COMPLICATED HERNIA: OUR EXPERIENCE WITH EMERGENCY MANAGEMENT IN A TERTIARY CARE HOSPITAL IN NORTH COASTAL ANDHRA PRADESH

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ABSTRACT

BACKGROUND

Hernia is a common clinical condition encountered in surgical practice. Obstruction and strangulation are the commonest complications, which usually present as surgical emergencies. Emergency repair of complicated hernias is associated with poor prognosis and a high rate of post-operative complications even with adequate pre and post-operative care, improved anaesthetic management and advanced surgical techniques.

MATERIALS AND METHODS

Our study was carried out among 41 patients of hernia, who had complicated clinical presentations like obstruction and strangulation in the emergency department of King George Hospital, Visakhapatnam, during the period from January 2016 to June 2017. The aim of this study was to determine the various modes of presentation, clinical findings, diagnostic and therapeutic strategies and to evaluate the postoperative outcome in complicated hernia management in our set up.

RESULTS

The highest incidence of complicated hernias in our study was in the age group of 41-50 years, seen more in males as compared to females. Obstructed and strangulated hernias had almost similar incidence. Of the different types of anatomical hernias that got complicated, inguinal hernias were the most common. The procedures that were performed included herniotomy, herniorrhaphy, orchidectomy, laparotomy, resection and anastomosis.

CONCLUSION

Complicated presentations of hernias like incarceration and strangulation are quite common in the north coastal districts of Andhra Pradesh. The cumulative risk of strangulation increases with time and type of hernias. Timely diagnosis and prompt surgical repair is essential to prevent the complications.

KEYWORDS

Hernias, Emergency, Complicated.

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BACKGROUND

Schwartz et al defined hernia as a protrusion of a viscus through an opening in the wall of a cavity which it contained.[1] Hernias become complicated when they are irreducible (incarcerated), obstructed and later progress to strangulation. Incarcerated external hernias are said to be the most common cause of intestinal obstruction.[2] Early diagnosis and elective repair is a safe and effective strategy for patients of all ages that avoid incarceration, strangulation and their complications.[3] It is of utmost importance that accurate diagnosis of complicated hernia be made early so that morbidity of an extensive procedure like resection and anastomosis be prevented.

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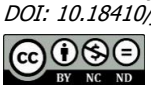


Aims and Objectives

The aim of this study is to evaluate our management of complicated hernias that have presented to us in the emergency department. Points of evaluation included various modes of presentation, clinical findings, diagnostic and therapeutic strategies and to evaluate complicated hernia surgeries in our set up.

MATERIALS AND METHODS

Our study was carried out among 41 patients of hernia, who had complicated clinical presentations like obstruction and strangulation in the emergency department of King George Hospital, Visakhapatnam, during the period from January 2016 to June 2017. Study was conducted by analysing the

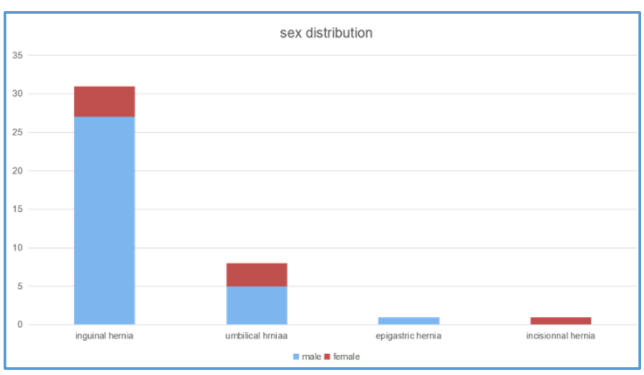
records of the patients admitted during the above mentioned period.

RESULTS

A total of 41 cases were studied. The highest incidence of complicated hernias in our study was in the age group of 41-50 years, with 10 patients (24.39%), followed by 51- 60 years age group, with 9 patients (21.95%). Table 1 shows the age wise incidence of complicated hernias. Most cases of complicated hernias were seen in males as compared to females. There were 33 male patients (80.49 %) and 8 female patients (19.51%) in our study. Of 33 male patients, 27 had complicated inguinal hernias, 5 had complicated umbilical hernias, 1 had complicated epigastric hernia. In females the distribution was 4 inguinal hernias, three umbilical hernias, and 1 incisional hernia. Most common contents of the sac were small bowel and omentum. 13 of the 31 inguinal hernias operated had non-viable bowel. Of the 13 inguinal hernias having non-viable bowel 8 had omentum along with small intestine and five had only small intestine. Of the 18 inguinal hernias which had viable contents 11 had both small intestine and omentum, 7 had only small intestine as contents. One case of epigastric hernia had fat in it, which was reduced. One case of incisional hernia operated had viable small bowel. Eight cases of umbilical hernia were operated. One had non-viable small bowel and 7 cases had viable bowel. 3 of the 7 cases had small bowel alone. 4 of 7 had both small bowel and omentum in them. There is no mortality in our series.

