

Results

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A) Summary of the previous history and laboratory investigations preoperatively before admission.

(1) Cases and their number.

No. of cases	Problem
40	Recurrence after repair of inguinal hernia

Table (4)

(2) Time of recurrence before repair

Time after repair	No. of patients
- one month	10
- one year	12
- 1 - 8 year	18

Table (5)

(3) Type of recurrence in the (40) recurrent cases which were diagnosed and operated as inguinal hernias, the type of recurrence was as follows:

Type of recurrence	No. of cases
Indirect	28
Direct	8
Direct + indirect	4
Total	40

Table (6)

(4) The number of recurrence (s) was as follows:

Number of patients	Number of recurrences
38	First recurrence
2	2 nd recurrence

Table (7)

- (5) Ages: The ages range between (2-70) years as in the following

Age in years	No. of cases
1 - 2 year	2
More than 2 y - 10 y	3
More than 10 y - 20 y	5
More than 20 y - 30 y	10
More than 30 y - 40 y	10
More than 40 y - 70 y	10

Table (8)

- (6) Occupation:

The type of work could be divided into 2 categories, moderate or heavy work as farmers, carriers, builders etc and sedentary life as house guards and very young children, this is shown in the following table.

No. of patients	Type of work
27	Moderate or heavy work
13	Sedentary life

Table (9)

- (7) Sex:

All patients were males

- (8) Special habits of importance as smoking is shown in the following table

No of patients	Degree of smoking or not
15	Heavy
15	Moderate
10	Not

Table (10)

(8) Duration of hernial swelling before the first repair as shown in the following table

No. of cases	Duration in years
15	Less than 1 y
12	1 - 5 y
13	5 - 10 y

Table (11)

(9) Body built taken by the sheet description as shown in the following table.

No. of patients	Body built
3	Over weight
6	Thin (under weight)
31	Normal or near normal

Table (12)

(10) Side of the original hernia

No. of cases	Side
20	Right side
19	Left side
1	Right and left

Table(13)

(11) Early postoperative complications after the previous repair, other than recurrence is shown in the following table.

Postoperative complication	No. of cases
Hematoma	3
Seroma	2
Wound sepsis	6
Pulmonary embolism	-
Persistent cough	6
D. V. T	2
Retention of urine	5

Table (14)

The following investigations were done according to their essentiality and relation to the case problem (s).

- 1- Urine and stool analysis.
- 2- RBC count.
- 3- WBC count.
- 4- HB %.
- 5- Fasting blood sugar.
- 6- Proctoscopy.
- 7- Abdominal sonar.
- 8- Plain x-Ray chest.
- 9- Blood urea.
- 10- Plain X-Ray and IVU if needed.
- 11- ECG.

The positive data were as follow:

1- Urine analysis:

No. of patients	Urine analysis
10	Living bilharzia ova
30	-Ve

Table (15)

2- Stool analysis

No. of patients	Stool analysis
4	Living bilhazial ova
36	-ve result

Table (16)

3- HB %

No. of patients	Hb %
3	Less than 70%
37	Over 70%

Table (17)

4- chest X-Ray

No. of cases	Chest X-Ray result
40	20 with chest diseases

Table (18)

Abdominal and pelvic Ultrasonography

No. of patients	Possible primary cause by sonography
16	Belh hepato splenomegaly
4	S. E. P

Table (19)

5- Proctoscopy:

Proctoscopy was done for (4) cases and in (2) of them piles was seen but nothing else this abnormality could be visualized.

6- Plain x ray U.T and I. V. U:

this was done for (10) cases and in (4) of them senile enlarged prostate was the diagnosis of the predisposing cause of the hernial swelling and its recurrence.

No. of cases	Plain x-ray U.T and I.V.U
10	(4) of them with S.E.P

Table (20)

7- The overweight patients never tried to decrease their weight and were still obese at the time of admission.

(B) Procedures used and operative details in our study.

- 1- Bassini repair.
- 2- Shouldice repair.
- 3- Bassini + Artificial mesh.

