

## **Clinical Profile Of Patients With Inguinal Hernia Admitted At Tertiary Care Hospital**

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### **Abstract**

Indirect Hernia comprises around 80% cases of inguinal hernia. Almost all the hernias in women and children are indirect. It is also called oblique indirect hernia. The hernia enters through the internal inguinal ring lateral to inferior epigastric artery and descends obliquely downwards and medially and reduces obliquely. After routine investigations, Patients were informed about the various techniques and advantages of the PHS mesh. In those patients who agreed, consent was taken and patients were prepared for surgery. Patients were subjected to Prolene Hernia system repair. All patients were given preoperative antibiotic prophylaxis with Injection Ceftriaxone 1 gm. Spinal anaesthesia was administered. More than half of the patients presented with hernia on the right side (51.1%) followed by left (40.0%). Bilateral hernias were 8.9 %. The most common presenting symptom was swelling accounting for 66.7% followed by swelling with pain 33.3%.

**Keyword:** Inguinal Hernia, swelling, oblique indirect hernia

### **Introduction**

Seventy five percent of all abdominal hernias are found in the groin. Of all groin hernias, 95% are hernias of the inguinal canal with the rest being femoral hernias. Inguinal hernias are 25 times more common in men than in women. The inguinal hernia is the most common hernia in women. The overall lifetime risk of developing a groin hernia is around 15% in males and in females it is less than 5%. There is an association between age and diagnosis of hernia. The complications of hernias like incarceration and strangulation are found more commonly at the extremes of age <sup>[1, 2]</sup>.

Indirect Hernia comprises around 80% cases of inguinal hernia. Almost all the hernias in women and children are indirect. It is also called oblique indirect hernia. The hernia enters through the internal inguinal ring lateral to inferior epigastric artery and descends obliquely

downwards and medially and reduces obliquely. It is more common in first decade on the right side but equal on both sides in second decade.

It may arise in two forms- congenital and acquired.

**Congenital:** Normally, the funicular process of peritoneum becomes obliterated when testis reaches the scrotum. Tunica vaginalis is the remnant of this process in the scrotum. In case of congenital hernia, the whole process remains patent. Hence, indirect hernia reaches the bottom of scrotum. If the funicular process remains patent only upto the top of testis, hernia stops at this site. This is called as congenital funicular hernia <sup>[3]</sup>.

**Acquired:** It does not protrude into a preformed sac. It appears and progresses gradually. In Direct Hernia, The sac of a direct inguinal hernia protrudes outward and forward and lies medial to the internal inguinal ring and inferior epigastric vessels. It is caused by an acquired weakness in the posterior wall of the inguinal canal. This hernia is more common in elderly individuals, above the age 40 years. It usually is incomplete but in long standing cases, it may descend into the scrotum. It can be bilateral <sup>[4]</sup>.

For the past ten decades, surgeons have classified groin hernias traditionally as indirect, direct and femoral. The concept of the direct and indirect hernias dates back to Cooper in the 1840's, with Hesselbach using the inferior epigastric vessels as a defining boundary between these types.<sup>5,6</sup> A more scientific classification of groin hernias increased in the 1950's when a new generation of herniorrhaphies appeared. These challenged the Bassini's repair that had been practised since 1880's. These new procedures were based on an improved understanding of anatomy in the myopectineal orifice.

## Methodology

### Study subjects

In this study 45 patients presenting with inguinal hernia were selected by Random sampling technique.

### Inclusion Criteria

1. All cases more than 18 years
2. Uncomplicated inguinal hernia

### Exclusion Criteria

Complicated hernia like obstructed and strangulated inguinal hernias presenting as emergencies

### Method of data collection

These patients presented with either swelling in the groin/ pain in the groin area of varying duration. Patients with these symptoms were admitted to surgical ward with the diagnosis of direct or indirect uncomplicated inguinal hernia. A detailed relevant clinical history was done as the proforma approved by the guide.

After routine investigations, Patients were informed about the various techniques and advantages of the PHS mesh. In those patients who agreed, consent was taken and patients were prepared for surgery. Patients were subjected to Prolene Hernia system repair. All patients were given preoperative antibiotic prophylaxis with Injection Ceftriaxone 1 gm. Spinal anaesthesia was administered.

