e-ISSN: 0975-1556, p-ISSN:2820-2643

Available online on www.ijpcr.com

International Journal of Pharmaceutical and Clinical Research 2023; 15(10); 321-324

Original Research Article

Groin Hernias Presenting as Acute Emergencies

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Received: 25-07-2023 / Revised: 28-08-2023 / Accepted: 30-09-2023
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Conflict of interest: Nil

Abstract:

Introduction: The most frequent kind of hernias occurs mainly in the groin region. Delaying in surgical intervention may lead to irreducibility, obstruction and strangulation. A strangulated Hernia's mortality rate is directly correlated with the ageof the victim and the duration of the strangulation.

Aim of the study was to closely examine the clinical manifestation of the groin hernias that have developed complications and potential strategy for handling the case successfully with the background objective of preventing the recurrence.

Methodology: This was a prospective study done in Tertiary Care Centre Nandyal from October 2020 to October 2022, with a sample size of 50.

Conclusion: Incidence of groin hernias presenting as acute emergencies was highest among 50 and 60 decades. In males complicated inguinal hernia is more common than females, in females femoral hernia is more common than males. Most of the complicated groin hernias occur on right side when compared to left side. Majority of groin hernias present as acute emergencies within one year durationof hernia. Most common symptom was pain with groin swelling followed by vomiting.

Small bowel is the most common content of sac followed by omentum. Most common site of obstruction was found to be deep ring. In our study most common procedure done was only herniorapy followed by resection and anastomosis. Majority of the patients recovered with no complications. Most common complication encountered in our study was wound infection.

Keywords: Groin Hernia, Strangulation, Obstruction, Irreducibility.

Introduction

Any abnormal protrusion of a viscus or a part of viscus through a normal or an abnormal opening with a sac covering it is referred to as hernia. Groin hernias in the abdominal wall consist of obturator, femoral, and inguinal hernias. The most frequent kind of hernias occurs mainly in the groin region. The occurrence of groin hernias has been linked to a various number of conditions, such as obesity, pregnancy, benign prostatic hypertrophy, persistent cough, and aging. Clinically significant groin hernias should be corrected electively before they became an acute emergency. Delaying in surgical intervention may lead to irreducibility, obstruction and strangulation. Emergency surgery is unavoidable if this occurs, regardless of the patient's health, any co-existing illnesses, or any concurrent drugs, including the usage of anticoagulants. A strangulated Hernia's mortality rate is directly correlated with the age of the victim and the duration of the strangulation. Our research aims to closely examine the clinical manifestation of the groin hernias that have developed complications and potential strategy for handling the case successfully with the background objective of preventing the recurrence.

Aims and Objectives: The Aim of the study was to know about various acute surgical emergencies in groin hernia.

Materials and Methods: This was a prospective study done in Tertiary Care Centre Nandyal from October 2020 to October 2022, with a sample size of 50.

Inclusion Criteria: Patients who were presented to outpatient and emergency department with symptoms and clinical features of complicated groin hernia like irreducibility, obstruction, strangulation were included in the study.

Exclusion Criteria: Patients who were initially admitted for irreducible hernia later it was reduced by maneuver were excluded from study.

Detailed history was taken and clinical examination was done and all patients are subjected to blood

investigations like complete hemogram, serum electrolytes, liver and renal function tests and various radiological investigations like X ray erect abdomen and ultrasonography. And all the patients were resuscitated with IV fluids, broad spectrum IV antibiotics and nasogastric tube decompression and all the patients were taken for surgery.

Observation and Results

Table 1: Distribution of Age

Age group	Frequency	Percentage
21-31	3	6
31-41	8	16
41-51	13	26
51-61	15	30
61-71	9	18
>71	2	4
Total	50	100

Table 2: Sex Distribution

Sex	Frequency	Percentage
Female	06	12
Male	44	88
Total	50	100

Table 3: Type of Hernia vs Sex

Sex	Inguinal	Femoral
Female	02	04
Male	44	00
Total	46	04

Table 4: Duration of Hernia Before Acute Episode

Duration	Frequency	Percentage
1year	36	72
2years	6	12
>2years	8	16
Total	50	100

Table 5: Side Vs Complications

Side	Frequency	Percentage
Right side	36	72
Left side	14	28

Table 6: Frequency of Symptoms

Symptoms	Frequency	Percentage
Pain	49	98
Swelling	28	56
Irreducibility	15	30
Vomiting	20	40
Abdomnal Distenstion	9	18
Constipation	7	14

Table 7: Contents of Sac

Contents	Frequency	Percentage
Small bowel	31	62
Omentum	9	18
Sigmoid colon	4	8
Small bowel +omentum	6	12

Table 8: Site of Obstruction

Site of constriction	Frequency	Percentage
Deep ring	38	76
Femoral ring	04	08
Adhesions	08	16

Table 9: Procedure and Type of Repair Done

Procedure and type of repair	Frequency	Percentage
Only Herniorraphy	22	44
Herniorraphy and Omentectomy	7	14
Herniorraphy and orchidectomy	8	16
Herniorraphy and resection & anastomosis	11	22
Herniorraphy & Ileostomy	3	6
Femoral hernia repair	4	8
Only hernioplasty	5	10

Table 10: Postoperative Complications

Complications	Frequency	Percentage
No complications	31	62
Wound infection	16	32
Death	3	6

All patients were resuscitated with intra venous fluids, broad spectrum IV antibiotics and nasogastic decompression was done and all patients were undertaken to surgery. Majority of patients 62% were recovered without any complications, 32% of patients developed wound infection on third postoperative day and were managed with appropriate antibiotics according to culture & sensitivity and secondary suturing was done. 6% of patients were expired due to sepsis and systemic inflammatory response syndrome.

