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Original Research Paper

General Surgery

A CLINICAL STUDY OF OBSTRUCTED GROIN HERNIA IN RIMS, RANCHI.

Dr. Krishna Murari	Associate Professor, RIMS Ranchi
Dr. Kriti Patel*	Junior Resident, RIMS Ranchi*Corresponding Author
Dr. Asim A. Minj	SENIOR Resident, RIMS Ranchi

ABSTRACT

Introduction: Obstructed groin hernia is very common cause of emergency surgical admission with complications like incarceration, obstruction and strangulation. Emergency surgical treatment of obstructed groin hernias is associated with poor prognosis and high rate of post operative complication even with better care, anesthetic management and advanced surgical techniques. The aim of this objective was to determine the various mode of presentation, clinical features and evaluate the post operative outcome in obstructed groin hernia surgery. **Materials and Methods:** Descriptive study was carried out among 64 cases were conducted in Department of General surgery, RIMS, Ranchi from June 2018-June 2020. Cases with obstructed groin hernia which had signs of obstruction, incarceration and strangulation were taken up for emergency surgical intervention within 6 hours. **Results:** Out of 64 cases, 61 cases had inguinal hernia and 3 cases had femoral hernia. Majority of the patients were in 5th and 6th decade. Obstructed groin hernia most commonly present in males (90%) than in females (10%). Obstructed inguinal hernia was seen predominately in males and obstructed femoral hernia was found in females. Right sided obstructed groin hernias were more common. Incarceration was the commonest complication seen in 75% cases of age groups 65-74 yrs and strangulated inguinal hernia found in 75% in age group of 55-64 yrs . Majority of duration of hernia varied for 1-2yrs in 50% of cases. Majority of patients presented with localized groin pain with inguino–scrotal swelling in about 40% cases. All patients presented with swelling in inguino–scrotal region which was tender, and there was no impulse on coughing and about 70% of cases had chronic constipation, 25% cases had respiratory distress disease and cardiac issues were seen in 5% cases. In majority of cases surgical intervention, reduction of sac content with modified Bassini's repair were done in about 35% cases followed by adhesiolysis with hernial content reduction with modified Bassini's repair were done in about 32.9% of cases. The commonest post operative complication in our study was scrotal edema in about 90% of cases, seroma in about 75% of cases and wound infection in 58% of cases. **Conclusion–** Obstructed groin hernia have complication like incarceration and strangulation are seen in mainly 5th to 6th decade of life belonging to low and middle socio-economic category of people who are belonging to hard labourer family than sedentary life may associated with chronic illness. Timely diagnosis and prompted surgical repair is essential to prevent the complication.

KEYWORDS : Obstructed groin hernia, incarcerated and strangulated inguinal hernia, modified Bassini's repair, obstruction.

INTRODUCTION

Hernia is derived from the Latin word "Rupture". Sabitson et al A hernia is defined as an abnormal protrusion of an organ or tissue through a defect in its surrounding walls. Hernia, although a hernia can occur at various sites of the body, these defects most commonly involve the abdominal wall, particularly the groin region. Inguinal hernia most common types of groin hernia in man and women but much more common in man.1 During early era (1500 BC) abdominal wall hernia was treated with trusses or bandage dressing. The first report of groin hernia classification based on anatomy of the defect (i.e. inguinal vs femoral) dates back to the 14th century, and the anatomical description of the direct and indirect type of inguinal hernia were first reported in 1559. 75% of all abdominal hernia is found in groin2 making it the most common location for an abdominal wall hernia of all groin hernia, 95% are hernia of the inguinal canal with remainder being femoral hernia defect. Inguinal hernia are 9 times more common in men than in women.3 Although femoral hernia are found more obtained in women, the inguinal hernia is still the most common hernia in women4. The strangulation of the groin hernia is a complication of the hernia itself rather than of a hernia repair. The risk of strangulation is highest in the first month to year after the initial presentation of reducible hernia probability of inguinal hernia strangulation over time, 2.8% over 3 months and 4.5% at 2 years. Mortality from strangulated hernia is more. Femoral hernia strangulated to be 22% in first 3 months following diagnosis and 45% at nearly 2 years.5 Incarceration external hernia are strangulation to be most common cause of intestinal obstruction. To prevent the simple hernia to go into complication, early diagnosis and elective repair is a safe and effective strategy for patient of all ages that avoid incarceration, strangulation and their complication.6 Post operative complication and mortality is high in the aged people in case of strangulated inguinal hernia.[6,7]

The aim of this objective was to determine the various mode of presentation, clinical features and evaluate the post operative outcome in obstructed groin hernia surgery.