Age Group in Years	No. of Cases
0-10 years	0
11-20 years	2
21-30 years	6
31-40 years	4
41-50 years	10
51-60 years	9
61-70 years	4
71-80 years	5
81-90 years	1
90-100 years	0
Total	**41**

Table 1. Age incidence



Graph 1. Sex Distribution

Duration of Symptoms	Number of cases
< 1 year	4
1 – 2 years	5
2 – 4 years	16
4 – 6 years	8
6 – 8 years	6
>8 years	2

Table 2. Duration of Symptoms

Pain	41 (100%)
Vomiting	23(56.1 %)
Irreducible swellings	41(100%)
Absence of cough impulse	41(100%)
Visible peristalsis	6(14.63%)
Constipation	20(48.78%)
Abdominal distension	15(34.88%)

Table 3. Symptoms and Signs

Type of Surgery	Number of Surgeries Performed
Herniorrhaphy	13
Laparotomy	10
Resection and anastomosis	14
Only herniotomy	2
Orchidectomy	2

Table 4. Procedures Performed

Type of Hernia	Number Requiring Resection and Anastomosis
Inguinal hernia (31)	13
Umbilical hernia (8)	1
Epigastric hernia (1)	0
Incisional hernia (1)	0

Table 5. Cases Requiring Resection and Anastomosis

DISCUSSION

Longer the duration of hernia, the greater is the chance of complications. Inguinal hernias are the most common to get complicated owing to the numbers**.** Simple hernias go into complications because of the patient hesitating to come out with complaints, and get it treated in an early stage. Complicated hernias are mostly seen in men, with right sided inguinal hernias being the most common. In females, the commonest hernias are inguinal hernias. But the commonest to get complicated are femoral hernias. The risk of strangulation increases with the duration of hernias.[4] Mean age of complication in our study was 49.56 years. In the study by Ernesto et al,[5] the average age of the patients was 71 (range: 26-92 years). In another study by J. A. Alvarez et al,[6] 66.7% patients were over 65 years of age and the mean age of the patients was 70 ± 15.2 years ranging from 24 to 96 years. Takuev and colleagues found age as a significant factor for morbidity after operation for incarcerated hernias.[7] Elderly patients usually have complicated presentations and are consistent with the

published observation of Oishi, Desunkamni, Andrew, Pollock, Dennis.[3,8,9-11] Clinical findings at time of presentation were consistent with those of intestinal obstruction in most cases. The single most important finding was that of pain and an irreducible swelling seen in all 41 cases. Vomiting was seen in 23 cases (56.1%). No visible cough impulse was seen in any of the hernias as all were complicated hernias. Constipation was present in 20 of the 41 cases (48.78%) studied. Visible intestinal peristalsis was seen in 6 cases. Abdominal distension was seen in 15 cases (34.88%). Abdominal tenderness, decreased or absent bowel sounds, tender hernia with local signs of inflammation are the early indicators of strangulation of incarcerated mass, and in such cases postural reduction should not be attempted. Diagnostic modalities used for the confirmation are ultrasound of the groin and plain x ray of the erect abdomen. Rarely CT scan was required. Clinical presentation of complicated hernias is quite classic and in most cases a reasonable diagnosis of it can be made based on the history and a proper clinical examination. But the fact remains that the definitive diagnosis of a strangulation can be made only on exploration. Bekoe in his prospective review of 118 patients with incarcerated/strangulation stated that he could find "no definite criterion" to differentiate incarcerated hernia with viable contents from the non-viable contents and cannot be diagnosed on clinical grounds.[7] The cornerstone for successful outcome in the management of gangrenous bowel is early surgical intervention with liberal antibiotic administration. An operated case of complicated hernia is invariably bound to have a difficult course. Longer the duration of symptoms before presentation, greater is the chance of postoperative difficulties. Wound infections and seroma formation are among the commonest problems faced. Other problems such as septicaemia and multi organ failure can be encountered when the patient presents to us in the later stages. Most of the cases of complicated hernias we encountered belonged to lower socioeconomic status and people who had lesser access to medical facilities. All the cases that have been dealt by us were through open method and repair of the hernial defects were done by herniorrhaphy. Mesh repair was not done in our emergency department due to non-availability of mesh, which is a part of protocol in our institution. Mesh repair can be undertaken where there is availability of resources and when the presentation is early and with no contamination. Landau et al. published a retrospective study investigating the use of laparoscopy in the repair of incarcerated incisional and ventral hernias. The authors argued that laparoscopic repair was feasible and could be safely used to treat patients presenting with incarcerated incisional and ventral hernias.[12] Resection of non-viable small intestine and anastomosis was performed in 18 patients (23%) and was not regarded as a contraindication for prosthetic repair.[13] Biological mesh prosthetics are most commonly used in infected fields involving large, complex abdominal wall hernia repairs. The use of biological mesh may offer a low-morbidity alternative to prosthetic mesh products in these complex settings, with good results also in immunocompromised patients.[14] There is no mortality in our series. This is in contrast to other studies like those of Kulah et al, who reported 2.5% mortality.[15]

CONCLUSION

Complicated hernias are one of the most common causes of acute abdomen. Most of the cases of complicated hernias are males with inguinal hernias though other hernias are also bound to get complicated. The duration of the hernia seems to be the important in deciding if the hernia will get complicated at all. The duration of symptoms before the time of presentation highly influences the overall outcome; hence, early diagnosis and aggressive intervention are the key to successful management of a case of complicated hernia. Even with advances in surgical technique and supportive specialities, the post-operative course of these patients is difficult. Increased mortality and morbidity is associated with increased age and strangulation of bowel.

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