

**ORIGINAL ARTICLE****DEMOGRAPHIC DETAILS OF PATIENTS SUFFEREING FROM HERNIA IN A TERTIARY CARE HOSPITAL IN PATIALA DISTRICT, PUNJAB**Kuldeep Singh<sup>1</sup>, Anand Singla<sup>2</sup>, Megha Sharma<sup>3</sup><sup>1</sup>Associate Professor, <sup>2</sup>Senior Resident, <sup>3</sup>Junior resident, Department of General Surgery, G.M.C. Patiala, Punjab, India**ABSTRACT:**

**Background:** The most commonly seen hernias are groin hernias which require surgical management. Majority (96%) of the groin hernias are in inguinal hernias. The exact incidence of inguinal hernia is not known but there are approx 500,000 cases that report every year. The present study was done to evaluate and determine the epidemiology and demographic conditions that are prevalent amongst patients of inguinal hernia. **Materials and methods:** The present study was including 60 patients of inguinal hernias admitted to the Department of Surgery at Rajindra Hospital, Government Medical College, and Patiala. In one group of patients a flat polypropylene mesh was used for laparoscopic inguinal hernioplasty (group A). In the other group of patient a newer three dimensional polypropylene mesh was used for laparoscopic hernioplasty. A detailed history and clinical examination was recorded. A written consent of the patient was taken for the procedure, after duly explaining the procedure and risk of surgery and anesthesia. All the data was arranged in a tabulated form and SPSS software was used for analysis. Chi square test was used for analysis. Probability value of less than 0.05 was considered as significant. **Results:** The youngest patient in group A was 23 years of age and the Mean age in group A was 46.5 +/- 11.43 years and that in group B youngest patient was 16 years with mean 46.23 +/- 16.5 years. In group A out of 30 patients 29 and in group B 28 patients are males which show that inguinal hernia is more common in males. Overall 15 cases and 12 cases out of group A and B were of right side inguinal hernia and rest were left sided. **Conclusion:** From the above study we can conclude that inguinal hernia is a commonly occurring clinical entity. It is more commonly seen in males than females. It is more prevalent in 41-50 years of age and indirect type of hernia is commonly seen.

**Keywords:** Epidemiology, Groin, Hernia, Probability.

Corresponding author: Dr. Anand Singla, Senior Resident, Junior resident, Department of General Surgery, G.M.C. Patiala, Punjab, India

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**INTRODUCTION**

Hernia is defined as a protrusion or projection of a part or whole of an organ through the body wall. The most commonly seen hernias are groin hernias which require surgical management.<sup>1</sup> Majority (96%) of the groin hernias are in inguinal hernias. The exact incidence of inguinal hernia is not known but there are approx 500,000 cases that report every year.<sup>2</sup> Hernias can occur in both men and women but they are more prevalent in men.<sup>3</sup> Even though this is such a common surgical condition, there always occurs a dilemma while managing this condition. For many years tension free techniques for repair of hernia were used, they offered little chances of reoccurrence and postoperative morbidity.<sup>4</sup> Initially nylon mesh was used for repair but it degenerated over time and lead to reoccurrence. Therefore now days, various synthetic mesh like polypropylene, polyester are widely used.<sup>5</sup> The various risk factors that predispose to complications following repair are increased age and associated medical conditions. The number of patients in higher age group

suffering from hernia is increasing in developing countries chiefly due to reluctant for surgery due to economic reasons and fear for surgery.<sup>6</sup> The present study was done to evaluate and determine the epidemiology and demographic conditions that are prevalent amongst patients of inguinal hernia.

**MATERIALS AND METHODS**

The present study was including 60 patients of inguinal hernias admitted to the Department of Surgery at Rajindra Hospital, Government Medical College, and Patiala. The study was approved by the institute's ethical committee. Patients were evaluated and complete bio data of the patient was recorded and detailed history was taken. Routine investigations were done. The cases were divided into two comparison groups by draw of lots. In one group of patients a flat polypropylene mesh was used for laparoscopic inguinal hernioplasty(group A). In the other group of patient a newer three dimensional polypropylene mesh was used for laparoscopic hernioplasty. Patients with Incarcerated hernias, who were less than 18 years of

age were excluded from the study. Both direct and Indirect inguinal hernias were included in the study. A detailed history and clinical examination was recorded. A written consent of the patient was taken for the procedure, after duly explaining the procedure and risk of surgery and anesthesia. Various investigations like haemoglobin, bleeding and clotting time, complete and differential leukocyte count were noted. All the data was arranged in a tabulated form and SPSS software was used for analysis. Chi square test was used for analysis. Probability value of less than 0.05 was considered as significant.

**RESULTS**

In this study a total of 60 cases of primary and recurrent inguinal hernias were included in this study without any prejudice regarding age, sex or type of hernia. Table 1 shows the age group of patients in both the groups. The youngest patient in group A was 23 years of age and the Mean age in group A was 46.5 +/- 11.43 years and that in group B youngest patient was 16 years with mean 46.23 +/- 16.5 years.

