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A RARE CASE REPORT-LEFT PARADUODENAL HERNIA PRESENTING AS SUBACUTE INTESTINAL OBSTRUCTION

Surgery

Dr. Priya Natarajan M.S, Assistant Professor, Department Of General Surgery, KAPV Govt. Medical College, Trichy.

Dr. Shanthini Periasamy* M.S., D.G.O.,, Professor, Department Of General Surgery, KAPV Govt. Medical College, Trichy. *Corresponding Author

Dr. Rajasekaran M.S, MCH, Assistant Professor, Department Of Surgical Gastroenterology, KAPV Govt. Medical College, Trichy.

ABSTRACT

Congenital internal hernias is rare cause of small bowel obstruction.paraduodenal hernia is a rare congenital anomaly that occurs due to malrotation of midgut. During malrotation small intestine and sometimes duodenum would be trapped in a sac lined by peritoneum behind the mesentery of colon either on the right or left side. Rarely it may cause intestinal obstruction which progress to strangulation or perforation and becomes a potentially life threatening condition. Paraduodenal hernias are commonest type of internal hernias which are associated with high rate of complications including strangulation of bowel and even death. Here, we report a 61 year old male presented with subacute intestinal obstruction, later we found left paraduodenal hernia intraoperatively.

KEYWORDS

paraduodenalhernia,malrotation

INTRODUCTION

Internal hernias can be either congenital or acquired constituting a rare cause of intestinal obstruction. Congenital internal hernias are classified according to their location with half of them being paraduodenal. Left sided paraduodenal hernias constitute about two-thirds of paraduodenal hernias. They present as small bowel herniation through Landzert fossa. Pre-operative diagnosis remains a challenge because of its rarity, hence often misdiagnosed. At least half of these patients with paraduodenal hernia will develop intestinal obstruction with lifetime risk of strangulation of about 50%.

CASE REPORT:

61years old male presented with chief complaints of: Abdominal pain for 2days.No H/O Nausea / Vomiting / Constipation /Diarrhea.Patient developed abdominal distension and continuous abdominal pain from the 3rd day of admission. Initially patient had just mild tenderness in the epigastricregion. PatientDiagnosed as a case of sub acute intestinal obstruction. Initial investigations were found to be normal. we planned to manage conservatively. After that Patient developedrecurrent abdominal distension, vomiting on and off. Hence CT abdomen was taken and it shows dilated small bowel loops and stricture at proximal ileum.

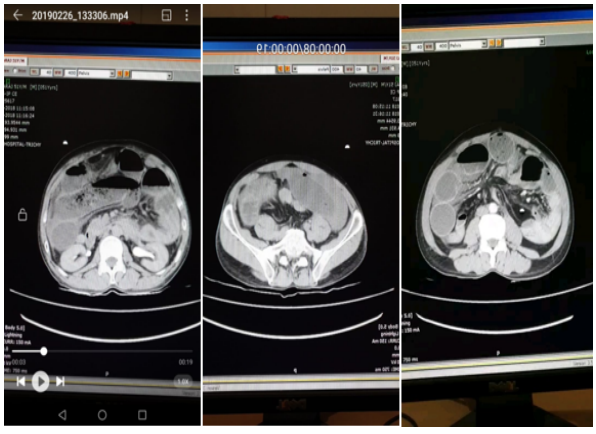

Figure-1 showing CT abdomen findings

Then proceeded with laparotomy. Intraoperatively we found small bowel loops, which herniated into the left paraduodenalfossa, behind the mesocolon. There was a stricture present in the proximal ileum at the place where the bowel loop just coming out of sac.

