

Unusual Case of Intestinal Obstruction Following Left Paraduodenal Hernia

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Abstract: Intestinal obstruction following Internal herniae is rare accounting for less than 4%, of which Paraduodenal hernias are the most common. A 42 yr male presented with abdomen pain & distension for two days, vomiting and obstipation for one day. Abdomen was distended with a tender mass in the left hypochondrium. X-ray showed dilated bowel loops. CT abdomen confirmed the diagnosis of small bowel obstruction. At laparotomy, impending gangrene of small bowel was visualized. A hernia sac to the left of 4th part of the duodenum was made out, with herniation of small bowel loops & twisting of the bowel along its axis resulting in vascular occlusion. Bowel loops were retrieved, hernia sac excised & the defect was closed. Warm saline, 100% O₂ were sufficient for the return of bowel viability. The patient had uneventful postoperative recovery.

Para-duodenal herniae are relatively rare. A timely & correct diagnosis is essential to prevent mortality and morbidity.

Keywords: Internal Hernia, Left Paraduodenal hernia, Small bowel obstruction.

I. Introduction

An Internal Hernia occurs due to the protrusion of bowel through a normal or abnormal orifice in the peritoneum or mesentery¹. Though considered as a rare cause of Intestinal obstruction, PARADUODENAL HERNIA's are the most common type of Internal hernia accounting for about 50% of which Left Para-duodenal hernia is the most common type. Bowel obstruction, ischemia & perforation may be the presentation of Paraduodenal hernia producing a high mortality¹.

II. Case History

A 42 yr male presented with abdomen distension, pain & obstipation for two days, vomiting that was not feculent / nonbilious. His examination finding revealed tachycardia, abdomen distension that was more towards the left hypochondrium, with guarding & rigidity. Bowel sounds were absent. Per rectal examination was empty without fecal staining. X-ray abdomen showed dilated bowel loops (Fig.1). CT abdomen showed features of small bowel obstruction with the conglomeration of bowel loops towards left hypochondrium, with no obvious mass or band to cause obstruction (Fig.2). The patient was taken up for emergency laparotomy after resuscitation. Small bowel loops were dilated and about 80cm of bowel was found in a state of Impending gangrene (Fig.3). About 40cm of small bowel was found to be herniated into the Left Paraduodenal Recess, with rotation of bowel along its axis resulting in vascular occlusion (Fig.4). Small bowel loops were retrieved from the recess and derotation of bowel was done. The hernial orifice was closed with 2'0 vicryl (Fig.5). Warm saline & 100% O₂ were sufficient for the return of normal bowel motility (Fig.6). The patient had an uneventful postoperative recovery. Postoperative follow-up of the patient was normal.

III. Discussion

The orifice of an internal hernia can be normal (Foramen of Winslow) or abnormal (Paraduodenal, ileocecal etc.) or pathological (in mesentery or omentum)⁶. Left Para-duodenal hernias originate at the fossa of Landzert, which is related to the fourth part of the duodenum, laterally and the IMV and ascending left colic artery posteriorly and most often occurs following midgut malrotation⁶. Paraduodenal herniae have a male preponderance (M: F ratio 3:1)⁴. The average age at diagnosis is 38 years with clinical presentation often due to chronic, intermittent, postprandial abdominal pain⁵. Diagnosis can be established by X-ray, which shows dilated bowel loops with conglomeration towards the left hypochondrium and with contrast CT abdomen that is more sensitive⁴.

Surgery is the mainstay of treatment for left para-duodenal hernia. An "empty abdomen" is the typical appearance intraoperatively wherein the small bowel loops are entrapped in the hernia sac, and only the last segment of the ileum is present in the abdominal cavity. The herniated small bowel loops should be reduced, and the hernial orifice should be closed⁶. Another option to prevent incarceration of bowel loops, is to widen the hernia orifice. Injury to the inferior mesenteric vessels that lie in close proximity to the left para-duodenal recess should be prevented³.

IV. Conclusion

Though being fairly uncommon, in any case of small bowel obstruction presenting in patients who are **relatively young, who have had repetitive attacks, and who lack any previous history of abdominal surgery, the differential diagnosis should include Left para-duodenal hernia⁶**. The preoperative diagnosis has become easier with the advances in imaging studies. This case is being reported due to its uniqueness in presentation, management and the timely intervention that saved the patient.



Fig. 1



Fig. 2



Fig. 3

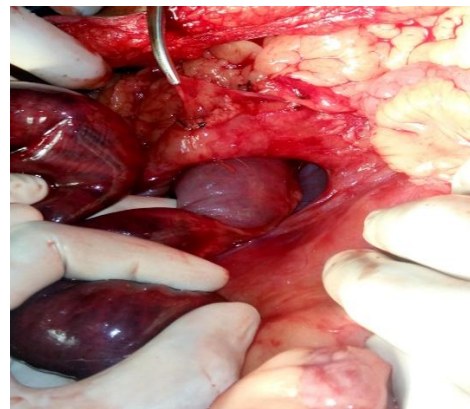


Fig. 4



Fig. 5



Fig. 6

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References:

- [1]. Al-khyatt W, Aggarwal S, Birchall J, Rowlands TE Acute intestinal obstruction secondary to left paraduodenal hernia: a case report and literature review. *World J Emerg Surg* 2013;8:5.
- [2]. Brehm V, Smithuis R, Doornebosch PG. A Left Paraduodenal Hernia causing acute bowel obstruction: a case report. *Acta Chir Belg* 2006;106: 436-37.
- [3]. Shetty P, Selvaraju K, Singh S. A left paraduodenal hernia causing recurrent small bowel obstruction : a case report. *Webmed Central gastrointestinal* 2010;1:WMC001308
- [4]. Munir A, Saleem SM, Hussain S. Paraduodenal hernia - a case report. *J Pak Med Assoc* 2004;54:16263.
- [5]. *Surgical Anatomy* : Skandalakais 2004 edition.
- [6]. Mozaffar M, Hasani M, Fallah M, Sobhiyeh MR, Adhami F. A Left Paraduodenal Hernia causing bowel obstruction: a case report. *Gastroenterol Hepatol Bed Bench* 2013;6(1):48-51