There were two patients who were more than 61 years of age(6.66%). Maximum number of patients (n=12) were between 41-50 years of age.

The P value is 0.9442 that is >0.05 which is statistically not significant. Table 2 shows the distribution of cases according to the gender of the patients. In group A out of 30 patients 29 and in group B 28 patients are males which show that inguinal hernia is more common in males. Table 3 shows the distribution of cases according to side and type of hernia.

Overall 15 cases and 12 cases out of group A and B were of right side inguinal hernia and rest were left sided. Out of these cases 5 in group A and 4 in group B were direct. Total patients with left inguinal hernia were 15 in group A and 18 in group B and out of these 7 were direct in each group. Three patients had recurrent hernia, all the other were primary hernias. In group A, 3 patients had bilateral hernia, in Group B 2 patients had bilateral hernias, all were repaired at the same time.

**Table 1:** Mean age group of Cases

SN	AGE (in years)	GROUP A		GROUP B	
		no.	%	no.	%
1	<20	0	0%	1	3.3%
2	21-30	4	13.3%	5	16.6%
3	31-40	4	13.3%	7	23%
4	41-50	12	40%	9	30%
5	51-60	8	26.6%	8	26.6%
6	>61	2	6.66%	4	13.3%
7	TOTAL	30		30	
8	RANGE	23-67		16-82	
9	MEAN +/- SD	46.5 +/- 11.43		46.23 +/- 16.5	
10	T and P value	0.0706		0.9442	
11	SIGNIFICANCE	NOT SIGNIFICANT			

**Table 2:** Gender distribution of patient

SN	SEX	GROUP A		GROUP B	
		NO.	%	NO.	%
1	MALE	29	96.6%	28	93.3%
2	FEMALE	1	3.3%	2	6.6%
3	TOTAL	30	100%	30	100%

**Table 3:** Distribution of cases according to the side and type of hernia

S.N	TYPE/SIDE OF HERNIA	GROUP A			GROUP B			GRAND TOTAL
		TOTAL	DIRECT	INDIRECT	TOTAL	DIRECT	INDIRECT	
1	RIGHT	15	5	10	12	4	8	27
2	LEFT	15	7	8	18	7	11	33
3	TOTAL	30	12	18	30	11	19	60

## DISCUSSION

Inguinal hernia can be divided into direct, indirect or combined based on their relation with the inferior epigastric vessels. Direct inguinal hernia is commonly seen in man more than 40 years of age and is less common.<sup>7</sup> Various risk factors predispose to inguinal hernia. These include family history<sup>8</sup>, smoking which can lead to chronic obstructive pulmonary disease and defects in connective tissue metabolism. There still exists a controversy whether heavy weight lifting should be considered as a risk factor for hernia. Various studies have shown inconclusive reports.<sup>9</sup> The presenting complain of patients include bulge in public area with pain, burning sensation and difficulty while bending or coughing.

In our study there were 93.3% males who suffered from inguinal hernia. In a study conducted by Abrahamson et al<sup>10</sup>, hernias were present in >45% of males at 75 year of age and older. According to them a patent processus vaginalis is prime cause of indirect inguinal hernia in infants and children. In adults, enormously high intraabdominal pressure due to coughing or straining and while performing strenuous physical act may lead to development of hernia. In old age it is generally the chronic cough, constipation, urinary obstruction associated of weakening of muscles and fascia of the abdominal wall which lead to hernia. In adults the risk of hernia operation is negligible and the recurrence rate, when a good repair has been done is so small that there is hardly any reason for not operating on all hernia as soon as they are diagnosed. This is especially so, one considers the mortality and morbidity and high recurrence rate when operation is for a neglected hernia. Gilbert also stated that there is no age limit for the hernia patient who needs surgery.

In our study the youngest patient in group A was 23 years of age and the mean age in group A was 46.5 +/- 11.43 years and that in group B youngest patient was 16 years with mean 46.23 +/- 16.5 years. Studies by various workers are revealed that inguinal hernia is very common in males and very rates in females. The reported incidence in various studies ; the male to female ratio is 12:1<sup>10</sup>, 7:1<sup>11</sup> 24:1<sup>12</sup>. In the study by Ferzli et al<sup>13</sup> all the 50 patients were male. In the present series in group A out of 30 patients 29 and in group B 28 patients are males. Hence it is clear that is inguinal hernia can be considered as a disease of males only with very rare exception. Overall 15 cases and 12 cases out of group A and B were of right side inguinal hernia and rest were left sided. Out of these cases 5 in group A and 4 in group B were direct. Total patients with left inguinal hernia were 15 in group A and 18 in group B and out of these 7 were direct in each group. Three patients had recurrent hernia, all the other were primary hernias. In group A, 3 patients had bilateral hernia, in Group B 2 patients had, all were repaired at the same time.

## CONCLUSION

From the above study we can conclude that inguinal hernia is a commonly occurring clinical entity. It is more commonly seen in males than females. It is more prevalent in 41-50 years of age and indirect type of hernia is commonly seen.

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