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CLINICO-EPIDEMIOLOGIC PROFILE OF INGUINAL HERNIA IN RURAL MEDICAL COLLEGE IN NORTHERN INDIA

Surgery

Dr. Prashant Ranjan Singh J.R, MIMS, BARABANKI, U.P.

Dr. Sandesh Bharat Singh ASSISTANT Professor, MIMS, BARABANKI, U.P.

Dr. Ashutosh Gupta* Associate Professor, MIMS, BARABANKI, U.P. *Corresponding Author

ABSTRACT

Background: Inguinal hernias are one most common problem dealt by general surgeons and have significant morbidity and mortality. In the developed countries, almost all of the inguinal hernias are recognized early and present early in the course of disease to the surgeon. However, in developing countries, quite a considerable percentage of it is not repaired leading to a higher incidence of morbidity and mortality. Hence, we planned this study to understand the clinico-epidemiologic profile of inguinal hernia in rural medical college in northern India.

Methodology: This is a descriptive epidemiological, prospective study carried out in rural medical college. All patients who presented to the surgical wards and outpatient with a clinical diagnosis of inguinal hernia were included in the study.

Results: Among the 92 patients included in the study, most of them were men (88) with a mean age of around 44 years, married (85) and farmer (48) by occupation. All the patients of inguinal hernia presented with the complaints of lump above the inguinal crease and had predominantly right-sided hernia. 5 patients had family history of hernia. Indirect inguinal hernias were predominant. 3 patients had recurrence of earlier operated hernia, while 5 patients had hernia on the opposite side. Most of the patients presented late to the hospital due to the lack of awareness of the disease.

Conclusion: Late presentation of disease is the hallmark of this disease in rural areas due to the lack of awareness. Increasing awareness of the disease among general population will lead to inguinal hernias being detected at earlier stage and will decrease the morbidity due to this disease.

KEYWORDS

Clinical profile, epidemiology, hernia, inguinal hernia.

INTRODUCTION:

Inguinal hernias are one most common problem dealt by general surgeons and have statistically significant morbidity and mortality. Globally, inguinal hernias comprise 75% of all abdominal wall hernias. Inguinal hernia repair is one of the most common general surgical operations worldwide accounting for about 10–15% of all surgical procedures second only to appendectomy.[1] It has been estimated that worldwide over 20 million repairs of inguinal hernia are carried out each year, the specific operation rates varying between countries from around 100 to 300/100,000 population/year.[2] In the United Kingdom, some 100,000 inguinal hernias are repaired each year and approximately 750,000 inguinal hernias are repaired each year in the United States. In India, the estimated annual incidence of inguinal hernias is 1,957,850.[3]

Inguinal hernias have varied presentation, and treatment of hernia depends upon the duration of presentation and the type of presentation. In the developed countries, almost all of the inguinal hernias are recognized early and present early in the course of disease to the surgeon.

However, in developing countries, quite a considerable percentage of it is not repaired leading to a higher incidence of morbidity and mortality. The management of inguinal hernia poses therapeutic challenges to general surgeons practicing in resource limited countries. Late presentation of the disease coupled with the lack of modern therapeutic facilities such as laparoscopy and mesh are among the hallmarks of the disease in developing countries. In India, there is a paucity of published data on the clinico-epidemiological profile of patients presenting with inguinal hernia and data on their surgical management and outcomes.

Hence, we planned this study to understand the clinico-epidemiologic profile of inguinal hernia in rural medical college in northern India. We describe our experience of the various presentations, epidemiological profile, and treatment outcome of patients with inguinal hernia.

METHODS:

The source of the material for the study is from the patients attending surgical outpatient department and inpatients of the surgical wards at a Tertiary Hospital between January 2020 and December 2021, 92 cases were studied. Informed valid consent was taken. Departmental Clearance was done.

All patients who presented to the surgical wards and outpatient with a clinical diagnosis of inguinal hernia were included in the study. Patients those who refused to give consent were excluded from the study. The clinical diagnosis of inguinal hernia was made by detailed history and clinical examination.[4] All patients being admitted/or managed in outpatients are seen by a surgical attending/consultant to confirm diagnosis of hernia. Those patients who are willing for surgical intervention are then admitted to the surgical wards. Patients with complications of inguinal hernias are directly admitted from emergency ward. All patients have a detailed preoperative assessment by a team of attending surgeons and attending anesthetists before operative procedure.

