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Original Research Article

A Study to Assess Incidence of Hernia in a Tertiary Hospital in North Karnataka City

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ABSTRACT

Background: Since the dawn of surgical history, hernias have been a subject of interest, and their treatment has evolved through distinct stages.
Objectives: To know the incidence of hernia, 2) to know the symptoms and duration of hernia and 3) to know different types of hernia and complication associated with surgeries.
Methodology: The present study was conducted in a tertiary hospital, Vijaypur for a period of one year from July 2014 to June 2015.
Result: The incidence of hernia was common in the age group 51-60 and men were affected more. The occurrence of hernia is common in labourers accounting for 60%
About 50% of patient presented with swelling and pain. Left indirect hernia was seen in 27 % of cases being most common while pantaloons right was the least common accounting for only 3%. Complications associated with surgeries, 10.0% had post operative pain, and 25% had wound infection.
Conclusion: The results of this study confirmed that the incidence of cases is more in men, and in the older age group.

Key words: hernia, pain, hematoma, wound infection, complication.

INTRODUCTION

Of the study, of the many operations available in a general surgeon's armamentarium, that of hernia repairs has been written about repeatedly. [1] The rapid changes that have been witnessed in open approach surgeries, prosthetic materials and laparoscopic surgeries have made hernia surgery a common most interesting field of endeavor that demands renewed discipline and dedication. [2] Though a variety of procedures are performed, none can be termed as an ideal procedure as each one is accompanied by varied early and late complications, the most significant being recurrence. In 1891, William Bull, one of the most prominent surgeons, wrote of hernia repairs, "It is wise to estimate the value of given procedures by the relative proportion of relapses." [3] In the mid 19thcentury, although an aesthesia was available, the concepts of antisepsis and asepsis were unknown; abscesses, putrefaction and tissue sloughs represented the end result of open hernia surgery. The description of the Lichtenstein tension free mesh repair - 12 years ago opened a new era in groin hernia repair. Lichtenstein commented as follows- "The advantages are many and apparent. The lack of post operative pain, minimum hospitalization, immediate return to work, virtual absence of anesthesia or cardiac risk, freedom from urinary retention, gas pains and post

operative complications (pneumonia, thrombosis, atelectasis, nausea and vomiting etc) and saving of money are but a few. [4] There is no significant difference between unilateral and simultaneous bilateral tension free inguinal hernia repairs with regard to initial recovery, wound problems, narcotic requirement, overnight admission and recurrence rate. Other potential advantages of simultaneous bilateral inguinal hernia repair include obviating the need for a second anesthetic and operations, decreased psychological stress, and financial savings due to less time off work [5] or avoidance of the risk of incarceration or disability caused by the hernia on the opposite side. A simultaneous bilateral hernia repair, if done in a tension free manner, appears to be safe and cost effective for the patient with bilateral inguinal hernias. [6]

Hence the present study was conducted to assess the incidence of hernia, symptoms and duration of hernia and also to know different types of hernia and complication associated with surgeries.

METHODOLOGY

A cross sectional study was conducted on inguinal hernia patient admitted in a tertiary hospital, Vijaypur during the period July 2014 to June 2015.A total of 60 patients were enrolled in the study and the data was analyzed using Microsoft excel software. Statistical software Epi-info 3.5.2 was used to analyze the data. Descriptive statistics and chi-square test were used to find out the association.

The inclusion criteria are:

- All patients with direct and indirect bilateral inguinal hernia were included in the study

The exclusion criteria are:

- Infants with inguinal hernias
- Recurrent hernias
- Complicated hernias
- Hernias treated with laparoscopic method

The diagnosis of inguinal hernia was made by clinical examination.

The preoperative evaluation included history and clinical findings.

Routine lab investigations like Hb%, urine examination, RBS, Serum urea and creatinine, HIV, HBsAg were done. X ray and ECG were done for patients above 40 years for anesthetic evaluation.

Preoperative treatment included:

- Correction of anemias
- Weight reduction if obese [7]
- Improvement of nutritional status
- Treatment of respiratory infection of any
- Abstinence from smoking /alcohol
- Advice regarding breathing exercises

Post operative care and complications

- After surgery all patients were monitored carefully for pain, bleeding, wound infection and urinary retention.
- Pain was assessed using verbal graphic rating scale.
- A wound infection ranged from minimal discharge of pus from a single cutaneous suture to extensive and invasive process requiring lengthy hospitalization and intravenous antibiotics.
- Bleeding was defined as subcutaneous hematoma which can result from careless ties or cautery.
- Urinary retention was termed as inability to urinate requiring catheterization.

