

Original Research

Comparison of modified Bassini's repair (MBR) and Lichtenstein mesh repair (LMR) of inguinal hernias

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ABSTRACT:

Background: An inguinal hernia occurs when a portion of the intestine or abdominal tissue pushes through a weak spot or tear in the abdominal muscles, specifically in the inguinal canal, located in the lower part of the abdomen. The present study was conducted to compare modified Bassini's repair (MBR) and Lichtenstein mesh repair (LMR) of inguinal hernias. **Materials & Methods:** 94 cases of inguinal hernia of both genders were divided into 2 groups of 47 each. Group I patients underwent Lichtenstein mesh repair (LMR) and group II modified Bassini's repair (MBR). Parameters such as duration of surgery (in min), type of hernia, post-operative pain, and post-operative complications were recorded in both groups. **Results:** Group I had 27 males and 20 females and group II had 24 males and 23 females. In group I and group II, type of hernia was direct in 17 and 15 and indirect in 30 and 32 respectively. Duration of surgery (in min) was 20-35 in 6 and 5 and 35-50 in 39 and 42. Post-operative pain on day 1 was 5.6 and 5.8, on day 7 was 3.2 and 2.1 and on day 30 was 0.31 and 0.23. Incidence of seroma was seen in 9 and 3, hematoma in 1 and 2, infection in 1 and 0 and recurrence in 0 and 1 patient. Post-operative complications were osteitis pubis seen in 0 and 1, retention of urine in 1 and 2, ischemic orchitis in 0 and 1 and scrotal ecchymosis in 0 and 1 patient respectively. The difference was significant ($P < 0.05$). **Conclusion:** Because LMR was simpler, required less dissection, allowed for early postoperative ambulation, and had no recurrence, it was superior than MBR.

Keywords: inguinal hernia, Lichtenstein mesh repair, seroma

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INTRODUCTION

An inguinal hernia occurs when a portion of the intestine or abdominal tissue pushes through a weak spot or tear in the abdominal muscles, specifically in the inguinal canal, located in the lower part of the abdomen. This condition can cause a noticeable bulge, pain, or discomfort in the groin area.¹ Direct inguinal hernias usually acquired and occurs in men over 40 due to the weakening of abdominal muscles over time. The hernia protrudes through a weak spot in the lower part of the abdominal wall near the inguinal canal but not through the canal itself. Indirect inguinal hernia is the more common type, typically present from birth due to a weakness in the abdominal wall. It occurs when abdominal contents protrude through the inguinal canal, a passage through the lower abdominal

wall.² It can happen on either side, but it is most often seen on the right.³

The advantages of tension-free mesh repair over the conventional tissue approximation method have been amply shown by numerous comparative randomized experiments.⁴ Nonetheless, the benefit of tissue healing techniques like Bassini's is that they are easy to use and reasonably priced. Research has shifted from the least recurrence to the least complication rate as surgeons have generally shifted away from "technical success," which is measured by low recurrence rates, as an outcome metric and evaluated other end objectives.⁵ The present study was conducted to compare modified Bassini's repair (MBR) and Lichtenstein mesh repair (LMR) of inguinal hernias.

MATERIALS & METHODS

The study was carried out on 94 cases of inguinal hernia of both genders. All gave their written consent to participate in the study.

Data such as name, age, gender etc. was recorded. Patients were divided into 2 groups of 47 each. Group I patients underwent Lichtenstein mesh repair (LMR)

and group II modified Bassini’s repair (MBR). Parameters such as duration of surgery (in min), type of hernia, post-operative pain, and post-operative complications were recorded in both groups. Results thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Groups	Group I (47)	Group II(47)
Method	LMR	MBR
M:F	27:20	24:23

