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Original Research Article

Incidence of inguinal hernia and its type in a study in a semiurban area in Andhra Pradesh, India

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ABSTRACT

Background: Repair of inguinal hernia is one of the most common operations in general surgery. A reducible hernia is usually a longstanding condition, and diagnosis is made clinically, on the basis of typical symptoms and signs. This study was conducted to assess the incidence of inguinal hernias in our geographical area.
Methods: 187 patients who had come to the hospital with complaints of swelling in their groin and confirmed to be inguinal hernia were included into the study. Ultrasound for the detection of aneurysm of the abdominal aorta was done for all the patients before the inguinal hernia repair.
Results: 129 (69%) patients were males and only 58 out of the 187 patients were females. Most of the patients had primary hernia while 45 (24.1%) of them had recurrent hernia. Most of the patients were between 31-60 years of age followed by 61-75 years. Around 94% of the patients had unilateral hernia and 5.9% had bilateral hernias. Of the unilateral ones, right side was predominant over the left side. 80% of the patients had indirect hernia and direct hernia was seen only among 20% of them.
Conclusions: More such studies need to be conducted at various geographical regions to get more number of observations and data to gather the prevalence.

Keywords: Inguinal hernia, Incidence, Unilateral, Bilateral

INTRODUCTION

A hernia occurs when an organ pushes through an opening in the muscle or tissue that holds it in place. It protrudes through body pats though defects in the anatomical structures that normally contains it and are most common in the abdomen. Abdominal wall hernias are more common and account for about 15-18% of all the surgical procedures.[1,2]

The prevalence for abdominal wall hernias among all the age groups is estimated to be 1.7% and 4% for those aged over 45 years. Inguinal hernias are among the most common of the abdominal wall hernias accounting for almost 75% with a life time risk of 27% in men and 3% in women.[3]

Repair of inguinal hernia is one of the most common operations in general surgery, with rates ranging from 10 per 100 000 of the population in the United Kingdom to 28 per 100 000 in the United States.[4] Inguinal hernias usually present with a lump in the groin, that normally goes away with minimal pressure or when the patient is lying down. There is a mild to moderate discomfort in the patients and pain is normally uncommon. Most of the patients who are scheduled for surgery do not have any pain.[5]

A reducible hernia is usually a longstanding condition, and diagnosis is made clinically, on the basis of typical symptoms and signs. The condition may be unilateral or bilateral and may recur after treatment (recurrent hernia).

Males have been reported to be more affected with inguinal hernias than females. Possible aetiological factors include an open processus vaginalis and conditions which can raise intra-abdominal pressure, such as chronic bronchitis or hyperplasia of the prostate.[6] This study was conducted to assess the incidence of inguinal hernias in our geographical area.

METHODS

This study was conducted by the department of surgery at Vishwabharathi Medical College, duration period of two years. 187 patients who had come to the hospital with complaints of swelling in their groin and confirmed to be inguinal hernia were included into the study. Detailed demographic details such as the family history, life style, chronic cough, cause of strain if any, constipation etc. The duration of swelling, if present on one side or both sides were also noted. Thorough physical and clinical examination was done for all the patients before the repair surgery and all the parameters were investigated for normal levels.

Ultrasound for the detection of aneurysm of the abdominal aorta was done for all the patients before the inguinal hernia repair, in case it was an emergency operation, the ultrasound was done if possible. The hernia was palpated for all the patients to look for the visible and clearly palpable hernia, a palpable impulse or a previous operational scar. Clearly visible hernias were identified by a visible lump. If its neck was continuous with the inguinal canal or directed backwards into the abdomen, it was diagnosed as a palpable hernia. If there was no visible lump, the scrotum was invaginated by the little finger to reach the external ring, and the subject was asked to cough, in order to determine whether there was a palpable impulse. Scarring at the site was taken as recurrence of hernia.

RESULTS

129 (69%) patients were males and only 58 out of the 187 patients were females (Figure 1).

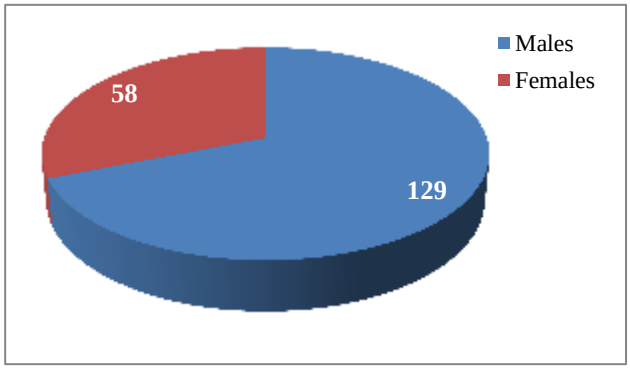

Figure 1: Sex wise distribution of the patients.

