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Study Of Clinical Profile Of Extended Totally Extra Peritoneal (ETEP) And Totally Extraperitoneal (TEP) Procedures Amongst Patients With Inguinal Hernia.

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ABSTRACT

Endoscopic herniorrhaphy (EH) has been shown to have a recurrence rate comparable to open tension-free herniorrhaphy (OH), reducing the relative risk by 30-50% over conventional non-mesh procedures. The main objective of this study was to study post operative outcome and compliance amongst patients undergoing ETEP and TEP and assess post operative complications amongst patients operated by TEP and ETEP to compare complications (Intra-operative, Early or Late Post-operative) associated with inguinal hernia repair. At the time of registration the baseline information was taken especially with respect to sociodemographic factors, clinical findings, and other investigations. On lump examination it was seen that all patients had cough impulse positive, the lump was reducible in all and on percussion there was a dull note in all the respondents among both the groups respectively. On deep ring occlusion, among TEP it was seen that majority 23cases had indirect deep ring occlusion and among ETEP surgery majority 21cases had indirect deep ring occlusion. The eTEP technique has a place in the armamentarium of hernia surgeons. Residents and surgeons early in their experience find this technique easier to master than the classic TEP method. It has expanded the traditional indications of the extraperitoneal approach to patients with a difficult body habitus, a short umbilicus-pubis distance, and previous pelvic surgery. As the surgeon‟s experience increases, the indications for the traditional TEP technique can be expanded to more complex cases.

Keywords: Endoscopic herniorrhaphy, open tension-free herniorrhaphy

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INTRODUCTION

Endoscopic herniorrhaphy (EH) has been shown to have a recurrence rate comparable to open tension-free herniorrhaphy (OH), reducing the relative risk by 30-50% over conventional non-mesh procedures [1]. Given their similarityin terms of the recurrence rate, other issues associated with these surgical techniques become more important [2]. Also, in the age of evidence-based medicine, health technology assessment mandates the full and explicit evaluation not only of efficacy and safety but also of every aspect that impacts on society. Economic aspects become important when resources are scarce and choices have to be made by policy makers [3]. Furthermore, patients are demanding effective treatments that also yield the maximum health-related quality of life (HRQoL) [4]. By the age of two, 37-40% still persists and half of them may develop into an inguinal hernia later in life [5]. An acquired inguinal hernia is generally not believed to be associated with a persistent processus vaginalis but develops in a secondary manner. Several risk factors for the development of this type of hernia have been suggested, among these various connective tissue factors. For individuals with Marfan´s and Ehlers-Danlos syndrome, cutis laxa and osteogenesis imperfecta, all of which carry an increased hernia incidence, the aetiological link to connective tissue disorders seems to be quite clear [6]. In the recent times, the procedure most commonly used to treat adult inguinal hernias is the tension-free open hernioplasty using a mesh [7, 8].

MATERIAL AND METHODS

Study design

The present study was prospective type of study.

Study area

Department of surgery at Tertiary care hospital

Outpatient department of Surgery of tertiary care hospital. Registration of patients was from January 2021 to June 2022. They were registered when admitted under Surgery department. At the time of registration, patients with exclusion criteria were not enrolled for study.

The main objective of this study was to study post operative outcome and compliance amongst patients undergoing ETEP and TEP and assess post operative complications amongst patients operated by TEP and ETEP to compare complications (Intra-operative, Early or Late Post-operative) associated with inguinal hernia repair. At the time of registration, the baseline information was taken especially with respect to sociodemographic factors, clinical findings, and other investigations.

Inclusion criteria

- Should have an Inguinal Hernia
- Consent to participate in study
- Patients with uncomplicated Inguinal Hernias
- Patients with no evidence of infections

Exclusion criteria

- Patients with bleeding diathesis
- Patients with complicated Inguinal Hernias
- Unfit for surgery
- Lost to follow up

Data collection

After clinical approval of ethical committee and informed consent, 100 patients posted for Inguinal Hernia Repair at tertiary care center were chosen from January 2021 to June 2022. Patients were

evaluated and educated about the merits and de-merits of the study. Informed consent was taken prior to the study. Patients were selected based on inclusion criteria and exclusion criteria. Patients were randomly divided (given choice) into two groups of 30 patients each.

RESULTS

Group I undergoing TEP surgery – 30 cases Group II undergoing ETEP surgery – 30 cases.

Table 1: Age wise distribution among the study population

Age	TEP	ETEP
<20 years	3	1
21 to 40 years	10	11
41 to 60 years	12	10
>60 years	5	8
Total	30	30

Table 2: Complaints among the study population

Complaints	TEP	ETEP
Pain	4	4
Swelling	30	30
Vomiting	1	1
Chronic cough	3	4
Increased frequency of micturition	3	3

Table 3: Lump examination

Lump examination	TEP	ETEP
Cough impulse	30	30
Reducible	30	30
Percussion dull note	30	30

Table 4: Deep ring occlusion

Deep ring occlusion	TEP	ETEP
Direct	7	9
Indirect	23	21
Total	30	30

Table 5: Ziemen`s Test

Ziemen	TEP	ETEP
Direct	7	9
Indirect	23	21
Total	30	30

DISCUSSION

Age wise distribution, where among TEP majority 12 patients were in age group of 41to 60 years and among ETEP surgery patients majority 11cases were in 21 to40 years of age group. Mean age for TEP was 43.8± 16.05 years. Mean age for ETEP was 47.5 ± 17.6 years. P value 0.39. As p value was >0.05, hence no significance seen. Study by Singh, S et al [8] showed that mean age of TEP group was 45.7 and ETEP was 44.2 years. Study by D. Ramesh et al [9] showed that majority 28.5% were in age group of 21 to 30 years, 14.2% for age 31-40yrs,19.04% for age 41-50yrs ,14.2% for age 51- 60yrs,14.2% for age 61-70yrs, 9.52% for age >70yrs.

Complaints among the study population, where among both groups all patients had swelling,

followed by pain, followed by chronic chough and increased frequency of micturation respectively and only 1case each had vomiting. On lump examination it was seen that all patients had cough impulse positive, the lump was reducible in all and on percussion there was a dull note in all the respondents among both the groups respectively. On deep ring occlusion, among TEP it was seen that majority 23cases had indirect deep ring occlusion and among ETEP surgery majority 21cases had indirect deep ring occlusion. On Ziemen`s test, where among TEP it was seen that majority 23 cases had indirect deep ring occlusion and among ETEP surgery majority 21 cases had indirect deep ring occlusion. Study by Singh, S et al [8] showed that among both group majority had indirect hernia.

Study by D. Ramesh et al [9] showed that among 21 cases studied, 15 cases had Indirect inguinal hernia and 6 had direct inguinal hernia. Although all cases were preoperatively evaluated most of the diagnosis on the type of hernia was made intra operatively.

CONCLUSION

The eTEP technique has a place in the armamentarium of hernia surgeons. Residents and surgeons early in their experience find this technique easier to master than the classic TEP method. It has expanded the traditional indications of the extraperitoneal approach to patients with a difficult body habitus, a short umbilicus-pubis distance, and previous pelvic surgery. As the surgeon‟s experience increases, the indications for the traditional TEP technique can be expanded to more complex cases.

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