

Original Research Paper

Comparison among surgical factors in Transabdominal Preperitoneal (TAPP) and Total Extraperitoneal (TEP) Repair conducted in a tertiary care hospital.

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ABSTRACT:

Inguinal hernias are outpouching of the peritoneum with or without its contents, which occurs through the muscles of the anterior abdominal wall at the level of the inguinal canal in the groin. The two mainly used techniques are TAPP and TEP both of which are laparoscopic techniques. This study was conducted on 40 patients in the Post-Graduate Department of Surgery, ASCOMS for a period of one year from November 2020 to October 2021. We found that right sided inguinal hernias are common than the left sided hernias with TEP requiring more operating time while there is no significant difference in the hospital stay. Meanwhile, both operations had a very less complication rate.

Keywords: Inguinal hernia, TAPP, TEP, Inguinal swellings.

INTRODUCTION:

Inguinal hernias are outpouching of the peritoneum with or without its contents, which occurs through the muscles of the anterior abdominal wall at the level of the inguinal canal in the groin. The two mainly used techniques are TAPP and TEP both of which are laparoscopic techniques. TEP is different in that peritoneal cavity is not entered and mesh is used to seal the defect in the extra-peritoneal space. The choice of technique could be according to the skills and likes of the surgeon, there is no sufficient evidence to recommend the use of TAPP over TEP [1].

MATERIAL AND METHODS:

This comparative prospective study of 40 patients suffering from primary unilateral inguinal hernia was divided into 2 groups with 20 patients in each group based on the method of approach for hernia repair (TAPP/TEP). This study was conducted in the Post-Graduate Department of Surgery, ASCOMS for a period of one year from November 2020 to October 2021.

The exclusion criteria were:

- Below 18 years of age
- Bilateral Inguinal hernia
- Obstructed/Strangulated/Irreducible/Recurrent Inguinal hernia
- Not fit for general anesthesia
- Previous lower abdominal surgery

RESULT:

The mean age group of Patients in TAPP group was 59.3 +/- 16.89 and TEP group was 55.5+/-15.52.h The age of the patients in our study ranged from 25-82 years. The detailed data is shown in the Table 1.

Table 1. Age wise distribution of patients according to technique performed.

Age Distribution	Mean Age	TAPP(n=20)	TEP(n=20)
25-44	34.5	4	5
45-64	54.5	7	10
>64	73.5	9	5

In our study group we found that the most common presentation i.e., 35% was of Right sided inguinal hernia with pain while the least common presentation was of left sided inguinal hernia with pain in 5% patient only. The detail is given in table 2.

Table 2. Distribution of patients according to their chief complaint.

Chief Complaints	No.of patients	Percentage
Rt side with pain	14	35%
Rt side without pain	11	27.50%
Lt side with pain	2	5%
Lt side without pain	13	32.50%

The two surgical methods differ in term of duration of operation (p value 0.0001), significantly longer for patients in TEP group. The mean duration of operation for the TAPP group was 65.95+/-4.16 min and the mean duration of operation for the TEP group was 83.35+/- 3.76min. Details given in table 3.

Table 3. Duration of Operation.

Operative Time	Mean	SD
TAPP	65.95	4.16
TEP	83.35	3.76

The hospital stay was found to be longer in TAPP group than TEP group. The detailed information is given in table 4.

Table 4. Duration of Hospital Stay.

Hospital Stay (in days)	Mean	SD
TAPP	1.9	0.47
TEP	1.4	0.51

Among patients who underwent TAPP 3 patients had developed wound seroma, 2 had developed hematoma and 3 patients had scrotal swelling while patients who underwent TEP 3 developed wound seroma. The details are given in table 5.

Table 5. Distribution of patients according to wound related complications.

Wound Related Complications	TAPP	TEP
Wound Seroma	3	3
Hematoma	2	0
Scrotal Swelling	1	0

During TEP procedure 2 patients had peritoneal tear, thus converting the procedure to TAPP. During both the procedures, there was no injury to the inferior epigastric vessel and no trauma to the adjacent structures.

DISCUSSION:

In patients we found right sided inguinal hernia was about 2 times more common than left sided inguinal hernia which is like studies previous conducted which found prevalence of 53% and 58% of the total cases [2,3]. The duration of operation was also noted, and these are similar to results reported with Zeineldin A et.al. they reported the duration of TEP is significantly higher than the TAPP [4]. Similar findings were seen in a review which reported that experienced operators (between 30 to 100 operations) are 40 min for TAPP and 55 min for TEP, this difference was not significant [5]. However, some of the studies found the opposite result to the following studies [6,7]. Various studies like our own study represent that the hospital stay

duration is usually less than 2 days in a uncomplicated procedures [8].Gass M et.al. found the postoperative hospital stay was significantly longer for patients undergoing TAPP than for those with TEP [9]. During both the procedures, there was no injury to the inferior epigastric vessel and no trauma to the adjacent structures. In our study the complication among TAPP had more complication rate than the TEP. The rate of visceral injuries is very less 0-0.06% in these surgeries and 50% of such injuries are caused during the access phase of the laparoscopy and small bowel being the most injured segment [10,11]. In two patients there was conversion from TEP to TAPP as there is better visualization of anatomical structures and larger working space than TEP.

CONCLUSION:

In conclusion we found that right sided inguinal hernias are common than the left sided hernias with TEP requiring more operating time while there is no significant difference in the hospital stay. Meanwhile, both operations had a very less complication rate.

Conflicts of Interest: Nil

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