Most of the patients had primary hernia while 45 (24.1%) of them had recurrent hernia. In both the conditions, males were the predominant gender (Figure 2).

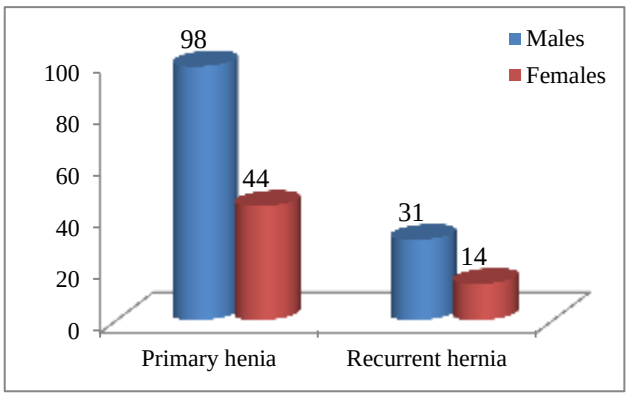

Figure 2: Type of hernia.

Most of the patients were between 31-60 years of age followed by 61-75 years. The numbers of males were more in the 46-60 years of age followed by 31-45 years. Among the females, the most common age group was also 46-60 years; however, the older age groups were more affected than the younger age group (Table 1).

Table 1: Age wise distribution of the patients.

Age	Males	Females
18-30	5 (3.9%)	3 (5.2%)
31-45	41 (31.8%)	9 (15.5%)
46-60	49 (38%)	21 (36.2%)
61-75	26 (20.2%)	15 (25.9%)
>75	8 (6.2%)	10 (17.2%)
Total	129	58

Around 94% of the patients had unilateral hernia and 5.9% had bilateral hernias. Of the unilateral ones, right side was predominant over the left side. 80% of the patients had indirect hernia and direct hernia was seen only among 20% of them (Table 2).

Table 2: Distribution of inguinal hernia according to side and type.

Side	Number	Percentage
Right	114	60.9%
Left	62	33.2%
Bilateral	11	5.9%
Type		
Indirect	159	80.3%
Direct	39	19.7%
Total	198	100%

DISCUSSION

Hernia is a common surgical problem, which affects almost all age groups, from infants to elderly. Most of the

times the symptoms are manageable, while a few of them can be critical. Integrity of the abdominal wall is primarily dependent upon the abdominal muscles and their conjoined tendons. These muscles assist respiration and control the expulsive efforts of urination, defecation, coughing and parturition. The contour of the abdomen is dependent upon the age, muscle mass, muscle tone, obesity, intraabdominal pathology, parity, and posture. All these factors play a significant role in the formation of a hernia.[7]

In our study, males were more affected than females which were in concordance to many other literatures. Gupta et al reported an incidence of 96% males compared to females while Charles et al reported 93.2% of all the cases to be males.[8,9] Similar results were found from other parts of India.[10-13] The possible reason of high preponderance of inguinal hernia in males is their more involvement in strenuous activities. In the present study, primary hernia was more predominant than recurrent hernia. This was found to be similar to the studies by Gulzar et al, BAlram et al, Kuhl et al.[10-13] Most of the cases in our study had a unilateral hernia. Bilateral hernia was seen only in 5% of the cases. Among the unilateral hernias, right side was more prevalent than the left. Charles et al also reported right sided hernias to be more prominent than the left side.[9] Saeed et al found 70% to be right sided while 30% were left sided and 46% were indirect hernias and 59% were direct inguinal hernias. Balram et al reported a total of 62.3% of the inguinal hernias to be on the right hand side compared to left or bilateral. Similar cases were found by other workers also.[15-19] Some of the workers have proposed that the right side dominance of the hernia could be due to the late fall down of the right testis and more frequent failure of closure of right processes vaginalis.[20,21]

CONCLUSION

There is a high incidence of inguinal hernia among our population with men being more affected and right side unilateral hernias being more common. Though not at a risk of mortality, inguinal hernia is a considerable cause of morbidity among the patients thus requiring repair. Although the present study was not done for epidemiological purposes, more such studies need to be conducted at various geographical regions to get more number of observations and data to gather the prevalence.

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