

MESH REPAIR OF INGUINAL HERNIAS

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ABSTRACT

Objective: To determine the frequency of infection in Lichtenstein's mesh repair of inguinal hernia in Surgical C unit, Lady Reading hospital Peshawar

Material and Methods: Thirty seven consecutive cases of inguinal hernia (direct/ indirect) of either side were repaired by Lichtenstein technique between January 2007 to December 2007 with an initial follow up of six months. All cases above 20 years were included. Patients with acute complications of hernia were excluded from the study.

Results: All patients were males with mean age of 49.1 years. Twenty seven patients had right sided inguinal hernia, 16 had a direct hernia and 21 patients had an indirect inguinal hernia. Thirty two patients had uneventful recovery. Minor wound infection was noted in 2 cases and scrotal swelling in one case. There was no recurrence during initial follow up of six months

Conclusion: Tension free mesh repair is the procedure of choice for inguinal hernias.

Key Words: Inguinal Hernia, Mesh Repair.

INTRODUCTION

Recent trend in inguinal hernia surgery has been towards using a mesh based tension free repair and the Lichtenstein's repair¹ of primary inguinal hernia is the most popular², a well-established and successful technique practiced by most surgeons³. It is now an established fact that classical Bassini repair of inguinal hernia produces unacceptably high recurrence rates⁴. This is also the case with plication darn repair irrespective of the experience of the operating surgeon⁵. Many series of studies have been published showing the benefits of tension free mesh repair as a treatment of choice for Inguinal hernia. There has been a debate whether to perform an open or laparoscopic mesh repair. The latter is associated with less postoperative pain and early return to work; but it has the drawback of heavy cost, longer operative time and a longer learning curve. The open method of mesh repair of inguinal hernia is simple, easy to learn and has excellent results. The longer post operative period required to return to work as compared to laparoscopic mesh repair of hernia can be acceptable when similar results are compared with the classical methods of inguinal hernia repair.

The present study aims at the surgical management of primary inguinal hernia by tension free mesh repair and its post operative outcome.

MATERIAL AND METHODS

We operated 37 cases of inguinal hernia in the surgical C unit, Lady Reading Hospital Peshawar from Jan 2007 to Dec 2007. Patients more than 20 years of age were included in the study. While patients presenting with acute complications like obstructed or strangulated hernia were excluded. The patients were admitted through out patient clinic. Detailed history, with special reference to occupation, and the detailed examination findings were recorded. All the relevant investigations were performed and the fitness of the patient for general anesthesia was assessed. The patients were counseled in detail and informed written consent was taken. All the patients were operated on the elective morning list by senior consultants taking all the aseptic precautions. A third generation antibiotic (Ceftriaxone) was administered at the time of induction and the dose was repeated after 12 hours. The wound was examined for any induration or collection on 5th postoperative day.

AGE RANGE

	Frequency	Percent	Cumulative Percent
Valid 30-39 years	6	16.2	16.2
40-49 years	12	32.4	48.6
50-59 years	11	29.7	78.4
60-69 years	8	21.6	100.0
Total	37	100.0	

Table 1

RESULTS

All the patients were males. Age range was from 32 years to 68 years with mean age of 49.1 years (Table-1). Most of the patients belonged to 40-59 years age group. Eighty six percent of the patients belonged to occupations associated directly or indirectly with physical exertion (Table-2). Out of thirty seven, 27 patients had inguinal hernia on right side. Twenty one patients had indirect and 16 had direct inguinal hernia (Table-3). Thirty two patients had uneventful recovery. Two patients had fever postoperatively which responded to antipyretics, one had scrotal edema which resolved with rest and elevation (Table-4).

DISCUSSION

Inguinal hernia is a common disorder. Using a mesh in inguinal hernia repair has rapidly increased world wide since 1989 and is associated with low recurrence rates⁶. The Lichtenstein repair of inguinal hernia has been shown to have recurrence rates tenfold lower than those of the Shouldice repair, which was then the standard technique⁷. Synthetic mesh not only reduces tension over the tissues avoiding postoperative pain and risk of recurrence, the polypropylene mesh induces synthesis of collagen by inducing an inflammatory response and setting up a scaffolding effect⁸.

We operated 37 consecutive patients who were subjected to mesh repair of the inguinal hernia. All were male patients belonging to various age groups ranging from 20 to 70 years. Like the present study some other studies have also shown

SIDE AND TYPE OF INGUINAL HERNIA

Type of inguinal hernia	Side of inguinal hernia		Total
	Right	Left	
Direct	10	6	16
Indirect	17	4	21
Total	27	10	37

Table 3

OCCUPATION

	Frequency	Percent	Cumulative Percent
Labourer	12	32.4	32.4
Farmer	9	24.3	56.8
Carpenter	4	10.8	67.6
Blacksmith	4	10.8	78.4
Cart driver	3	8.1	86.5
Teacher	3	8.1	94.6
Office worker	2	5.4	100.0
Total	37	100.0	

Table 2

that only males had suffered and it appeared that it was virtually a disease of male patients^{9,10,11}. Majority of them belonged to professions associated with heavy physical work, weight lifting or exertion.

Many surgeons prefer local anesthesia^{12,13,14}. We routinely used general anesthesia during the elective surgery taking into account the comfort of the patient and also to avoid the risk of conversion to general anesthesia¹⁵.

We did not put drain intra operatively except in cases where relatively more dissection was required to dissect out the hernia sac and to put in the mesh. This was a prophylactic measure to prevent a seroma / hematoma formation in selected cases^{16,17}. Seroma formation was reported to be 1.6% by¹⁸ Holzheimer RG in his study and was noted to be 12.6% by Awad SS et al¹⁹. No case of seroma formation was detected in the present study. The drain was removed on the next day of surgery to avoid the risk of surgical site infection²⁰. Cord injury, hematoma, post operative neuralgia, urinary retention, wound infection and orchitis are the known intra- and post operative complications.^{21,14,19,22} One patient in the present study presented with scrotal edema but there was no evidence of orchitis.

Minor wound infection was noted in 2 cases. These patients responded to systemic antibiotics and dressing. Tseng CC et al¹³ in their

POSTOPERATIVE COMPLICATIONS (N=37)

	Frequency	Percent
Fever	2	5.4
Scrotal Edema	1	2.7
Superficial Wound Infection	2	5.4

Table 4

large study of 1411 patients observed 9 cases of wound infection. In a study on the role of antibiotic prophylaxis for hernia repair, the rate of wound infection was observed to be 2.9% in prophylaxis group (control group= 3.9%)²³. No case of mesh infection was observed.

In the present limited trial, no case of recurrence was observed in the initial 6 months follow up period.

CONCLUSION

Tension free mesh repair for inguinal hernia may be considered the procedure of choice for primary inguinal hernias with early and relatively pain free recovery and minimum complications.

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