



A COMPARATIVE STUDY ON eTEP-RS VS IPOM FOR UMBILICAL HERNIA.

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(ABSTRACT) **Introduction-** umbilical hernia repair has undergone various developments with laparoscopic repair of umbilical hernia is gaining increasing popularity due to its low recurrence rate, short hospital stay, and low complication rate[1]. **Aim & Objectives:** The aim of the study was to compare laparoscopic eTEP-RS & IPOM hernia repair in umbilical hernia. **Method:** This is a prospective study. The total sample size for this study is 45 and among these 18 cases were from eTEP-RS and 27 cases were from IPOM in which variable defect size, operative time, intra and postoperative complications & return to normal activities were compared. The study period was from May 2015 to June 2022. **Results:** In a total of 45 cases eTEP-RS was performed in 18 patients having mean age of 49 years and were mostly males (64%) whereas IPOM was performed in 27 patients having mean age of 50 years and were mostly males(82%). We noted mean operative time of eTEP-RS repair is 120 min which is longer than the IPOM which is 52.4 min. We have seen the post operative complications in IPOM were more than eTEP-RS with a significant p-value 0.014. Who underwent IPOM has mean hospital stay of 8.4 days where as in eTEP-RS it was 3 days. Chronic abdominal pain is more significant in IPOM. No intra operative bowel injuries in any of the cases. **Conclusion-** Laparoscopic eTEP-RS repair for umbilical hernia have long learning curve but it is the best method with less postoperative complications and early recovery and return to day-to-day activities.

KEYWORDS : umbilical hernia, eTEP-RS, IPOM

Introduction -

umbilical hernia is included in ventral hernia group, Defect <3cm can be managed by herniorrhaphy. Defects >3cm are closed using prosthetic mesh. umbilical hernia repair has undergone various developments with laparoscopic repair of umbilical hernia is gaining increasing popularity due to its low recurrence rate, short hospital stay, and low complication rate[1].

Aim and Objectives-

The aim of the study was to compare laparoscopic eTEP-RS & IPOM hernia repair in umbilical hernia.

Materials and Methods-

This is a prospective study with Sample size of 45, Among these 18 cases were from eTEP-RS and 27 cases were from IPOM in which defect size, operative time, intra and postoperative complications & return to normal activity were compared. This study was conducted in NRI Medical college & General Hospital from October 2020 to June 2022.

Inclusion criteria-

- Patient age above 20 years.
- Umbilical hernia with defect size equal to or less than 5cm.
- Elective hernia repair.
- Patients who are fit for general anesthesia.

Exclusion criteria-

- Defects more than 5 centimeters.
- Hernia defects considered to require an open approach.
- Prior mesh placement in the retro rectus space(open method).
- Patients not fit for laparoscopic surgery.
- Those who are unwilling.

Results-

A total of 45 cases were recorded during the study period, among 18 cases underwent eTEP-RS and 27 cases underwent IPOM repair for umbilical hernia. Mean age

Figure-1: Retro rectus plane showing volcano sign with umbilical defect in anterior abdominal wall.

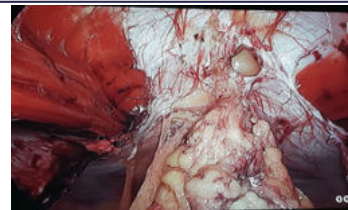


Table-1 Age distribution

Age distribution	IPOM	eTEP-RS
20-40 years	4	8
41-60 years	18	6
>60 years	4	5

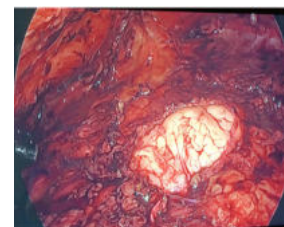


Figure 2: Reterorectus plane with peritoneal defect.

In both eTEP-RS and IPOM there is male predominance.

Table-2 gender predominance

Gender	IPOM	eTEP-RS
Male	11	22
female	7	5

In operative data mean defect size in eTEP-RS was 3.1 cm and in IPOM was 2.8cm, mean duration of surgery in eTEP-RS was 140min and in IPOM was 52.4 min.

Table-3 operative data

Operative data	IPOM	eTEP-RS
Mean defect size	3.1cm	2.8cm
Mean mesh size	22.5x17.7cm	22x18.1cm
Mean duration of surgery	140 min	52.4 min

Mean Post operative hospital stay in eTEP-RS was 3 days and in IPOM was 8.4 days.

Post operative complication such as post operative ileus and chronic abdominal pain were more in IPOM with a significant P value- 0.016 and 0.000239.

Table-4 post operative complication

Complications	IPOM	eTEP-RS	P value
SSI	2	1	0.807
seroma	1	3	0.13
Post operative ileus	10	0	0.016
Chronic abdominal pain	18	2	0.000239

Discussion-

The first umbilical hernia repair procedure was described by William Cheselden in 1740. Since 1901, when William J. Mayo reported a method of suturing by overlapping fascia using nonabsorbable sutures, either simple closure or the Mayo technique has been used, but the recurrence rate remains at 10–30%. eTEP is a novel technique which was first introduced by Jorge Daes in 2012 to address difficult inguinal hernias.

It is postulated that eTEP-RS causes vascularization of the mesh from both sides, less recurrence, fewer issues of fixation, less pain, and less chances of bowel adhesions.

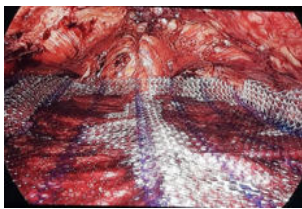


Figure-3 polypropylene mesh placed in retro rectus space

In our study we have noted male predominance in both methods and mean duration of surgery is high in eTEP-RS method, this indicates it has long learning curve. eTEP-RS showed less postoperative complications with a significant p value of 0.014.

limitations of the study were it is a single centric study, short period of follow-up, small sample size.

CONCLUSIONS:

We conclude that eTEP-RS is a feasible and safe technique for the repair of umbilical hernia, With good understanding of the anatomy and surgical technique, this technique can be adopted in centers with advanced laparoscopic skills with careful patient selection.

Laparoscopic eTEP-RS repair for umbilical hernia have long learning curve but it is the best method with less postoperative complications and early recovery and return to day-to-day activities.

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