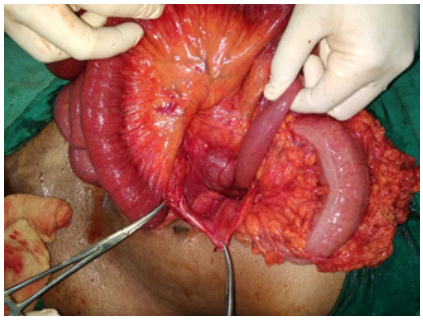

Figure-2:paraduodenalhenial sac with herniated small bowel

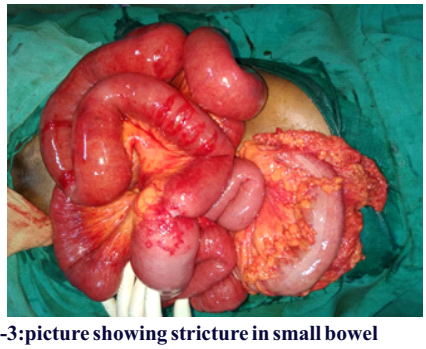

Figure-3:picture showing stricture in small bowel

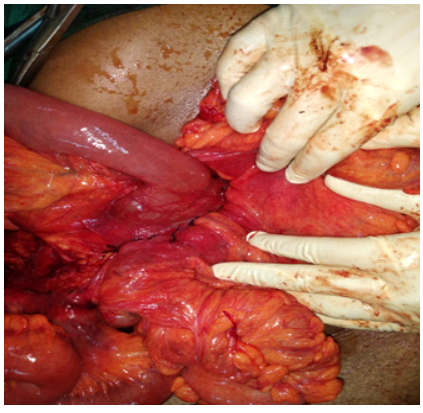

Figure-4:picture of paraduodenalfossa after sac excision and closure

Then we reduced the contents manually into abdominal cavity, after opening the sac. The small bowel loops present atthe neck of the sac shows constriction. Then we proceeded with resection of constricted part and end to end anastomosis done. Post operative period was uneventful. Patient was discharged on POD-10,on follow up for 6 months patient has no complaints.

DISCUSSION:

Left paraduodenal hernia results from malrotation of midgut. In the 5th week of embryonic development, rapidly elongating midgut herniates into umbilical cord. Later herniated midgut undergoes counter clockwise rotation of 90 degree around superior mesenteric artery leaving the prearterial limb on the left side. The herniated intestinal loops return to the abdominal cavity by the 10th week of gestation. First prearterial limb, followed by the post arterial limb. During this process, the intestinal loop undergoes another 180 degree counter clockwise rotation. In the end, prearterial limb lies left to the superior mesenteric artery and the post arterial limb lies superior and to the right of superior mesenteric artery.

Under normal condition, fusion of mesocolon with peritoneum of body wall occurs. Failure of fusion takes place in the time leaves a potential space called Fossa of Landzert behind the mesocolon.

Figure-5 : Illustration showing a loop of small bowel prolapsing (curved arrow) through Landzert'sfossa, located behind the inferior mesenteric vein and left colic artery (straight arrow)

Invagination of small intestine into the fossa of Landzert is called as Left paraduodenal hernia. This abnormality is present in approximately 2% of general population. It occurs commonly in males 3:1. It is located behind the fourth part of duodenum posterior to the inferior mesenteric vein and left branch of middle colic artery.

Regardless of its congenital occurrence, most cases present in the 4th and 6th decade of life. Complicationmay cause mortality of above 20%. Right duodenal hernias are also congenital in origin, in which the bowel loops herniates through the defect in the first part of jejunal mesentry called Fossa of Waldeyer's.

Waldeyers fossa found in about 1% of the population, commonly diagnosed during autopsy. This hernia is found in the right side of the transverse mesocolon and extends inferolaterally behind the ascending mesocolon. Right paraduodenal hernias are larger and fixed than its counterpart.

Paraduodenal hernias have varying presentation ranging from nonspecific abdominal pain to recurrent sub acute intestinal obstruction with or without strangulation.

Pre-operative diagnosis of paraduodenal hernias remains difficult. CT of abdomen and pelvis is considered as initial tool for investigation. Most common radiological finding in left paraduodenal hernia is clustering of small bowel loops with encapsulation at or above the ligament Treitz, DJ flexure, mass effect on posterior stomach wall with engorgement and crowding of mesenteric vessels with right displacement of main trunk and a downward displacement of transverse colon.

If the bowel loops are collapsed it may be mistaken for a soft tissue mass. A high index of suspicious of this condition can avoid taking unnecessary invasive procedure like image guided biopsy.

Once diagnosed, left paraduodenal hernia should be surgically treated as a lifetime risk of obstruction is 50% and the risk of strangulation increase mortality rate to more than 20%. The surgical procedure consists of manual reduction of hernial contents, followed by closure of defect. If the contents are difficult to reduce, make an incision over the avascular portion of the hernial sac to the right side of the inferior mesenteric vessel to enlarge the opening. During this step, it is important to consider the relationship of inferior mesenteric vessel to sac opening to avoid injury to the vessel.

CONCLUSION:

Internal hernias are considered as uncommon cause of intestinal obstruction accounting for 0.2 to 0.9% of cases. Paraduodenal hernias are also considered as a differential diagnosis incase of small bowel obstruction in older age group with absence of previous abdominal surgery.

Paraduodenal hernias are common type of internal hernias accounting for more than 50 % of reported cases. Timely surgical intervention should be undertaken to minimize morbidity and mortality in paraduodenal hernia.

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