

# A Comparative Study Of Lichtenstein Mesh Repair (LMR) v/s Modified Bassini's Repair (MBR) + MESHPLASTY of Indirect Inguinal Hernias in Rural Population

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**Abstract---** *Background: Inguinal hernia is one of the biggest challenges in surgical practice because of its frequency, complexity as well as the socio-economic consequences. Inguinal hernia repair is the only cure; spontaneous recovery has never been reported. There are many techniques of hernia repair but most effective and commonly done are Lichtenstein's repair and modified bassini's repair with meshplasty. This study is being done to see the recurrence rate and post operative complication in the two groups of inguinal hernia patients one with Lichtenstein's repair and modified bassini repair with meshplasty. Objectives- To study the recurrence rate among both groups, to study the factors which lead to recurrence, to evaluate operative time in both procedures. Methodology- Patients will be divided in two groups, one group will be operated by lichenstein repair and other will be operated by modified bassini repair and meshplasty. The patients will be followed up postoperatively after 6 months by clinical examination and USG inguinoscrotal region for hernia recurrence. Results- The results expected in the end of the study are that the risks of recurrence may be less in both the groups with almost the same incidence of recurrence in both the groups. Conclusion- It may be concluded that both the surgical procedures for inguinal hernia repair are effective equally with less chances of recurrence and complications*

**Keywords---** *Hernia, meshplasty, comparison, recurrence*

## I INTRODUCTION:

Inguinal hernia is a great deal of challenge in surgical practice due to its high incidence, complex anatomy as well as the socio-economic consequences. The incidence and prevalence of inguinal hernias are not precisely known. Repair is the only cure, chances of spontaneous recovery are not scripted. The risks of hernia occurrence in lifetime are 27% in men and 2-3% women. Various techniques of repair include, herniorraphy, herniotomy, hernioplasty and combination of herniorraphy with hernioplasty. Herniotomy is done in children and in adults Bassini's repair,

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different types of Darnings, mesh plug, Lichtenstein's repair, Prolene Hernia System (PHS) and many more modifications (1-5) . Laparoscopic approach had been recently added. The criterias which are used to make choice of methods are recurrence rates, postoperative pain, testicular atrophy and the length of convalescence and surgical ease. Till last decade, in Europe the standard for open hernia repair was Shouldice technique 1945 (double breasting of tissues). But most of the surgeons in less specialized hospitals fail to achieve the low recurrence rate as claimed by Shouldice(6-10) .

Geographically the commonest surgery done by surgeons is hernia repair. The descriptions of surgery goes back to the Hammurabi of Babylon and Egyptian papyrus. Edoardo Bassini was the first who got considerable credit for hernia repair . Though the frequency of surgery for hernia is high, very few surgeries have good results (11-15).

## **II RATIONALE:**

Recurrence rate for Modified Bassini's plusmeshplasty is less than Lichtenstein repair alone. This depicts that modified bessini's is the better repair method for inguinal Hernias .

## **III OBJECTIVES**

- To study the recurrence rate in both the groups
- To study and evaluate the postoperative complications like Cord edema, postoperative Urinary Retention, hematoma, seroma, infection and sinuses in both the groups.
- To evaluate the factors which may be responsible for recurrence
- To evaluate the operative time in both the cases

## **IV METHODOLOGY:**

This is a comparative randomized study, which would carried out over a period of 2 years (August 2018 to August 2020), on the patients admitted to Sawangi Meghe Hospital, Wardha with complaints of inguino-scrotal swelling and diagnosed as hernia. Department of General Surgery, JNMC, Wardha, India, which caters to population of central India. A 50 consecutive patients presenting with indirect inguinal hernia would be included in this study without bias on a serial basis. Written informed Consent would be obtained from all the participants and explained about the nature and purpose of the study in their own language. A Visual Analogue Scale (VAS) will be used, to quantify the pain. This scale consists a horizontal line marked with whole numbers marked from 0 to 10 and we will tell the patient to mark on it.

Mean of the pain scores will be taken on:

- The day of surgery in the evening, after the effect of spinal anaesthesia has faded.
- On postoperative days 0, 1, 7 and 30th day would be considered for comparison between these two groups.

The outcomes of both the techniques will be compared

**Eligibility criteria:**

Inclusion of all male patients aged between 18 years to 60 years with indirect inguinal hernia and who are willing to participate in the study, with no comorbid conditions.

**Exclusion Criteria:**

- Congenital hernias, Recurrent hernias and all complicated hernias.
- Patient not willing to participate.
- Patient with Psychiatric illness or any other comorbid condition (COPD, BPH, Hypertension, Diabetes Mellitus)
- Patient unfit for surgery due to any other reason.

Interventions: Patients will be divided into two groups, one group will be operated with Lichtenstein repair and other group will be operated by modified bassini repair with meshplasty. Strict adherence of the patient will be done by providing health care at low cost.

Postoperative follow-up will be through periodic physical examination and through telephonic conversations when physical examinations are missed. All patients will be followed for 6 months postoperatively with regular follow up monthly for first six months, to see any postoperative complications.

In this study, descriptive statistical analysis would be done. Results will be interpreted by SPSS V25 software. Student's t-test and chi-square test would be used.

**V ASSESSMENT AND IMPLEMENTATION**

ASSESMENT METHODS	PATIENTS WITH LICHENSTEIN MESH REPAIR	PATIENTS WITH MODIFIED BASSINI'S REPAIR+ MESHPLASTY
ULTRA SONOGRAPHY INGUINOSCROTAL		
RECURRENCE OF INGUINOSCROTAL SWELLING		
COUGH IMPULSE		

**Sample size:** 30 to 50 patients in both the groups.

Recruitment: Through camp facilities for less operating charges for the patients providing them care on less charges.

Methods: Assignment of interventions (for controlled trials):

Allocation: Sequence generation-All the male patient presenting to the opd with inguinal hernias will be randomly placed in two groups in ratio of 1:1 .

Allocation concealment mechanism will be As per the surgeon.

Implementation by the operating team and the author

Blinding (masking): Ultrasonologist is blinded as he or she is the one who is documenting the reports on hernia recurrence and complications.

## VI ETHICS AND DISSEMINATION:

The study has been submitted for approval to INSTITUTIONAL ETHICAL COMMITTEE.

## VII EXPECTED RESULTS

Recurrence rates of hernia are less with modified bassini repair with meshplasty as compared to lichenstein repair

## VIII DISCUSSION:

For inguinal hernia repair, Modified bassini repair with meshplasty is better procedure in comparison to Lichenstein repair. A number of studies on this topic and associated factors were reviewed (16-65).

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