Transabdominal Preperitoneal Inguinal Hernia Repair

Dr. Mohamed A M Zarrouk
Department of General Surgery
Faculty of Medicine -Zawia University

Abstract:

Inguinal hernias are the most common hernias and their repairs are the most frequent operations in general surgery . The objective of this study was to evaluate laparoscopic hernia repair using Transabdominal preperitoneal approach in Zawia teaching hospital .

Methods : A total of thirty two patients underwent laparoscopic TAPP herniorrhaphy between January 2009 and March 2011 and analysed from demographic data until the date of discharge . Results : thirty two patients

were operated and the TAPP transabdominal preperitoneal repair was a safe and effective operation .

1.Introduction.

Inguinal hernias are the most common hernias[1,2], the incidence of symptomatic hernia is about 16% in adult men [3] . Inguinal hernia repair is the most frequent operation in general surgery [4,5,6,7].

The two most important changes in the inguinal hernia surgery are the introduction of the tension free open mesh repair by Lichtenstein et al in 1989 and the application of laparoscopic surgery in the treatment of inguinal hernia during the early 1990s [8].

Ger et al reported the first laparoscopic inguinal hernia repair[9,10] and Schuitz et al were the first to report the use of prosthetic material during laparoscopic inguinal hernia repair [11]

The proportion of laparoscopic repairs has increased markedly and become common place over the last 20 years[12,13].

TAPP repair has patient-oriented positive out comes and many advantages including rapid evaluation of the contralateral groin[14,15], preferred for recurrent inguinal hernia repair, reduces acute and chronic postoperative pain[16,17,18,19,20]. Offers the possibility to perform a diagnostic laparoscopy[21], associated with earlier return to work [22] , has low recurrence rate [23] , fewer wound complication and better cosmesis [24] .

METHODS:

32patients underwent Transabdominal preperitoneal inguinal hernia repair at Zawia Teaching Hospital in Zawia , Libya , in the period between January 6th 2009 to April 7th 2014.

Demographic data of the patients , duration of postoperative hospital stay ,and the type of the hernia were recorded and analyzed prospectively .

The patients were adviced to embty their urinary bladder befor the operation .

All TAPP repairs done under general anesthesia in a supine position.

Three trocars were used , a 10 mm umbilical optic trocar and two 5mm midclavicular manipulating trocars . A peritoneal flap developed to get access to the sac which reduced and in case of direct inguinal hernia the sac inverted and anchored to Coopers ligament .

A proline mesh were used to cover hernial orifices by using a 5mm Tacker , begening at the pubic tubercle and proceeding laterally . The peritoneal flaps were closed using the same Tacker . The trocars were removed under direct vision and the wounds of trocars infiltrated by local anesthetic .

A prophylactic antibiotics used for all patients . Postoperative analgesia initiated by Paracetamol and supported by Nonsteroidal anti-inflamatory drugs and/or Pethedine.

RESULTS:

Thirty two patients who had inguinal hernias were operated , thirty one patients were males and one patient was female Table 1 , all patients had unilateral inguinal hernia , three of these operations were performed for recurrent hernias.

Table 1 Demographic data of the patients

Decade	Number of the patients
20-<30 years	7 males
30-<40 years	6 males
40-<50 years	8 males and 1 male
50-<60 years	1 male
60-<70 years	4 males
70-<80 years	5 males

The types of inguinal hernias treated are 25 indirect inguinal and 7 direct inguinal hernias

Postoperative hospital stay was varies from one to five days Table 2 , the greater number of patients left hospital within 24 hours and other patients stayed longer because of other medical reasons

Table 2 Duration of postoperative hospital stay

Number of the days	Number of the patients
One day	19
Two days	8
Three days	3
Four days	1
Five days	1

Since 2009 until now 2015 no recurrent cases and no wound complications were reported .

DISCUSSION :

Inguinal hernia repair is a major public health issue. Traditional groin hernioplasty methods including Bassini , McWay , and shouldice repairs were associated with a high rate of recurrence and postoperative chronic pain [25].

The nature of surgery has led to improvement in operative techniques to decrease the postoperative stress response [26] . Improved instrumentation put the principles of minimal invasive surgery into practice [27] . Arregui et al described the TAPP approach in 1992 that requires intra-peritoneal access to fix a mesh in a pre-peritoneal space . Laparoscopic inguinal hernia repair is currently the standard alternative approach for hernia repair [28] .

Laparoscopic repair (TAPP) has several advantages over open repair which includes reduced postoperative pain[29,30,31], less requirements of postoperative analgesia reduced recurrence rate , [32] , fewer wound complications [33],reduced postoperative hospital stay, better preservation of testicular function [34] ,better long term quality of life outcomes [35], faster return to usual activities [36], easier repair for recurrent hernia [37] , adviced for recurrent [38] and bilateral hernias , the performance of a simultaneous diagnostic laparoscopy [39] , and improved cosmesis [40] .

CONCLUSION:

The transabdominal prepeitoneal inguinal hernia repair is a safe operation and is an effective method to correct an inguinal hernia.

It has clear and obvious many advantages over the open repair.

We must enhance it and provide all the facilities for such operation and is a necessaty work to establish the total extraperitoneal inguinal hernia repar in our hospital .

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