

Original article:

Retrospective study and Management of clinical outcome of 50 patients presenting with ventral hernia

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Abstract:

A Total of 50 cases of ventral hernias were studied at Goa Medical college, Bambolim. They constituted Paraumbilical hernia (30) ,Incisional hernia (12), Umbilical hernia(4) , Epigastric hernia (3) and Spigelian hernia(1). Most of them were diagnosed clinically. Surgical repair gave favourable results. Obesity was a major risk factor for ventral hernias. The risk of Surgical site infection for ventral hernias was 6 %.Since it was a retrospective study the delayed complications, recurrence rate could not be opined on.

Keywords: ventral hernia, recurrence rate

Introduction

A hernia is defined as an abnormal protrusion of an organ or tissue through a defect in its surrounding walls.²⁰ A ventral hernia is defined as a protrusion through the anterior abdominal wall.These hernias mainly present as a swelling and they rarely go for complications like strangulation, incarceration with their respective clinical features.¹ Commonly ventral hernias do not require any special investigation to diagnose them. It's usually clinically diagnosed, rarely they need ultrasound ,CT scan and herniography for diagnosis.Among all ventral hernias , incisional, epigastric, umbilical hernias are common Incisional hernia is common complication following abdominal surgery. Incidence varies from 2-20%¹⁶ Epigastric hernia is not very common. Its more common in men than in children and rare in women.²⁰

Adult paraumbilical hernias are more common in women and obese patients. The strangulation of adult paraumbilical hernia is more common in females than in males.¹³ The purpose of this study was to identify different types of ventral hernias, its sites and their clinical features such as swelling, pain, various risk factors and its complications and to study management protocol adopted in our institution that is Department of General surgery, Goa Medical College.

Methodology

Study Design: Retrospective observational Study

Sample size: 50

Duration of study : Till attaining sample size

Study setting: Inpatients and outpatients in Department of General surgery, Goa Medical College with ventral hernias. Retrospective data was collected from medical records department for this study for the year 2021 and 2022.The data of 50 patients was collected and analysed.

Inclusion criteria:

Patient undergoing surgery for ventral hernia in our department.

Exclusion Criteria:

Patient operated with laparoscopic hernia repair

Patients with defect size less than 1.5

Analysis:

Data was analysed using SPSS Version software.

Conclusion:

Out of 50 patients with ventral Hernias ,30 patients (60%) had paraumbilical hernia ,12 (24%) were incisional hernia and 4 (8)% were umbilical hernia and 3(4%) were epigastric hernia and 1 (2%) was spigelian hernia.

Among 50 cases of ventral hernia, 30 (60%) were Females and 20 cases (40%) were males.

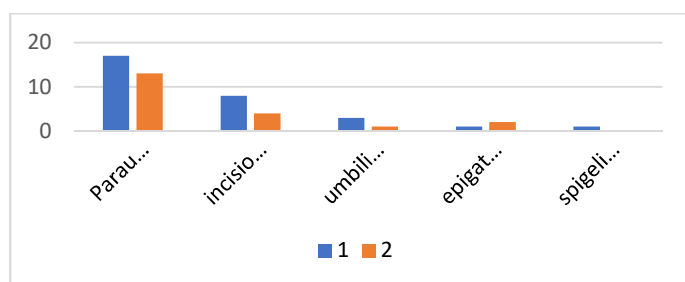


Fig 1 : Sex distribution of study participants according to different type of ventral hernia.

Paraumbilical hernia was more common in females. 57% (17 out of 30) cases were females whereas 13 out of 30 (47%) were males. Among incisional hernia majority cases were females. 8 out of 12 cases (67%) were females and 4 out of 12 cases were males (33%). Umbilical hernia more cases were found in females i.e. 3 out of 4 (75%) females than males (1 out of 4 (25%)). Among epigastric hernia 2 out of 3 were males (67%) and one was female (33%). Also one case of spigelian hernia was seen, that was in females.