Discussion

Most of the complicated groin hernias observed in this study includes irreducibility, obstruction and strangulation.

Age Incidence

Majority of the complicated groin hernias observed in elderly age group. In our study complicated groin hernia occurred mostly in above 50 years age group. The majority of patients who were admitted as emergencies with complicated groin hernias have not taken previous medical opinion or been diagnosed with the condition in the outpatient department. This implies that most hernias developing complications within a relatively short time of the history.

So, patients with a short history of groin hernias should be operated earlier than those with longer histories to prevent complications. Other studies showed, Andrew et al 1981 shows peak incidence at 80 yrs. Waddington et al shows at 60yrs. Bahadur kulah et al [1] 2001 shows peak incidence at 60yrs. Gallego et al [7] 1991 at 65yrs. Old age is one of the risk factors for a complicated groin hernia. The age incidence of this implies the fact that peak incidence of complications occurs in the 5th and 6th decade of life. Old age associated co-morbidities also contribute to the higher incidence in old age.

Sex Incidence

In our study most of complicated groin hernias were presented in male population,88% males than female population, 12% females, which is in accordance with the literature like Andrews et al and Mc Entee et al showing higher incidence in males than females, Shakya et al study showed the higher incidence of acute emergencies in groin hernias in male than females ,88.5% males and 11.5% in females. It is mainly due to differences in the anatomy, pelvis in females is wider and the angle between cooper's ligament and inguinal ligament is small when compared to males. Hesselbach's triangle is narrower in females when compared to males, because of above factors females has lesser incidence of groin hernias when compared to males. In our study male predominance noted in the occurrence of complicated groin Hernia. However Femoral Hernia is more common in the Female patients in our study. The sex ratio male to female in our study is 7.3:1

Duration of Hernia

In our study 72% of patients had the duration of hernia was one year before presenting as acute emergency. In Galleos et al 1991 shows risk of groin hernia for becoming complicated is maximum in first 3 months due to narrow deep ring.

Side of Hernia

In our study right sided hernias has developed most of complications than left sided hernias, 72% are right sided and 28% are left sided hernias, which is in accordance to literature like Andrew et al 1981, Aird et al 1957, Waddington et al 1971. Anatomical basis for this is the line of attachment of small bowel mesentery is left side of L2 to right iliac fossa and left testis descends earlier than right testis leads to increased incidence of failure of obliteration of processus vaginalis.

Symptoms

In present study most common symptoms were pain (98%) and groin swelling (28%) followed by vomiting. This is due to, most common cause being

the obstruction of the contents of the hernia sac Other symptoms were irreducibility (30%),vomiting (40%), abdominal distension (18%), constipation (14%).

Contents of the Sac

In present study most common content of sac was small bowel accounting for 62%. Both small bowel and omentum were the contents in about 6 cases, only omentum was content in 9 cases and in 4 cases sigmoid colon was the content. This happens more frequently in older age groups, larger hernias with relatively smaller openings. Amos et al[2], goyal et al[3] and shakya et al[4] shows small bowel as most common content .

Site of obstruction

Site of obstruction or site of constriction in our study is at deep ring which is seen 76%of patients. All the complicated inguinal hernias in present study are indirect**.**

Management

Releasing the site of constriction was the foremost step in complicated groin hernias and sac is opened usually at fundus to avoid spillage of infected fluid into peritoneum and in our study deep ring was the site of constriction for majority of cases. In our study only hernioraphy (modified basini repair) was done for 44% of patients, along with hernioraphy resection and anastomosis was done in 22% of patients,orchidectomy was done in 16% of patients, omentectomy was done in 14% ofpatients.6% of patients underwent resection and ileostomy, hernial content reduction and hernioplasty was done in 10% of cases and 8% of cases underwent femoral hernia repair.

Complications

Majority of patients 62% were recovered without any complications, 32% of patients developed wound infection on third postoperative day and were managed with appropriate antibiotics according to culture & sensitivity and secondary suturing was done. 6% of patients were expired due to sepsis and systemic inflammatory response syndrome. Shakya et al [4], Mc entee et al [5] shows most common complication as wound infection. John T Jenkins et al. shows 7% mortality rate in acute groin hernias, Haapaniemi [6] show 7% mortality in their series. Present study is in accordance with above mentioned studies.

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