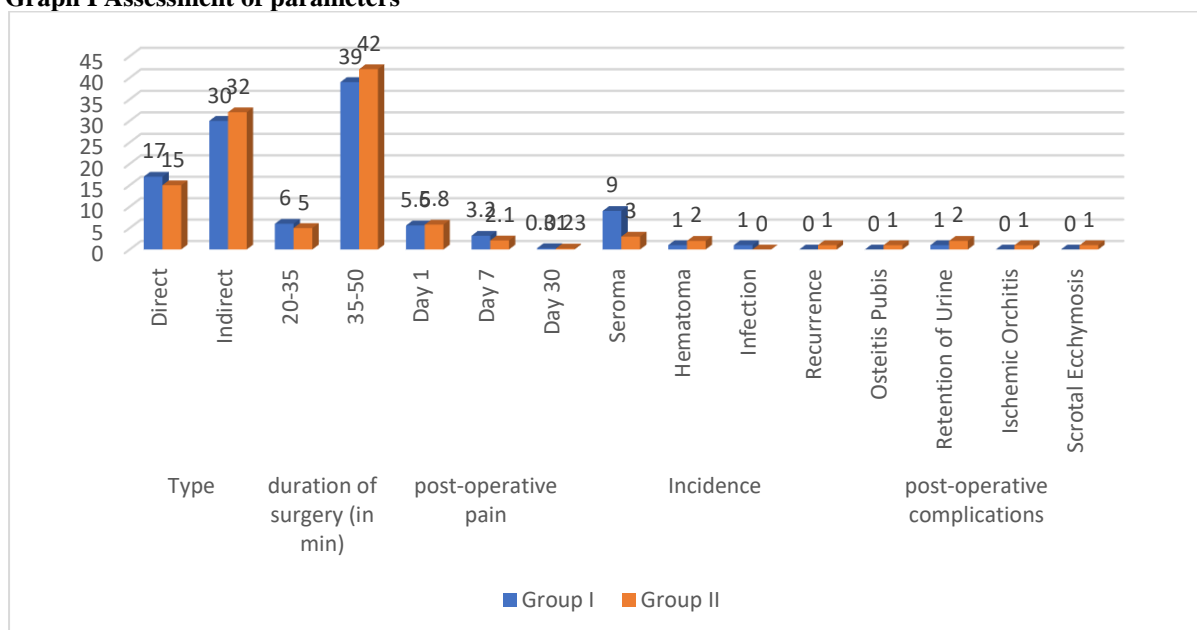
Table I shows that group I had 27 males and 20 females and group II had 24 males and 23 females.

Table II Assessment of parameters

Parameters	Variables	Group I	Group II	P value
Type	Direct	17	15	0.05
	Indirect	30	32	
duration of surgery (in min)	20-35	6	5	0.04
	35-50	39	42	
post-operative pain	Day 1	5.6	5.8	0.01
	Day 7	3.2	2.1	
	Day 30	0.31	0.23	
Incidence	Seroma	9	3	0.75
	Hematoma	1	2	
	Infection	1	0	
	Recurrence	0	1	
post-operative complications	Osteitis Pubis	0	1	0.82
	Retention of Urine	1	2	
	Ischemic Orchitis	0	1	
	Scrotal Ecchymosis	0	1	

Table II, graph I shows that in group I and group II, type of hernia was direct in 17 and 15 and indirect in 30 and 32 respectively. Duration of surgery (in min) was 20-35 in 6 and 5 and 35-50 in 39 and 42. Post-operative pain on day 1 was 5.6 and 5.8, on day 7 was 3.2 and 2.1 and on day 30 was 0.31 and 0.23. Incidence of seroma was seen in 9 and 3, hematoma in 1 and 2, infection in 1 and 0 and recurrence in 0 and 1 patient. Post-operative complications were osteitis pubis seen in 0 and 1, retention of urine in 1 and 2, ischemic orchitis in 0 and 1 and scrotal ecchymosis in 0 and 1 patient respectively. The difference was significant (P< 0.05).