The youngest patient with ventral hernia was a female with 22 years of age with umbilical hernia. Oldest case was a female aged 72 years with paraumbilical hernia. The highest incidence of ventral hernia was seen in 6th decade that is 20 cases which accounted to 40% and the lowest incidence was in 8th decade that is 1 case (2%). The incidence of umbilical hernia is the highest in 3rd decade that is 40% (3 Cases) and lowest in 6th decade that is 20% (1 Case). In epigastric hernia all cases were seen in 4th and 6th decade that is 67% and 33%. Among incisional hernia most cases were found in 5th decade (5 cases) and in 4th decade (3 cases) which accounted to 66% of all incisional hernia.

	Paraumbilical Hernia	Incisional Hernia	Umbilical Hernia	Spigelian Hernia
Swelling	100%	100%	100%	
Pain	33%	18%	20%	100%
Irreducibility		9%	20%	
Obstruction & strangulation			20%	

Fig 2 : clinical features of study participants according to different types of ventral hernia.

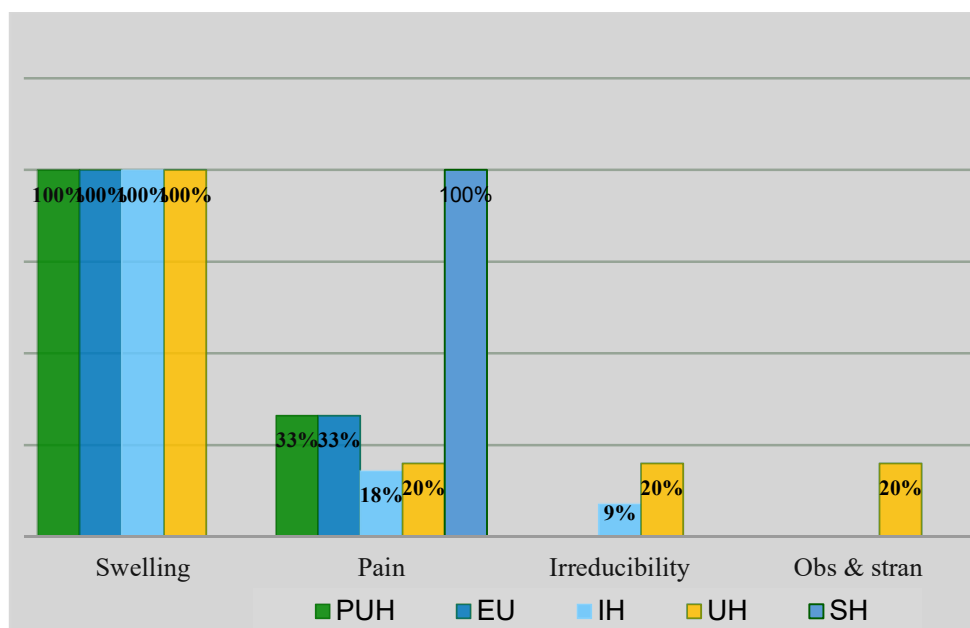


Fig 3 : clinical features of study participants according to type of hernia.

All patients with Paraumbilical hernia presented with swelling, 10 patients (33%) presented with pain. 100% of all patients with epigastric hernia (3/3) presented with swelling, 33% (1/3) with Pain, and there were no cases of hernia with irreducibility and strangulation. Among incisional hernia all 12 cases presented with swelling (100%), two cases presented with pain (18%), 1 with irreducibility (9%) and no cases which strangulation and obstruction. Among umbilical hernia all 4 cases presented with swelling (100%), 1 case presented with pain (20%), 1 case presented with irreducibility (20%) and one case presented with strangulation (20%). Only 1 case of spigelian hernia was seen that presented with pain.

factor	Percentage
Obesity	22%
COPD	8%
Constipation	6%
Multiparity	6%

Fig 4 : Distribution of study participants according to different risk factors.

