A Retrospective Study on Prevalence of Recurrent and Primary Inguinal Hernia in a Tertiary Care Teaching Hospital

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ABSTRACT

Background: Inguinal hernia is defined as invagination of abdominal cavity along with its contents through the inguinal canal. Both primary and recurrent inguinal hernia is frequently encountered problems in the outpatient department. Present study was conducted with the aim of identifying the incidence of primary and recurrent inguinal hernia and to determine whether any specific risk factors are associated with it. Materials and Methods: The present retrospective study was conducted in the Department of Surgery, Saraswathi Institute of Medical Sciences, Anwarpur, UP (India). This study was based on data of last 4 years. A data collection sheet containing salient points of recurrence and repair was prepared. All the data was collected in these sheets. Information regarding patient’s history, type of hernia, time of repair and time of recurrence were noted. Information on the type of surgical repair was also noted. All the data thus obtained was arranged in a tabulated form and SPSS software was used for analysis. Student T test was used for evaluating the results.

Results: Present study included 320 subjects but there was inadequate information available for 2 patients, so they were excluded from the study. The mean age of subjects in this study was 29.27±11.8 years. There were majority of males (72.9%) and rest of females. There were 68.5% cases (n=218) of primary inguinal hernia and 31.4% cases (n=100) of recurrent inguinal hernia. There were 38.1% cases (n=121) of early recurrence i.e. recurrence occurring within 2 years of primary repair. There were 61.7% cases (n=197) of late recurrence i.e. recurrence after two years of primary repair.

Conclusion: In our present study, the prevalence of recurrent hernia was 31.4% with 87.7% of the males being involved. Repeated hernial surgeries increase the morbidity of the patient and also become a burden for the hospital. Steps should be taken to decrease the recurrence of the disease.

Keywords: Inguinal, Hernia, Surgical, Recurrence.

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INTRODUCTION

Inguinal hernia is defined as invagination of abdominal cavity along with its contents through the inguinal canal. Both primary and recurrent inguinal hernia is frequently encountered problems in the outpatient surgical department.¹ It is more common in men as compared to women, 27% of the men during their lifetime and 3% of women during their lifetime suffer from this.² There are about 500,000 cases of abdominal hernia that are reported every year.³

The exact etiology behind inguinal hernia is unknown and there is little epidemiologic data available regarding its occurrence. There are different varieties of inguinal hernia that occur at a variable rate and they vary with age, it is seen that in children indirect inguinal hernia is most common.⁴ The most common and frequent problem while operating inguinal hernia is its recurrence, in spite of various advancements in the treatment modality. It has been reported that 13% of all the groin hernia cases are of recurrent hernia.⁵ According to a survey conducted in US, the prevalence of non-surgically operated inguinal hernia was 5-7%.³ The various other complications associated with inguinal hernia include bowel strangulation, obstruction of bowel and incarceration. Surgical repair of inguinal hernia is the most commonly performed surgery for both adults and children. Inguinal hernia represents 95% of groin hernias.⁶ There is paucity of data on the recurrence rates of inguinal hernia. In today’s era, there has been a tremendous rise in the number of septic complications, even with so much advancement in sterilization techniques.⁶ Different types of surgical repair offer different recurrence rate.⁷ The present study was conducted with the aim of identifying the incidence of primary and recurrent inguinal hernia and to determine whether any specific risk factors are associated with it.
MATERIALS AND METHODS

The present retrospective study was conducted in the Department of Surgery, Saraswathi Institute of Medical Sciences, Anwarpur, UP (India). This study was approved by Institute’s ethical board and male and female patients who were aged more than 12 years, belonging to ASA grade I and II were included in the study. Patients who underwent emergency repair for strangulation were excluded from study. The demographic details of patient’s were collected. A data collection sheet containing salient points of recurrence and repair was prepared. All the data was collected in these sheets. Information regarding patient’s history, type of hernia, time of repair and time of recurrence were noted. Information on the type of surgical repair was also noted. All the patients who came for follow up were also included in the study, if the patient was unable to come for follow up then telephonic communication was established.

All the data thus obtained was arranged in a tabulated form and SPSS software was used for analysis. Student T test was used for evaluating the results.

<table>
<thead>
<tr>
<th>Table 1: Prevalence of recurrent and primary inguinal hernia</th>
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<th>Table 2: Prevalence of type of recurrent inguinal hernia</th>
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<tr>
<td>Type</td>
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<tr>
<td>Early recurrent inguinal hernia</td>
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<td>Late recurrent inguinal hernia</td>
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<th>Table 3: Gender variation in the prevalence of inguinal hernia</th>
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<td>Sex</td>
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<td>Male</td>
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<td>Female</td>
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<td>Total</td>
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RESULTS

Present study included 320 subjects but there was in adequate information available for 2 patients, so they were excluded from the study. The mean age of subjects in this study was 29.27±11.8 years. There were majority of males (72.9%) and rest of females. In our study the males were more commonly affected as compared to females. The male to female ratio in this study was 7.25:1. In our study also there was male predominance, 87.7% of the males were involved. This male predominance could be due to anatomical variation and occupational differences amongst males and females. In a study conducted by Balamr,12 to determine the predominance of inguinal hernia in Bundelkhand district, he also found that males were more frequently affected than females and the age group of 41-50 years was more susceptible to inguinal hernia.

In a study conducted by Basu et al10, there were higher chances of recurrence (60%) in case of indirect inguinal hernia. The major risk factor for inguinal hernia was heavy weight lifting due to this, laborers and construction workers are more prone to hernias. In our study there were many cases of early recurrence, this high

DISCUSSION

Hernia is basically an opening in muscle or tissue through which various anatomic tissues protrude. These protrusions are most commonly seen in abdominal wall. Abdominal wall hernias account for 15-18% of all the surgical cases,9,9 The major factor of concern for a surgeon while performing hernia surgery is recurrence. It is most important complication and it varies depending on the types of repair. According to our present study, the recurrence rate was found out to be 31.4%, which is high compared to the other studies on prevalence of recurrent hernia. In a study conducted by Indranil Basu et al11, in Kolkata, studying over 498 cases of inguinal hernia, they found that prevalence of recurrent hernia was 30.72%. In a study conducted by Shengulwar11 to determine the prevalence of inguinal hernia, they found that there were 71.11% cases of primary inguinal hernia and 28.29% cases of recurrent inguinal hernia. In our study also males were more commonly affected as compared to females. The male to female ratio in this study was 7.25:1. In our study also there was male predominance, 87.7% of the males were involved. This male predominance could be due to anatomical variation and occupational differences amongst males and females. In a study conducted by Balamr,12 to determine the predominance of inguinal hernia in Bundelkhand district, he also found that males were more frequently affected than females and the age group of 41-50 years was more susceptible to inguinal hernia.
incidence of early recurrent hernia is majorly due to technical errors. Late recurrences are due to local tissue failure.13-15 Genetics play an important role in this disease. Family history plays a key factor in the type of hernia16 and recurrence of hernia.17 This increase in the incidence of hernia is becoming a burden for the patient and hospital by increasing the morbidity and length of hospital stay. Various immediate measures should be taken to curb this recurrence. Advancements in surgical technique with trained and experienced surgeons need to be adopted to decrease the recurrence rate.

CONCLUSION
In our present study, the prevalence of recurrent hernia was 31.4% with 87.7% of the males being involved. Repeated hernial surgeries increase the morbidity of the patient and also become a burden for the hospital. Steps should be taken to decrease the recurrence of the disease.

REFERENCES

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