MATERIALS AND METHODS

This was a descriptive clinical study, comprises of 64 obstructed groin hernia, done in a tertiary care hospital RIMS Ranchi during two years period of June 2018 to June 2020. Prior approval from Institutional Ethics Committee of Rajendra Institute of Medical Sciences, Ranchi, was taken.

Inclusion criteria- All patients above 25 years of age admitted for obstructed groin hernia were included.

Exclusion criteria- Normal reducible groin hernia were excluded.

For diagnosis of obstructed hernia, proper taking history and physical examination of all cases were done. Routine examination of blood like CBC, BT CT, RBS, RFT, LFT and Serum electrolytes (Na+, K+, Ca++) were done in all cases. Radiological examination like X-ray chest, X-ray abdomen erect with emergency USG whole abdomen was done. Written informed consent was taken from all patients. All case with obstructed groin hernia which had sign of incarceration and strangulation were taken up for emergency surgery after proper resuscitation and hemodynamically stable. Most of the patients were taken under general anaesthesia and some were given spinal anaesthesias.

RESULT

Total number of obstructed inguinal hernia were 61 cases which constitute 96% of total obstructed groin hernia among them obstructed indirect hernia cases were 2/3rd (64.06%) and 1/3rd direct inguinal hernia (31.25%). Femoral obstructed hernia found in about 4% (3cases).

Table 1: Types of groin hernia and its location

Type	Side	No of cases	Percentage
Inguinal (indirect)	Right left	35 3	90% 30%
Inguinal (direct)	Right left	20 2	70% 5%
Femoral	Right left	3 -	6% -

Table 2:- Age and sex distribution

Age group (years)	Total no. cases	Percentage	Incarceration	Strangulation
25-34	1	2%	1 (2%)	-
35-44	1	2%	1 (2%)	-
45-54	13	20%	8 (60%)	5 (40%)
55-64	26	40%	6 (25%)	20 (75%)
65-74	23	36%	17 (75%)	6 (25%)
Total	64	100%	33	31

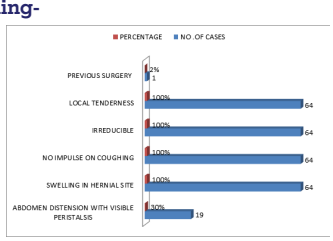
The case with least age group 25-34 years and highest were present in age group 55-64 years as represented in table. Incarceration was most common complication in obstructed groin hernia about 75% of incarceration found in age group of 65-74 years of age group and strangulation was found in most common complication about 75% of obstructed groin hernia of age group 55-64 years.

Table 3:- Clinical presentation

Symptoms	No. of cases	Percentage
Groin pain with swelling	26	40%
Groin pain, abdominal distension with swelling	16	25%
Groin pain, swelling, vomiting with abdominal distension	12	19.5%
Swelling	5	8%
Groin pain	4	6%
Abdominal distension	2	1.5%

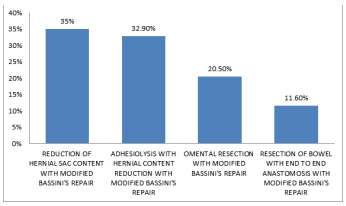
Clinically, nearly all patients presented with swelling in the inguino-scrotal region swelling, which was tender, and there was no impulse on coughing. Groin pain with swelling found in 40% (26 cases) followed by groin pain, abdominal distension with swelling found in about 25% (16 cases). Groin pain, swelling, vomiting with abdominal distension found in about 19.5% (12 cases). Only abdominal distension found in 1.5% (2 cases).

Clinical finding-

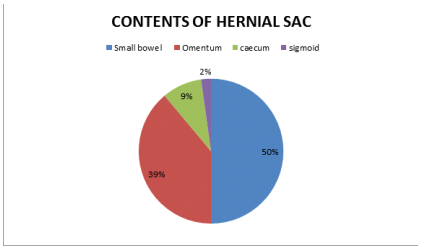


Clinical finding like local tenderness, irreducibility, swelling in hernia site were the most common finding nearly all of the obstructed groin hernia cases.

