddy27, Taymouth Mostafa28, Mohamed Zahran29, Khaleed Rabat30, Amany Elshorbagy31

1 Department of Cardiology, Faculty of Medicine, Menofia University, Menofia, Egypt; 2National Heart Institute, Giza, Egypt; 3Department of Cardiology, Faculty of Medicine, Zagazig University, Zagazig, Egypt; 4Department of Cardiology, Faculty of Medicine, Cairo University, Cairo, Egypt; 5Department of Cardiology, Faculty of Medicine, Mansoura University, Mansoura, Egypt; 6Cardiology Unit, Port Foad Centre, Port Foad, Egypt; 7Department of Cardiology, Faculty of Medicine, University of Alexandria, Alexandria, Egypt; 8Critical Care Department, Faculty of Medicine, University of Cairo, Cairo, Egypt; 9Department of Cardiology, Faculty of Medicine, Banha University, Banha, Egypt; 10Department of Cardiology, Faculty of Medicine, Bony Sweif University, Cairo, Egypt; 11Department of Cardiology, Faculty of Medicine, Ain Shams University, Cairo, Egypt; 12Department of Cardiology, Faculty of Medicine, Tanta University, Tanta, Egypt; 13Department of Physiology, Faculty of Medicine, University of Alexandria, Alexandria, Egypt

* Corresponding author.

**E-mail address:** ashrafreda5555@gmail.com (A. Reda).

**Background.** Strategies to improve acute coronary syndrome (ACS) prevention and management in low-and-middle-income countries are hampered by economic considerations and by the paucity of data from these countries. Egypt is the most populous country in Middle East and North Africa, and has >15% of the cardiovascular deaths in the region.

**Methods.** Data was collected from 1681 patients diagnosed with ACS in 30 coronary care units in 11 governorates across Egypt, spanning the Mediterranean coast, Nile Delta, and Upper Egypt. Risk factors and management procedures were compared in men and women.

**Results.** Women constituted 25%. Premature ACS was common, with 43% of men aged <55y, and 67% of women <65y. Most men had STEMI (49%), while a larger percentage of women had unstable angina and NSTEMI (32% each; P <0.001). Central obesity was present in 80% of men and 89% of women, with 32% of men and women having atherogenic dyslipidemia. Men were more frequently smokers (62%, vs 5% of women; P <0.001). A larger proportion of women had type-2 diabetes (53% vs 34% of men), hypertension (69% vs 49%), dyslipidemia, and obesity (71% vs 41%; P <0.001 for all). There were no gender differences in most diagnostic and therapeutic procedures, but among STEMI patients, 51% of men underwent primary PCI compared to 46% of women (P =0.064).

**Conclusions.** Obesity, central obesity and smoking are extremely prevalent in Egypt, likely contributing to an increased burden of premature ACS. The recognized tendency in many parts of the world to treat men more aggressively was absent or not pronounced.: Atherosclerosis, Cardiornisk, Risk factors, Dyslipidaemia

**Keywords:** Acute coronary syndrome, Risk factors, Atherosclerosis, Egypt, Cardiornisk

### ELEVATED HIGH SENSITIVITY C-REACTIVE PROTEIN AFTER PERCUTANEOUS CORONARY INTERVENTION IN PATIENTS WITH STABLE CORONARY ARTERY DISEASE: A PROOF-OF-CONCEPT STUDY

Bendary A1, 2, Wagdy B3, Aboul Azm4, Sanad O1, 2Benha faculty of medicine, Cardiology department, Benha University, Egypt; 2Al-Sahel teaching hospital, Ministry of health, Cairo, Egypt

* Corresponding author.

**E-mail address:** dr_a_bendary@hotmail.com (B. A).

**Objectives:** Elevated levels of high sensitivity C-reactive protein (hs-CRP) is associated with increased incidence of cardiovascular events. We aimed to investigate whether iatrogenic disruption of plaques by percutaneous coronary intervention (PCI) in patients with stable coronary artery disease (CAD) would result in a meaningful rise in hs-CRP that could impact short-term outcome.

**Methods:** From September 2017 to May 2018, we measured hs-CRP in 60 patients divided into 3 groups; group I (20 patients with stable CAD undergoing elective PCI), group II (20 patients with NSTEME-ACS undergoing PCI) and group 3 (20 patients with stable and unstable CAD undergoing angiography without PCI). Samples for hs-CRP testing were withdrawn before the procedure, 6 and 24 hours later.