At the time of diagnosis of the patient with inguinal hernia, the study investigator completed the detailed pretested, coded questionnaire of the patient, which included socio-demographic details (age, sex and occupation), clinical presentation (duration of hernia, side affected, extent, reasons for late presentation, type of hernia, whether primary or recurrence), past medical and surgical history, American Society of Anesthesiologists (ASA) class,[5] type of surgical procedure, postoperative complications, the duration of hospital stay, and mortality. Data were then abstracted from the medical records regarding the complications and hospital stay.

RESULTS:

Among the 92 patients included in the study. Mean age was around 44 years (Table 1).

Age Group	Number of Patients
11-20	3
21-30	15
31-40	20
41-50	30
51-60	18
61-70	6
Total number of Patients	92

Most of them were men (88) (Table 2).

According to sex distribution	Number of patients
Female Patient	4
Male Patient	88
Total number of Patients	92

Indirect inguinal hernias were predominant (Table 3).

Type of Inguinal Hernia	Number of patients
Direct	21
Indirect	71
Total number of patients	92

All the patients of inguinal hernia presented with the complaints of lump above the inguinal crease and had predominantly right-sided hernia (Table 4).

According to site of hernia	Number of patients
Left sided	32
Right sided	60
Total number of patients	92

Married (85) and farmer (48) by occupation (Table 5).

Occupation	Number of patients
Farmer	48
Labourer	29
Shopkeeper/Business owner	4
Housewife/Homemaker	4
Student	7
Total number of patients	92

5 patients had family history of hernia (Table 6).

According to the hernia occuring in the family	Number of patients
Yes	5
No	87
Total number of patients	92

3 patients had recurrence of earlier operated hernia, while 5 patients had hernia on the opposite side (Table 7).

According to the past history for hernia	Number of patients
Hernia has recurred in the operated site	3
Occuring on the Opposite side	5
No such past history	84
Total number of patients	92

There were 4 emergency cases operated (Table 8).

According to the association with complication	Number of patients
Complicated Hernia	4
Uncomplicated Hernia	88
Total number of patients	92

Most of the patients presented late to the hospital due to the lack of awareness of the disease.

DISCUSSION

A hernia occurs when an internal part of the body pushes through a weakness in the muscle or surrounding tissue wall. In many cases, hernias cause no or very few symptoms, although you may notice a swelling or lump in your tummy (abdomen) or groin. The lump can often be pushed back in, or will disappear when you lie down.

Coughing or straining may make the lump appear. Hernia is considered a complication of PD. The pathophysiology is based on the concept of increased abdominal pressure (mechanical effect) affecting a weak abdominal wall. [5] In the present study, the most common affected age group was 41-50 years followed by 31-40 years. This was in concordance with a study by Balram et al, wherein, 42-50 years age group was the most common age group in Jalaun, Uttar Pradesh.[6]

In present study, primary hernia was more common than recurrent hernia. Both primary and recurrent hernia was more common in males than in females. The preponderance of males to females was also seen in other studies such as Balram et al. [6] This preponderance of hernia in males was attributed to the fact that here was involvement of more strenuous exercises and lifting of weights by them and the anatomical differences between the two.

60 of the patients had right side hernia followed by left. Similar was the case in the study by Balram et al where the right side hernia was the commonest. This dominance was similar in both the genders equally. The cause for the right side predominance was said to be due to late fall down of the testis and more frequent failure of closure of right processus vaginalis. [7]

The occupation of many of the men was farming, hauling construction, lifting weights at the factory etc. These factors increase the abdominal pressure during cough or straining, which further increase the risk of inguinal hernia. A study in USA reported that inguinal hernia was associated with older age, obesity, greater height, chronic cough or rural residence. [8]

Family history was another important factor contributing to occurrence of hernia in patients. This was concurred by others such as Lau et al and Junge et al, who also predicted hernia if a family member previously had it.[9] Indirect inguinal hernias were predominant with 71 of the cases; this is as given in literature.

CONCLUSION

Inguinal hernias continue to be a source of morbidity and mortality in our center and globally. The data regarding the presentation and epidemiologically profile of patients with inguinal hernia is lacking from Indian subcontinent. Late presentation of disease is the hallmark of this disease in rural areas due to the lack of awareness. Increasing awareness of the disease among general population will lead to inguinal hernias being detected at earlier stage and will decrease the morbidity due to this disease. This study highlights this data which is of paramount importance in order to eliminate the morbidity and mortality associated with this common problem.

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