

## An Analysis of External Hernias – A Surgical Unit's Experience

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### Abstract

**Introduction:** Hernias are one of the common clinical conditions treated by general surgeons. In spite of such a common condition, there are very few studies over last 2-3 decades on it. The aim of this study is to provide our experience on external hernias. **Materials and Method:** A retrospective study was carried in our unit from January 2012 to December 2012. **Results:** External hernias accounts for 11.15% of the total surgeries done. Inguinal hernias remain the most common hernias (52.12%) followed by paraumbilical hernias. Around 8.67% of the hernias presented as complicated hernias. 13.04% of patient will have some complications following hernia repair. **Conclusion:** Inguinal hernias are the most common external hernias encountered by a general surgeon. 8.67% of hernias presents as complicated hernia. All the hernias undergo mesh repair in today's scenario.

**Keywords:** Complications, Hernia, Inguinal, Para umbilical

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**Introduction:** External hernia is defined as an abnormal protrusion of intra-abdominal tissue through a fascial defect in the abdominal wall<sup>1</sup>. Hernia is one of the most common clinical conditions encountered by a general surgeon in his practice<sup>2</sup>. The repair of abdominal wall hernias represents the most common group of operations performed by the general surgeon<sup>3</sup>.

In 2003, it was estimated that over 7,00,000 inguinal hernia repairs and over 1,00,000 ventral hernia repair were performed in USA<sup>3</sup>. An analysis of a population based registry revealed that the rate of mesh placement for ventral incisional hernia repair increased from 35% in 1987 to 66% in 1999<sup>3</sup>. In 2003, 14% of the 8,00,000 hernias were repaired laparoscopically<sup>3</sup>.

Improved surgical technique and a better understanding of the anatomy and physiology of the inguinal canal, have significantly improved outcome of many patient<sup>3</sup>.

However, in developing countries like India, the overall occurrence of external hernias is not clear yet. This is due to various reasons like no maintenance of national register of this disease, many patient don't seek medical advice till complication occurs, etc<sup>4</sup>.

Further, being a common condition that is seen in clinical practice of a general surgeon, there is very few research paper's on experiences of external hernias from Indian subcontinent.

The aim of this study is to analyze the external hernia occurring in single unit of a tertiary teaching institute.

**Materials and method:** A retrospective study over a period of one year was carried from January 2012 to December 2012 in a single unit of department of surgery at St

**Results:** A total of 619 patients underwent surgery in our unit during this period. 69 patients (11.15%) underwent surgery for external hernias. 44 patients (63.77%) were males and 25 patients were females (36.23%). The average age for males was 49.14 years with range of 17- 74 years whereas the average age for females was

Johns medical college and hospital, Karnataka, which is a premiere medical Institute. The following were the inclusion and exclusion criteria.

❖ *Inclusion Criteria*

1. All patients admitted in the unit during this period
2. All patients willing for the treatment at our hospital
3. All external hernias

❖ *Exclusion criteria*

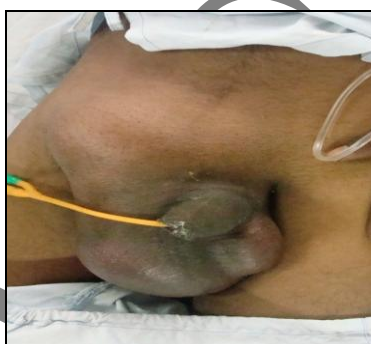
1. Patients from other surgical unit
2. Patients who refused treatment at our hospital
3. Patients operated at another hospital and referred to our institution for further management of complication
4. Internal hernias
5. Hernias in children
6. Patients in medical ward who did not undergo surgery.

48.68 years with range of 30- 81 years. Of 37 patients (52.12%) had inguinal hernias [Figure 1] whereas 18 patients (25.35%) had paraumbilical hernia. Incisional hernia was the third most common hernia in our study [Table 1]. 2 patients had multiple site hernias. 67 patients had primary hernias whereas 2 patients (2.89%) had recurrent hernia.

Table 1 showing distribution of different hernias.

Sr. no	External hernias	Number of Hernias	Percentage
1	Inguinal	37	52.12%
2	Paraumbilical	18	25.35%
3	Incisional	14	19.72%
4	Epigastric	02	2.82%
5	Femoral	0	0%
	Total Hernia's	71	100%

Figure 1 showing an Inguinal Hernia.



All the 69 patients [Table 2] underwent mesh repair (100%). 67 patients underwent open repair (97.1%) and 2 patients underwent laparoscopic mesh repair (2.89%).

**Table 2** showing the distribution of performed surgeries

Sr. no	Surgery	No. of patients	Percentage
1]	Open mesh repair	67	97.11%
2]	Laparoscopic mesh repair	02	02.89%
	Total	69	100%

Total 6 Patients (8.67%) had complicated hernias with 4 patients having obstructed hernia and 2 patients had irreducible hernia.

There was no strangulated hernia during this study period. Total 9 patients (13.04%) had postoperative complications following

hernia repair. 3 patients had surgical site infection, 3 had superficial skin necrosis and 3 had umbilical necrosis out of which one underwent umbilicectomy. In 2 patients, we had to remove the mesh due to infection. Both this patients had obstructed

paraumbilical hernia. Total 6 patients (8.7%) had associated surgeries with hernia repair. 4 patients had TURP, 1 patient had abdominal hysterectomy and 1 patient underwent hydrocele repair.

**Table 3** showing the comparison between present study and other series

Hernias	Afridi series (%)	Sultan et al series (%)	Present series (%)
Inguinal	77.5	86.54	52.12
Paraumbilical	6.25	6.40	25.35
Umbilical	6.25	3.95	-
Incisional	3.75	2.6	19.72
Femoral	0.75	0.85	-
Epigastric	3.25	-	2.82

## Discussion

External hernias are common clinical problems. Of all the hernias, inguinal hernias are the most common hernias. The incidence of inguinal hernia is as high as 75%<sup>5</sup>, followed by incisional hernias<sup>6</sup>. In our study, it was paraumbilical hernia.

Epigastric hernias account for 1.6% to 3.6%<sup>3,7</sup> of all abdominal hernias and are 3 times more common in men than women. About 20% of epigastric hernia are multiple and about 80% are located just off the midline<sup>3</sup>. In our study, epigastric hernia accounted for 2.82%.

More than 2 million laparotomies are performed annually in the United States with a reported 2% to 11% incidence of

incisional hernia<sup>3</sup>. In our study, around 19.72% patient had incisional hernia.

We compared our result with series of Afridi<sup>7</sup> and Sultan et al<sup>4</sup>. In all [Table 3], inguinal hernia was the commonest hernia followed by paraumbilical hernia. In Afridi and Sultan et al series, there were femoral hernias [0.75% and 0.88%]. We had no femoral hernia in our series.

## Conclusion

External hernias are common surgical condition accounting for 11.15% of all cases. 52.12% of the cases were inguinal hernia and 25.35% were paraumbilical hernias. 8.69% hernias presented as complicated hernias. All the patients required mesh repair.

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