**Results:** In group I, levels increased from 2.4 ± 0.6 at baseline to 8.2 ± 1.7
mg/L 24 hours later, P < 0.001). In group II, levels increased from 7.7 ± 2.9 at baseline to 12.2 ± 3.5 mg/L 24 hours later, P < 0.001. Group III showed no significant change. The median percent change in group I was significantly higher than both groups II and III (239.69% [117.86 - 566.67] versus 70.47% [- 19.09 - 212.24] and 10.98% [-27.59 - 272.73], P < 0.001). No significant differences in baseline or 24 hours hs-CRP levels were found between those who developed 30-day endpoints and those who did not.

**Conclusion:** Latrogenic disruption of plaques by PCI in stable CAD resulted in a significant rise of hs-CRP. However, this does not impact short-term outcome.

**Keywords:** hs-CRP; PCI; Stable CAD

### CARDIOVASCULAR RISK FACTORS IN A SAMPLE OF EGYPTIAN POPULATION WITH ACUTE CORONARY SYNDROME: PART OF A MULTICENTRE OBSERVATIONAL STUDY: PRELIMINARY DATA OF THE PHASE I OF THE EGYPTIAN CARDIORKIS PROJECT

Mohamed Ashraf 1, Mahmoud Soliman 2, Hany Ragy 1, Ahmed Elkersh 3, Ashraf Reda 4, 1 National Health institute, Cairo, Egypt; 2 Cardiology Department, College of Medicine, Menoufa University, Egypt

* Corresponding author.

E-mail address: m_reda_88@hotmail.com (M. Ashraf).

**Objectives:** We present the interim analysis of the pilot phase of of an observational study of the risk factors in a sample of Egyptian patients with acute coronary syndrome.

**Methods:** Illegible patients admitted with ACS were recruited using on line case report form (CRF) to collect demographic data, history of risk factors, anthropometric measures and results of laboratory investigation. Groups are compared by Chi square test or Fisher’s Exact test as appropriate. Significant P values (P<0.05) are shown, as well as borderline P values (P>0.05 but <0.1). NS= nonsignificant (ie P>0.1).

**Results:** 119 valid patients , 83 men (69.7%) and 36 (30.3%) women, of whom > half were in the 55-65 y age group. Initial diagnosis was unstable angina (UAP) in 25%, ST elevation myocardial infarction (STEMI) in 47% and non STEMI in 28%. Central obesity was present in 94.9%, hypertension in 53.8%, current smoking in 53.3%, dyslipidaemia in 50% , type 2 DM in 34.2% and non STEMI in 28%. Central obesity was present in 94.9%, hypertension in 53.8%, current smoking in 53.3%, dyslipidaemia in 50% , type 2 DM in 34.2% and +ve family history in 12.7%.

**Conclusion:** This sample of Egyptian patients with ACS, though small, yet showed that smoking in young males , obesity and DM in females and hypertension in the elderly represent the most prevalent risk factors, and strategies for smoking cessation in the youth and life style intervention in women as well as hypertension awareness program in the elderly could be the basis for a comprehensive CV prevention program in Egypt.

**Keywords:** Atherosclerosis, Cardiorkis, Risk factors, Dyslipidemia

### PILOT PHASE OF THE EGYPTIAN FAMILIAL HYPERCHOLESTEROLEMIA RESEARCH FORUM REGISTRY

Ashraf Reda 1, 2, Atef Elbahry 1, Seif Kamal 1, Bendary M 4, Sameh Emil 1, Tarek Naguib 6, Bendary A 1, Mohamed Ashraf 3, Ahmed Gaber 1, 1 Cardiology Department, College of Medicine, Menoufa University, Egypt; 2 Portfoad Cardiology Centre, Egypt; 3 National Heart Institute, Egypt; 4 Cairo University, Egypt; 5 Military Medical Academy, Egypt; 6 Zagazig University, Egypt; 7 Banha University, Egypt

* Corresponding author.

E-mail address: ashrafreda5555@gmail.com (A. Reda).

**Background and objectives:** The aim of the familial hypercholesterolemia research forum (FHRF) is to collect date about the clinical and laboratory phenotypes of the Egyptian patients with FH. We present data from the pilot phase of the Egyptian registry.

**Methods:** An online electronic case report form (e-CRF) was prepared to collect data matching the protocol of the familial hypercholesterolemia Studies Collaboration (FHSC) of the European Atherosclerosis Society (EAS).