Surgical procedure-



Hernial content reduction with modified Bassini's repair was done in most of the cases i.e. 23 cases (about 35%), adhesiolysis with hernial content reduction with herniorraphy was done in 21cases (about 32.90%), resection of bowel with end ileostomy or end to end anastomosis with herniorraphy was done in 7 cases (about 11.60%) & omental resection with modified Bassini's repair was done in 13cases (about 20.50%).



Post operative complication -Early complication– scrotal edema 90%, seroma 75%, wound infection 58% cases were found. Late complication – anastomotic leak found in about 7% cases recurrence in 2% cases, mortality in 1% case.

DISCUSSION

A clinical study of 64 cases of obstructed groin hernia was conducted in department of general surgery RIMS, Ranchi for duration of two years mid 2018-mid 2020. The outcome of our study correlated with the existing clinical trail. Conducted a clinical study on obstructed groin hernia and reported that the prevalence was highest in the age group of 44-53 years whereas in our studies at present more incidence was highest in 55-64 years of age group which correlated study conducted by Pollock et al. Andrew that main age of patient with complicated hernia was 55 years and 66 years respectively the finding were consisting with present study.8,9 In present study the prevalence of groin hernia was mainly in male patient i.e. about 90%, only 10% were presented in female in standard literature there was male preponderance on the incidence on groin hernia which was correlated with our study.10 In a prospective study conducted by Shakya et al, on the outcome of complicated herinas, the incidence of acute groin hernias was reported to be higher in male than female, 90% in male and 10% in female, also consistent with the observation of our study.11 The present study reported the incidence of right sided hernia to be about 90% of the cases. The finding which had correlation with study of Kulah et al (right vs left 33.50% vs 17.40%) and Alverez et al (right vs left : 16.08% vs 7.82%) both study conducted on incarcerated inguinal hernias.12,13 Femoral hernia commonly occur in female and becomes complicated more frequently than inguinal hernia.3 Risk of strangulated hernia increases with duration of hernia.5 Incarceration is our important finding that should urge the surgeon undertake operation sooner rather than later.3 Patient with chronic illness like chronic constipation , chronic cardio–respiratory illness are prone for getting chance of hernias due to persistent severe coughing . In our study chronic constipation was present in about 70% of cases, respiratory distress disease in about 255 cases and cardiac issues was present in about 5% cases. Most of the cases 35% of cases (23 cases) reduction of content with modified Bassini's repair was done where as 82.6% of cases in Prakash et al study were treated by herniorrhaphy and no mesh repair was done. The duration of obstructed groin hernia range from 12 hours-2 days intestinal obstructions lasting are 2 days

resulted in gangrenous intestine and needed bowel resection in 11.60% (11 cases) in our study. The result of which were comparable with the Eze et al, study on obstructed inguinal hernia14. On increasing duration of obstruction of groin hernia increases the chance of complication. Goyal et al, in there proportional study on uncommon content of groin hernia sac, reported that small bowel as the most common content in groin hernia followed by omentum. The observations are similar to finding of our present study15. Bekoe in his prospective review of 118 patients with incarcerated /strangulated inguinal hernias stated that he could find "no definite criterion" to differentiate incarcerated hernias with viable contents from the non viable contents and cannot be diagnosed on clinical grounds.16 Gul et al, conducted a study on factors affecting morbidity and mortality in patients who underwent emergency operation for incarcerated groin hernia which are consistent with the observation of the present study.[17]

CONCLUSION

Obstructed groin hernias have complication like incarceration and strangulation are seen in mainly 5th-6th decays of life belonging to low and middle socio-economic category of people who are hard labourer family than sedentary life may associated with chronic illness . Right sided inguinal hernia more common in male than female. Incarceration is a most common complication followed by strangulation. In femoral hernias most common complication is obstruction of small intestinal content of sac followed by omentum. Most common clinical presentation in obstructed groin hernia is lower abdominal swelling with pain. The cumulative risk of strangulation increases with time and types of hernias. Clinical diagnosis may be difficult as there are no definite criteria to differentiate incarcerated hernia with viable contents from the non-viable contents .The definite diagnosis of strangulation can be made only at the timely operation. Manual reduction of obstructed hernia should never be attempted because of risk of perforation .The primary management of all incarcerated hernia is prompt surgical reduction and repair accompanied by aggressive pre and post operative care. The mortality rate after repair of complicated hernias continues to be associated with advancing age and resection of the necrosed bowel.

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Conflict of interest:- None