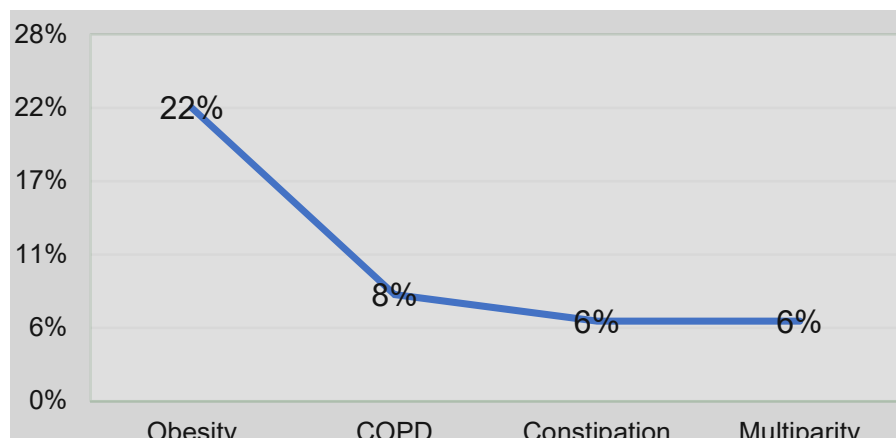


Fig 5: Showing distribution of study participants according to different risk factors

22% of all cases of ventral hernia were obese (11 cases), 8% of cases had chronic cough, secondary to chronic obstructive pulmonary disease(4 cases), 6% of all cases were multiparous(3 cases), and 3 patients had constipation(6%).

Nature of surgery	Number of patients	percentage	Type of incision
Exploratory Lap	5	41.6%	Midline
hysterectomy	4	33.3%	infraumbilical
LSCS	2	16%	infraumbilical
tubectomy	1	8.3%	infraumbilical

Fig 6 : Distribution of study participants according to different types of surgery leading to incisional hernia.

Among previous surgeries preceding to incisional hernia ,exploratory laparotomy was commonest that is 5 cases (41.6%), followed by hysterectomy ,4 cases(33.3%),LSCS 2 cases(16%)and 1 case of tubectomy (8.3%).

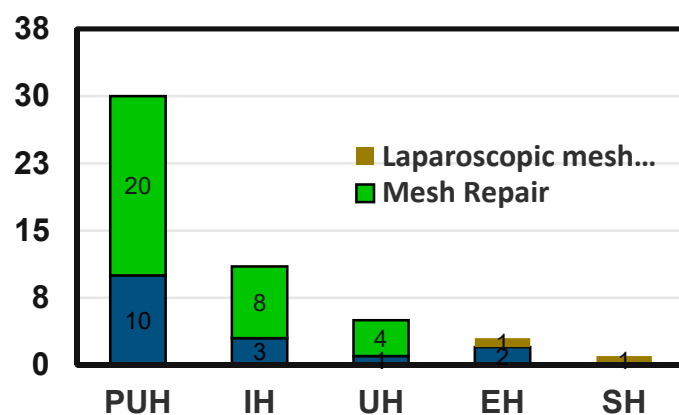


Fig 7: Bar diagram showing distribution of ventral hernia and type of surgery performed.

Among 50 patients of ventral hernias, 16 underwent anatomical repair, 32 patients underwent Mesh repair and 2 patients underwent laparoscopic mesh repair.

Discussion:

In this study, paraumbilical hernia was the most common hernia followed by incisional hernia > umbilical hernia > epigastric hernia. There was only one case of spigelian hernia that was seen in a female. These results were comparable with C. Gangalakshmi in their study.¹³ Females had a higher incidence of ventral hernia (60%) than males (40%) these results were comparable with Ranjani CM in their study.¹⁴ In females the most common ventral hernia found was paraumbilical hernia > incisional > umbilical > epigastric > spigelian hernia.

In males the most common ventral hernia found was paraumbilical hernia > incisional hernia > epigastric hernia > umbilical hernia. Explorative laparotomy (midline incision) was the major contributing surgery for incisional hernia followed by hysterectomy.

Conclusion:

Obesity was a major risk factor for ventral hernias. The risk of surgical site infection for ventral hernias was 6%. Since it was a retrospective study the delayed complications, recurrence rate could not be opened on.

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