**Results:** From August 2017 to June 2018, 19 cases with FH (26% males, mean age 36.6 ±10.4 years) were enrolled. Median time from diagnosis to enrolment was 4 (range 1-13) years. Dutch Lipid Network criteria was used in all patients, with 63%, 11% and 26% in the definite, probable and possible categories respectively. Mean baseline levels for total cholesterol was 393±129 mg/dl, for triglycerides was 281±181 mg/dl, for LDL-C was 293±131 mg/dl and for HDL-C was 40±16 mg/dl. For economic reasons, no genetic tests were done for diagnosis confirmation. All patients received lipid-lowering therapy (32% monotherapy and 68% combination with Ezetimibe). Fibrates were added in 26% of cases. Only one patient received lipoprotein apheresis. No patients received PCSK-9 inhibitors.

**Conclusion:** The pilot phase of the Egyptian FHRF registry, to our knowledge, is the first FH registry in Egypt. The preliminary data showed that the e-CRF system is feasible and reliable. The phenotype of enrolled FH cases showed very high lipoprotein levels, aggressive atherosclerosis and inadequate therapeutic interventions. Further registry data will provide detailed insights about the magnitude of the problem in Egypt.

**Keywords:** Familial hypercholesterolemia; Atherosclerosis; Dyslipidaemia

### CLINICAL SIGNIFICANCE OF ANGIOPOIETIN-1 IN BEHÇET’S DISEASE PATIENTS WITH VASCULAR INVOLVEMENT

Iman H. Bassouymi 1, Mohammed Sharaf 1, Iman E. Wali 3, Hossam M. Mansour 3, 1 Department of Rheumatology and Rehabilitation, Faculty of Medicine, El-Kasr El-Aini Hospital, Cairo University, Cairo, 12613, Egypt; 2 Medical Microbiology and Immunology, Faculty of Medicine, Cairo University, Giza, Egypt; 3 Cardiovascular Department, Aswan university, Faculty of Medicine, Six of October University, 6th of October, Egypt

* Corresponding author.

E-mail address: mansour.hossam@gmail.com (H.M. Mansour).

**Background:** Behçet’s disease (BD) is a chronic multisystem inflammatory disorder of unclear etiology. Vascular inflam-motion, endothelial dysfunction and angiogenesis may be in part responsible for the pathogenesis of BD. Angiopoi-etin-1 (Ang-1) is a recent angiogenic mediator. The aim of the present study was to assess Ang-1 in the plasma of BD patients as well as to analyze its association with clin-ical, and laboratory parameters of the disease.

**Methods:** The present study included 47 BD patients and 30 age- and gender-matched healthy controls. Demographic, clinical, disease activity and severity were prospectively assessed. Plasma Ang-1 levels were measured using enzyme-linked immu-nosorbent assay.

**Results:** The plasma level of Ang-1 in BD patients was significantly lower than healthy controls (p =0.005). Plasma Ang-1 level in patients with vascular affection was significantly lower than those without vascular affection (p = 0.045). Levels of Ang-1 showed a significant pos-itive correlation with steroid dose. Patients who received cyclophosphamide or steroids showed a significant increase in plasma Ang-1 level. This was further confirmed by the results of the multivariate analysis. There was no significant association between plasma Ang-1 levels and other clin-cal manifestations or disease activity and severity. Plasma Ang-1 levels were diminished in our BD patients especially in patients with vascular involvement.

**Conclusion:** Larger studies with further investigations of the precise role of Ang-1 in the pathogenesis of BD are needed and might lead to novel therapies for the clinical management of BD.

**Keywords:** Angiogenesis, Angiopoietin, Behçet’s disease, Vasculitis

### THE IMPLICATIONS OF DIABETES MELLITUS ON THE PATTERN OF RISK FACTORS PROFILE AND TREATMENT STRATEGIES IN PATIENTS WITH ACUTE CORONARY SYNDROME

Ashraf Reda 1, 2, Atef Elbahry 1, Elsayed Farag 3, Hazem Khamsi 6, Mohamed Ashraf 1, 1 Cardiology Department college of Medicine, Menoufa University, Egypt; 2 Portfoad Cardiology centre, Egypt; 3 Zagazig university, Egypt; 6 th of October University, Egypt; 4 National Heart Institute, Egypt

* Corresponding author.

E-mail address: ashrafreda5555@gmail.com (A. Reda).

**Background:** Diabetes Mellitus (DM) is one of the most important risk