## Results

**Table 1:** Age Wise Distribution of Cases

Age (Years)	No-of cases	Percent (%)
18-40	13	28.9
41-60	18	40
>61	14	31.1
Total	45	100

In this study, all patients were above 18 years with 71% of them being above 41 years of age. The greatest incidence was in the 41-60 years age group (40%).

**Table 2:** Symptoms

Symptoms	Position			Total (%)
	Right	Left	B/l	
Swelling	17	9	1	30 (66.7 %)
Swelling with pain	6	9	3	15(33.3%)
Total	23(51.1%)	18(40.0%)	4(8.9%)	45(100%)

All patients presented with swelling in the groin (100%) and pain was present in 15 of the patients (33%)

**Table 3:** Side of Inguinal Hernia

Side	No. of cases	Percentage (%)
Right Indirect	14	31.1 %
Right Direct	9	20.0%
Left Indirect	12	26.7%
Left Direct	6	13.3%
B/L Direct	4	8.9%
Total	45	100%

More than half of the patients presented with hernia on the right side (51.1%) followed by left (40.0%). Bilateral hernias were 8.9 %.

**Table 4:** Type of Inguinal Hernia

Type	No. of cases	Percentage (%)
Indirect hernia	26	57.7
Direct hernia	19	42.2
Total	45	100%

In this study, indirect hernias (57.7%) were found to be more common as compared to that of direct hernias (42.2%)

**Table 5:** Occupational Status.

Occupational status	Frequency	Percentage (%)
Farmer	21	46.7
Shopkeeper	6	13.3
Labourer	7	15.6
Student	3	6.7

Other	8	17.8
Total	45	100

Moderate to high activity workers (farmers, labourer) accounted for 62.3 % of the total no of cases. Others including truck drivers, bus conductors, tailor, retired government servant.

**Table 6:** Associated Factors

Associated comorbidities	No. of cases	Percentage (%)
HTN	6	13.3
DM	3	6.7
Constipation	4	8.9
BPH	4	8.9
COPD	2	4.4
Chronic cough+BPH	5	11.1
Chronic cough+ COPD	1	2.2
Chronic cough+DM	1	2.2

Most common associated co- morbidity was HTN, present in 6 cases accounting for 13.3% followed by constipation 8.9 %

### Discussion

In the present study, the mean age was calculated to be 52.7 years and maximum number of the patients (40%) belongs to the age group of 41-60 years. In a study by Faraj et al. [7], the mean age of the population (n = 187) was 62.2 years (range 28-92)

All the patients in our study were males. This represents the low incidence of inguinal hernia in female in general population. In Faraj et al. [7] study, male: female ratio was 15:1 (175:12). In a present study of 45 cases, most of them were agriculturists (46.7%) and labourer(15.6%). It is relatively less among shopkeeper and student. This suggests that hernias occur more commonly in people involved in strenuous activities.

Most common presentation of hernia is swelling. In the present study, without exception all patients presented with swelling in the inguinal region. Swelling only present in 66.7% of patients as compared to swelling and pain (33.3%). In a study by Hair et al. [8], 66% of patients presented with pain along with the swelling [9].

In the present study, 51.1 % had hernia had hernia on right side, 40% had left sided hernia and 8.9% had bilateral hernia.

**Table 7:** Comparison of side of hernia with other studies

Side of hernia	Bahadir Kulah et al. [10]	Present study
Right	63%	51.1%
Left	37%	40%
Bilateral	-	8.9%

In the present study, direct hernia was found in 42.2% and indirect hernia in 57.7%.

### Conclusion

The mean age of the patients presenting with inguinal hernia was 52.7 years with majority of patients in the age group of 41-60 years.

Farmers (46.7%) and labourers (15.6%) were commonly affected owing to their strenuous work.

The most common presenting symptom was swelling accounting for 66.7% followed by swelling with pain 33.3%.

Right sided inguinal hernia (51.1%) was common compared to left (40%) with indirect inguinal hernia being more common than direct hernia.

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