RESULTS

Table 1: Age and sexwise distribution

Age groups	Sex		Total
	Male	Female	
21-30	07 (11.6%)	00 (0.0%)	07
31-40	12 (20.0%)	02 (3.4%)	14
41-50	07 (11.6%)	00(0.0%)	07
51-60	16 (26.6%)	01 (1.6%)	17
61-70	12 (20.0%)	00(0.0%)	12
70+	03 (5.0%)	00(0.0%)	03
Total	**57 (95.0%)**	**03 (5.0%)**	**60 (100%)**

X^2 4.096, p=0.53

In our study the incidence of hernia was common in the age group 51-60 and men were affected more than women. There was no significant association observed.

Table 2: Occupational status of the study participants

Occupation	Number	Percentage
Farmer	8	13.3
Labourer	36	60
Teacher	4	6.6
Conductor	2	3.3
Student	4	6.6
Others	6	10
Total	**60**	**100**

The occurrence of hernia is common in daily wage labourers accounting for 60% in comparison to other occupation like conductor (3.3%) and teachers (6.6%)

Table 3: Symptoms of the study participants

Symptoms	Position Right	Left	Total
Swelling	12	08	20
Swelling with pain	18	12	20
Pain	04	06	10
Total	**34**	**26**	**60**

$X^2 = 1.357$, P = 0.71

About 50% of patient presented with swelling and pain while 33% with swelling and only about16 % presented with pain alone. There is no significant association observed.

Table 4: Duration of symptoms of study participants

Duration	Number	Percentage
< 1 year	24	40
1-2 year	17	28.3
2-3 year	10	16.7
3-4 year	06	10
>4 year	03	5
Total	**60**	**100**

40% of patients presented within the first year of onset of complaints, while 5% of them presented after 4 years.

Table 5: Types of hernia

Duration	Number	Percentage
Right-indirect	14	23.3
Right-direct	13	21.7
Left-indirect	16	26.7
Left-direct	12	20.0
Pantaloon- right	02	3.3
Pantaloon – left	03	5.0
Total	**60**	**100**

Left indirect hernia was seen in 26.7 % of cases being most common while pantaloons right was the least common accounting for only 3.3%.

Table 6: Complications of surgeries

Complications	Number	Percentage
Pain	06	10.0
Wound infection	15	25.0
Hematoma	10	16.6
Total	**31`**	

The above table infers that, 6 (10.0%) had post operative pain, 15 (25%) had wound infection

DISCUSSION

A total of 60 hernia patients were examined during the study period. The incidence of hernia was common in the age group 51-60 and men were affected more than women. The occurrence of hernia is common in daily wage labourers accounting for 60%. About 50% of patient presented with swelling and pain while 33% with swelling. 40% of patients presented within the first year of onset of complaints, while 5% of them presented after 4 years. Left indirect hernia was seen in 26.7 % of cases being most common while pantaloons right was the least common accounting for only 3.3%, 6 (10.0%) had post operative pain, 15 (25%) had wound infection.

Study by Ira M. Rutkow et al, shows the incidence of disease was highest in the age group 41-50 and male were reported to have high incidence compared to females [8] and also in a study by Martin Kurzer et al 97% of cases were male. [9]

M. Bay Nielsen et al study, have shown that labour workers have got high incidence of hernia 33.1%. [10] In a study by Mike SLLiem et al, 93% presented with swelling in the groin and 83% with discomfort and / or pain. The low incidence of pain in our study in comparison to that of Mike SLLiem and others can be explained by high threshold of pain in the Indian population. [11] The incidence of different types of hernia in our study is consistent with the analysis of the hernia centres 8 year series of 2861 primary hernias. [8] Studies by Martin Kurzer et all-in british hernia centre have shown that complications associated with surgeries, infection around 10 % and hematoma is about 5 %. [9] This difference may be due to operating stand and theatre setup

CONCLUSION

The result of this study infers that hernia is more common in men and in older

age group. Quality assessment of hernia surgery is essential. It is necessary for education and for evaluation of new methods. For surgeons and surgical units, quality assessment is necessary for improving and defending achievements. We have a long way to go in order to make hernia repair a "once in- a-lifetime experience" for our patients.

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