The fifth group:

It consists of five (5) patients with complicated inguinal hernia (irreducible), coming to the emergency department. At operation in all of them, the obstructing element was in the internal ring, and the previous repair was by absorbable sutures, the contents in four (4) of them was small bowel, and in two of them the intestine was doubtful, by hot water backs and oxygen over the affected bowl for (5-15) minutes, the color returns to normal, the peristalses was good, and the arterial pulse was present. Bassini repair was done for three (3) patients of them, with artificial prolene mesh placed over the repair and fixed with (proline) sutures (1/0) over the posterior wall with plugging the narrowed internal ring with a small piece of mesh, together with wound drain. At the fifth case (5 th) the sigmoid colon was healthy and reduced to the abdomen, the same repair was done.

In all cases wound drain was left under the skin and the drain was left in situ. The wound drain was removed 48 hour postoperatively.

Type of hernia	No. of cases
Indirect	4
Direct	1
Direct + indirect	-
Total	5

Table (24)

The sixth group:

It consists of three (3) patients, the recurrence was in a part of the wound, and of the direct type, the ilioinguinal nerve was found scarified, the scar of the previous operation was prominent. Plication of fascia transversalis was done with Bassini repair with artificial mesh fixed with proline sutures (1/0) to the weak posterior wall at the lower medial part (the site

recurrence and covering all the posterior wall up to the external ring. A drain was left over the repair.

Type of hernia	No. of cases
direct	-
indirect	3
direct + indirect	-
Total	3

Table (25)

The seventh group:

They are two (2) patients, one of them was (40 ys old), and the other was (65 y) with previous two recurrences, the hernia was direct in the younger, and indirect in the older, and the previous repair was Bassini repair with absorbable sutures.

In our repair. Bassini repair was done with non absorbable sutures (proline), with iliopubic tract repair was done with mesh, together with wound drain.

Type of harnia	No. of cases
indirect	1
direct	1
direct + indirect	-
Total	2

Table (26)

8- The eighth group:

It consists of one patient, he is very old (70 y), with very weak posterior wall, and the testis was found atrophic, orchidectomy was done, with obliteration of the inguinal canal with interrupted prolene sutures.

Type of hernia	No. of cases
Indirect	1
Direct	-
Direct + indirect	-
Total	1

Table (27)

The technical details of the operative techniques in the (40) recurrent cases was summarized in table (28)

Technical detail	No. of instances	percent
1- High ligation of the sac	40	100%
2- Closure of the internal ring	40	100%
3- Relaxing incision	15	37.5%
4- Excision of the cremaster	12	30%
5- Contents		
a- sigmoid	1	2.5%
b- tubes and ovary	-	zero
c- ilio caecal	-	zero
d- small bowel	4	10%
e- urinary bladder	2	5%
6- Excision of lipoma	5	12.5%
7- orchidectomy	3	7.5%

Table (28)

The operations done could be summarized in the following table:

Type of hernia	Type of repair	Drain left or not
* First group (2) cases oblique. H.	Herniotomy	a drain left in the wound
* Second group (10) cases oblique (4) direct + indirect (1) direct	Bassini	no drain
* Third group (2) oblique	Obliteration of inguinal canal	a drain left in the wound
* 4 th group (8) indirect (2) direct	Shouldice	a drain left in the wound
* 5 th group (irreducible) (4) indirect (1) direct	Bassini with mesh	wound drain
* 6 th group (3) direct	Bassini + plication of fascia transversali + mesh	wound drain
* 7 th group (1) direct (1) indirect	Bassini + iliopubic tract repair + plication of F.T + mesh	S.C drain
* 8 th group (1) indirect	Obliteration of the inguinal canal	No drain

Table (29)

C) postoperatively, patients were observed for the early postoperative complications as shown in the following table:

No	Early postoperative notes	No. of pts
1	Seroma	1
2	Hematoma	-
3	Wound sepsis	1
4	Pulmonary embolism	-
5	Intestinal obstruction	1
6	Persistent cough	12
7	Retention of urine	9
8	D.V.T	3
9	High fever	7

Table (30) .

D) Late complications:

During the period of follow up, some patients presented with indurated scar, especially those whose repair needs mesh, their number was (8) cases, others presented with stitch sinus (2), which was daily dressed, and cleaned, until the stitch was rejected from the sinus end, if it was catgut or silk suture left during removal of stitches.

Two patients with a direct recurrence after (3-5) months of the operation.

Three patients represented with scrotal induration at the side of our repair, which at the beginning was firm, then few months later it becomes more firm or even hard and its size doesn't return to the original normal size and consistency. This usually leads to testicular atrophy so after sometimes the consistency doesn't change but the size decreases.