

## Recurrence In Inguinal Hernia

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### Summary

*A review of 220 cases of direct and indirect Inguinal hernia operated during one year (Jan: 1989 to Jan: 1990) in Surgical 'C' Unit, Hayat Shaheed Teaching Hospital, Peshawar is presented.*

*The above study showed that the main cause of recurrence in Inguinal hernia repair is suturing of the tissue under tension.*

*The study also revealed a recurrence rate of 4.4%. Out of 220 cases there were 12 cases of recurrent Inguinal hernia, operated initially by Bassine type. Majority of the hernia were on the right side.*

### Material and Method

Two hundred and twenty cases of direct and indirect Inguinal hernia were included in the study. These were the cases operated by the Senior and Junior staff of the Unit.

These patients were divided into two groups: 'A' and 'B'. Group 'A' included patients whose hernia was repaired by Bassine or Halsteads type

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procedure. In both these procedures the posterior wall is repaired by suturing together the conjoint muscle and tendon to the inguinal ligament. In Helsteads repair in addition the cord is placed inferior to the external oblique. The number included in this group was 190 patients.

In group 'B' there were 30 patients who had Herniotomy done only. The posterior wall was strong and did not require repair and these were mainly children and young adults.

**Results**

Age incidents: The study revealed that majority of the hernias were in the age group of 50-59 years (Table-1).

**TABLE-1**

Age No:	0-20	21-49	50-59	60-70	above-70
	30	25	125	25	15

Total numbers 220.

**Sex Type and Side**

Of 220 cases majority were males. The ratio of male to female was 43:1. 175 cases were indirect type; 45 were direct type and found in males only. The majority of the hernia were on the right side (Table-II).

**TABLE-II  
SEX, TYPE AND SIDE**

Type	Side	Male	Female	Total
Indirect	R	116	3	119
	L	56	0	56
Direct	R	19	0	19
	L	26	0	26

Total numbers 220.

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**Discussion**

Inguinal hernia is a common problem and so is the recurrence. A study in 1983 conducted by Rand Corporation concluded that 10% of all the primary repair will fail.

Onukak et al<sup>3</sup> reported a recurrence rate of 2.7% (out of 2011 cases 53 cases were recurrent) during 2 years follow-up.

Leo Zimmerman<sup>4</sup> reported a recurrence rate of 20.4% for Indirect hernia during a follow-up period of 5 years and 25% for Direct hernia.

Torsten Amussen<sup>5</sup> revealed a recurrence rate for Inguinal hernia of 19.3% after 10 years follow-up and 4.1% recurrence rate for Direct hernia.

Our series show a recurrence rate of 4.4% which is mainly because hernias were repaired by Bassini and Halsteads repair where the tissues are usually under tension specially for large hernias. In addition majority of our patients were above 50 years of age.

Bassine did first true Herniorraphy in 1884. 5 years later he reported a 10% recurrence. In the above series and in those of Bassini's own study, the common disadvantage shared in the repair of posterior wall is suturing the tissues under tension; conjoint muscle and tendon are approximated to the inguinal ligament and the main cause of recurrence is this tension.

In Irving L. Lichtenstein<sup>1</sup> series of 1000 cases followed-up for 5 years showed no recurrence. In his technique the posterior wall defect is reinforced with a piece of synthetic mesh without reconstructing the floor of inguinal canal as practised by others. He opens the canal and deals with the sac and then reinforces the posteior wall by a shaped piece of synthetic mesh measuring 5-10 cm in length. The mesh is secured in place by continuous suture of Prolene starting from lacumnur ligament medially and extending along the inguinal ligament beyond the internal ring. The upper edge is anchored to the anterior rectus sheaths and conjoint muscle and tendon. At the internal ring a slit is made in the mesh to allow the cord to emerge. The canal is then closed. A similar procedure is described by R.T.J. Holl-

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Allen<sup>4</sup>. The difference in this procedure and that practised by Irving is that the internal ring is narrowed prior to placing the mesh (Zenoder mesh). He reports a recurrence rate of 1.25% in 2-3 years follow-up. Here again he demonstrates that the slight tension created by narrowing the internal ring resulted in higher recurrence rate than that of Irving procedure where the internal ring is not interfered with.

### **Conclusion**

In conclusion, therefore, tension on the suture line is the main cause of recurrence and should be avoided by using a mesh to reinforce the posterior wall which will reduce the recurrence rate.

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