



# INGUINAL HERNIA REPAIR; A COMPARATIVE STUDY, BASSINI'S VERSUS HERNIOPLASTY

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**ABSTRACT... Objective:** To compare the results of Inguinal Hernia repair using commonly employed methods of Bassini's and Mesh repair. **Methodology:** This study included 90 cases of hernia repair ranging over a period of 18 months from October 2008 to Mar 2010 at Social Security Hospital Lahore. All the cases were done by the consultants and senior surgeons. The methods of repair included Bassini's and Hernioplasty with Prosthetic mesh. **Results:** Out of 90 patients, 88 were males (97.78%) and 02 were females (2.22%). Male – female ratio 45 : 1. The peak incidence was found in 3rd and 4th decades of life. 56(62.22%) had Rt.sided Inguinal hernia, 29 (32.22%) had Lt. sided and 5(5.56%) had bilateral Inguinal hernia. 72 patients (80%) had Indirect Inguinal hernia, 17 (18.89%) had direct inguinal hernia while 1(1.11%) had both types. All the cases were done under Spinal anaesthesia. The Bassini's repair was performed in 50% cases, using non-absorbable no. 1 Prolene interrupted suturing (Group- A). In the Group – B, 50% cases underwent Hernioplasty with prosthetic prolene mesh 6x11 cms. Post-operative follow up was done for a period of 01 year. In the group- A, 3 (6.67%) patients had recurrence and 3 (6.67%) had infection of the wound. In group – B, 01 patient (2.22%) got infected and none of the cases did not get recurrence over a period of 01 year. **Conclusions:** Hernioplasty with prosthetic mesh is a better treatment modality for inguinal hernia repair to get a low recurrence rate.

**Key words:** Hernioplasty, Bassini's, Recurrence.

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## INTRODUCTION

Inguinal hernia can occur at any age and is 20 times more common in males<sup>1</sup>. Repair of hernia accounts for 10 – 15% of all surgical procedures, and above 80% are performed for inguinal hernias<sup>2</sup>. Both direct and indirect inguinal hernias considered to originate from congenital variants that are processus vaginalis and failure of shutter action of aponeurotic arch<sup>3</sup>. Other studies also indicate reduced collagen synthesis as a factor in the development of hernias<sup>4</sup>. In smokers increased blood proteolytic activity also contributes the formation of hernia<sup>5,6</sup>. Mostly hernial sac contains omentum or small bowel but caecum, appendix and sigmoid colon are seen at times and urinary bladder may also protrude as a content<sup>7</sup>. The groin is one of the natural weak areas in the abdominal wall and is a common site of herniation. However it could be that there is an inherited weakness of abdominal muscles and peritoneum with marked patency of inguinal rings which predisposes the formation of inguinal hernia<sup>8</sup>. Vigorous physical

activity per se is not a cause of herniation<sup>9</sup>, but strenuous effort may aggravate the predisposing factors and precipitate the herniation<sup>10,11,12</sup>.

## MATERIALS AND METHODS

This retrospective study included 90 cases of hernia repair over a period of 18 months from Oct 2008 to Mar 2010 at Social Security Hospital Lahore. The patients included in the study were from 15 to 55 yrs of age, both sexes with no concurrent or comorbid condition. The pts who had diabetes, renal or liver disease were excluded from the study, so were the pts with deranged bleeding profile. Pts less than 15 yrs of age and more than 55 yrs were also excluded from the study.

## RESULTS

This study included 90 cases of hernia repair. All the cases were done by the consultants and senior surgeons. The methods of repair included Bassini's and Hernioplasty with Prosthetic mesh. Out of 90 patients, 88 were males (97.78%) and

02 were females (2.22%) Table – I. Male – female ratio was 45: 1. The peak incidence was found in 3rd and 4th decades of life. 56(62.22%) had Rt.sided Inguinal hernia, 29 (32.22%) had Lt. sided and 5(5.56%) had bilateral Inguinal hernia(Table – II). 72 patients (80%) had Indirect Inguinal hernia, 17 patients (18.89%) had direct inguinal hernia while 1(1.11%) had both types(Table – III). All the cases were done under Spinal anaesthesia. The Bassini’s repair was performed in 50% cases using non – absorbable no. – 1 Prolene interrupted suturing (Group- A). In the Group – B, 50% cases underwent Hernioplasty with prosthetic prolene mesh 6x11 cms. Post-operative follow up was done for a period of 01 year. In the group- A, 3 (6.67%) patients had recurrence and 3 (6.67%) had infection of the wound. In group – B, 01 patient (2.22%) got infected and none of the cases did not get recurrence over a period of 01 year.

Gender	No. of cases	Percentage
Male	88	97.78%
Female	02	2.22%
Total	90	100%

Table-I

Site	No. of cases	Percentage
Right	56	62.22%
Left	29	32.22%
Bilateral	05	5.56%
Total	90	100%

Table-II

Type	No. of cases	Percentage
Indirect	72	80%
Direct	17	18.89%
Both	01	1.11%
Total	90	100%

Table-III.

## DISCUSSION

In our study the two groups were subjected to Bassini’s and Hernioplasty Group – A and Group – B respectively. Inguinal hernias are one of the commonest problems which we come across routinely in our surgical OPD. Many methods of hernia repair exist and many new innovations are being introduced all the time. Recurrence of hernia always remains a problem. The approximate recurrence rates are 5 – 10% after indirect hernia repair and 10 – 15 % after direct hernia repair<sup>2</sup>. Despite intensive study and efforts, inguinal hernia continues to recur at a rate of 10 – 15 % as was ascertained in a systematic review of controlled trials of using a meta-analysis<sup>13</sup>. The M:F ratio in our study is 45 :1 while M : F ratio reported by Memon<sup>14</sup>, Manzoor<sup>15</sup>, Zafar<sup>16</sup> and Davies<sup>17</sup> are 66 : 1, 57 : 1, 49 : 1, 23 : 1, respectively. In our study left sided hernia was found in 32.22%, whereas in other studies reported by Memon<sup>14</sup>, Manzar<sup>15</sup> and Rasool<sup>18</sup> are as given in Table – IV. This shows that right sided inguinal hernia is more frequent episode. As indirect hernia was common in our study being also supported by studies at Islamabad<sup>16</sup>, Hyderabad<sup>14</sup> and Rawalpindi<sup>18</sup>. In our study the rate of infection and recurrence was high in group –A than in group – B. This is supported by a study in Germany<sup>19</sup>. In our study group – B, there was no recurrence as compared by the study at Royal Liverpool hospital UK<sup>17</sup>. Similarly a study carried out at Islamabad<sup>16</sup> also supports our results.

## CONCLUSIONS

By comparing group – A and B in our study, the cost effectiveness, the recurrence rate, incidence of infection and technical expertise, we strongly recommend Mesh hernioplasty (Lichtenstein repair) as the procedure of choice for Inguinal Hernias repair, provided the technical expertise is available.

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SITE	PRESENTSTUDY (N = 90)	MEMON (N = 334)	MANZAR (N = 810)	RASOOL (N = 204)
Right	62.22%	63.2%	58.1%	61.76%
Left	32.22%	32.6%	32.5%	29.42%
Bilateral	5.56%	4.2%	9.4%	8.82%

Table-IV.

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