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Prevalence of Inguinal Hernia in Bundelkhand Region of India.

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ABSTRACT

Background: The aim of present study is to note prevalence of inguinal hernia in two genders and different age groups in patients from Bundelkhand region. **Methods:** This observational study was carried out on 130 patients of inguinal hernia belonging from Bundelkhand region of India. Patients were classified into groups based on their genders, age, laterality and type of inguinal hernia. All the findings were tabulated and inferences were drawn followed by statistical comparison using chi-square test with p value <0.05 considered as significant. **Results:** Highest prevalence of inguinal hernia was noted in 41-50 years age group. Males show a higher preponderance for inguinal hernia as compared to females. Prevalence of hernia was higher on right side as compared to left side, though 6.9% cases were found to be bilateral. Although the recurrence of inguinal hernia was noted in both direct and indirect hernia, but recurrent hernia showed higher preponderance. **Conclusion:** Such studies are needed to be conducted in all geographical regions with as much possible number of observations. Results of present study might be helpful for future studies in estimating inguinal hernia prevalence in population as a whole.

Keywords: inguinal, hernia, bundelkhand, direct, indirect.

INTRODUCTION

A hernia occurs when an organ pushes through an opening in the muscle or tissue that holds it in place. It is protrusions of body parts through defects in the anatomic structures that normally contains it and are most common in the abdomen. Abdominal wall hernias are frequently encountered in surgical practice accounting for 15% - 18% of all surgical procedures.[1, 2]

An inguinal hernia is a protrusion of abdominal cavity contents through the inguinal canal.[3] This is the most common type of hernia and it mainly affects men. It is said to be often associated with ageing and repeated strain on the abdomen.

Inguinal hernias account for 75% of all abdominal wall hernias with a lifetime risk of 27% in men and 3% in women.[4]

The aim of present study is to note prevalence of inguinal hernia in two genders and different age groups in patients from Bundelkhand region.

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MATERIALS AND METHODS

This observational study was carried out on patients of Bundelkhand region of India, suffering from inguinal hernia presented in Department of surgery, Rajkiya Medical College, Jalaun, Uttar Pradesh and Siddhi Vinayak Hospital, Jalaun, Uttar Pradesh on 130 patients over a period of evaluation from December 2013 to November 2015. Patients belonging to other regions were not included in this study. A prior approval was taken for this study from research ethical society of the institute. A very detailed history taking and thorough examination of all the patients were done. Data were stratified into groups formed on the basis of age and gender of patients, laterality of hernia and also on the basis of type of inguinal hernia viz. direct/ indirect hernia and primary/ recurrent inguinal hernia. All the findings were tabulated and inferences were drawn followed by statistical comparison with the help of "Statistical Calculator v 4.0" using suitable tests viz. chi-square test with *p* value <0.05 considered as significant.

RESULTS

Table 1: Age distribution of patients with inguinal hernia.

Age group in years	Number of patients		
	Direct inguinal hernia	Indirect inguinal hernia	Total
≤10	1	3	4
11-20	3	7	10
21-30	4	8	12
31-40	6	16	22
41-50	14	42	56
51-60	5	13	18
61-70	0	6	6
≥70	2	0	2
Total	35	95	130

(Chi square test: X^2= 8.06 df=7 *p*=0.33)

Table 2: Frequency distribution of inguinal hernia between two genders.

Gender	Number of patients		
	Direct inguinal hernia	Indirect inguinal hernia	Total
Male	21	70	91
Female	14	25	39
Total	35	95	130

(Chi square test: X^2= 2.28 df=1 *p*=0.13)

Table 3: Side distribution of inguinal hernia.

Side	Number of patients		
	Direct inguinal hernia	Indirect inguinal hernia	Total
Right only	21	60	81
Left only	10	30	40
Bilateral	4	5	9
Total	35	95	130

(Chi square test: X^2= 1.51 df=2 *p*=0.47)

Table 3: Distribution of patients on the basis of type of hernia.

Type	Number of patients		
	Direct inguinal hernia	Indirect inguinal hernia	Total
Primary	27	83	110
Recurrent	8	12	20
Total	35	95	130

(Chi square test: X^2= 2.05 df=1 *p*=0.15)

DISCUSSION

In the present study, the highest prevalence of direct inguinal hernia as well as indirect inguinal hernia was found in 41-50 years age group. [Table 1]. The same age group showing highest prevalence of inguinal hernia was also notified by other workers from other parts of India.[5, 6] Indirect inguinal hernia was found to be more prevalent than direct inguinal hernia in most of the age groups. [Table 1] Males showed a higher preponderance than females for developing inguinal hernia. [Table-2] Similar male preponderance was also noted by other workers.[5, 7, 8] The possible reason of high preponderance of inguinal hernia in males is their more involvement in strenuous activities. Prevalence of hernia was higher on the right side as compared to left side, though 6.9% cases were found to be bilateral [Table-3]. Right side dominance in inguinal hernia was also noted by other worker from different geological region.[5, 9-13] Dominance of right side inguinal hernia was seen in both genders. Right sided propensity was also noted in both direct and indirect inguinal hernia. Some workers proposed that inguinal hernia is more common on the right side due to late fall down of right testis and more frequent failure of closure of right processus vaginalis.[14, 15] Although the recurrence of inguinal hernia was noted in both direct and indirect hernia, but recurrent hernia showed a higher preponderance (60%) of indirect inguinal hernia similar to another study in different region in India.[6] [Table-4] Recurrent inguinal hernia also showed highest prevalence in 41-50 years age group and in the male gender. The recurrent inguinal hernia was also noted commoner on the right side as compared to the left side.

CONCLUSION

Such studies are needed to be conducted in all geographical regions with as much possible number of observations. Results of the present study might be helpful for future studies in estimating inguinal hernia prevalence in the population as a whole.

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