Graph I Assessment of parameters



DISCUSSION

Symptoms of inguinal hernias are bulge in the groin area, especially when standing or coughing, pain or discomfort, particularly when bending over, lifting, or coughing and a feeling of heaviness or dragging in the groin. In severe cases, if the hernia gets stuck (incarcerated) or cuts off blood supply (strangulated), it can cause intense pain, nausea, and vomiting, and requires immediate medical attention. Risk factors such as age; inguinal hernias are more common in older adults due to muscle weakness. Men are more likely to develop inguinal hernias than women.⁶ A new era in groin hernia repair was ushered in with the description of the Lichtenstein tension-free mesh repair. The approach is extremely straightforward, efficient, and low-complication. Thus, it is currently the method of choice for inguinal hernia repair all over the world. Even though Bassini's repair is rarely performed, it provides benefits in low-resource environments and contaminated fields.⁷ The present study was conducted to compare modified Bassini's repair (MBR) and Lichtenstein mesh repair (LMR) of inguinal hernias.

We found that group I had 27 males and 20 females and group II had 24 males and 23 females. Naveen Net al⁸ compared the technique and post-operative course so as to determine the best suitable of the two procedures for them. A comparative randomized study was conducted on a total of 70 patients with inguinal hernia and were operated upon by either of technique and followed up. Study involved 35 each of Modified Bassini's Repair (MBR) and Lichtenstein's Mesh Repair (LMR), over a period of 18 months. MBR took more operating time than LMR. Commonest complication in both the groups was seroma formation. There were two recurrences in the MBR group and none in LMR group.

We found that in group I and group II, type of hernia was direct in 17 and 15 and indirect in 30 and 32 respectively. Duration of surgery (in min) was 20-35 in 6 and 5 and 35-50 in 39 and 42. Post-operative pain on day 1 was 5.6 and 5.8, on day 7 was 3.2 and 2.1 and on day 30 was 0.31 and 0.23. Incidence of seroma was seen in 9 and 3, hematoma in 1 and 2, infection in 1 and 0 and recurrence in 0 and 1 patient. Post-operative complications were osteitis pubis seen in 0 and 1, retention of urine in 1 and 2, ischemic orchitis in 0 and 1 and scrotal ecchymosis in 0 and 1 patient respectively. Csontos Z et al⁹ found that wound suppuration occurred only in a very small number of the patients (0.76 per cent) and there was merely one occasion when the mesh implant had to be removed because of sepsis. The intensity of postoperative pain and demand for analgesics was very low. During the follow-up period of 4 years 16 recurrent hernias were diagnosed (2.4 per cent). A hydrocele developed in 8 patients (0.5 per cent) while necrosis of the testicle was found in 4 patients (0.27 per cent). Authors realised that both the attitude and practice of the institutes participating in the study has changed

thoroughly and the Bassini-repair seems to be replaced by the Lichtenstein procedure in these surgical departments.

Faish et al¹⁰ evaluated the mesh plug technique in the repair of all types of inguinal hernias and its results in one consultant practice within a district general hospital. All patients with inguinal hernias presenting to the general surgical clinic of one consultant were recruited to the study. All had mesh plug repair under local (n = 40), regional (n = 50) or general (n = 110) anaesthesia either by the consultant, associate specialist or specialist registrar (following initial training), using the same standard technique. The majority 80% (n = 160) were done as day cases. The results were evaluated by questionnaire and personal outpatient review initially at 3 weeks, then at 1 year (9-13 months). 200 consecutive patients with inguinal hernias underwent mesh plug repair; mean age was 54 years (95% CI, 46-61). The majority of patients had primary (n = 180) and others had recurrent (n = 20) hernia. All types of hernia (Gilbert's I-VII) were included. Median follow-up was 1 year (9-15 months). Groin pain, which was the leading symptom at presentation, was relieved in 96% of the patients; 79% returned to previous jobs within 4 weeks. All retired patients resumed normal life activities within 2 days. Postoperative pain was minimal; 28 patients did not require any postoperative analgesia. There were very few minor (n = 6) and no major complications. During the follow-up, one recurrence occurred. The shortcoming of the study is small sample size.

CONCLUSION

Authors found that because LMR was simpler, required less dissection, allowed for early postoperative ambulation, and had no recurrence, it was superior than MBR.

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