Left Paraduodenal Hernia: Case Report and Literature Review
Janardhana Rao Konkena\(^1\), Santa Rao Gunta\(^2\)*, Prasad Neelam\(^3\) and Srinu Babu Kollu\(^4\)

**ABSTRACT**
An internal hernia is a protrusion of bowel through a normal or abnormal orifice in the peritoneum or mesentery. Although they are considered as a rare cause of intestinal obstruction, para-duodenal hernias are the most common type of congenital internal hernias. We report one such case of a left para-duodenal hernia presented as acute intestinal obstruction.

**KEYWORDS:** Internal hernia, Para-duodenal hernia, Intestinal obstruction, Congenital, Peritoneal fossae, Trietz

**INTRODUCTION**
Para-duodenal hernias are uncommon and account for less than 1% of all cases of small bowel obstruction. They are associated with a high lifetime risk of causing obstruction and in these cases mortality rate is up to 20%, probably due to missed diagnosis. Therefore, the diagnosis should be considered when examining a patient with acute small bowel obstruction without a history of prior abdominal surgery. Para-duodenal hernia of small bowel loops is diagnosed by CECT scan of abdomen and managed by reduction of herniated loops and closure or widening of hernial orifice.

**CASE REPORT**
A 28-year-old male patient presented to the emergency department with complaints of colicky abdominal pain and vomiting of two days duration, which was associated with abdominal distension and absolute constipation of one-day duration. He had history of similar complaints twice in the past which were relieved spontaneously. There was no history of any previous abdominal surgeries. On examination, the abdomen was distended without guarding or rigidity and bowel sounds were exaggerated.

Haematological and biochemical investigations were within normal limits. Plain X-ray of erect abdomen showed multiple air fluid levels. CECT of abdomen revealed mass of small bowel loops to the left of the ligament of Treitz\(^1\) consistent with the diagnosis of left para-duodenal hernia.

Laparotomy was performed and viable small bowel loops were found herniating through an opening below the inferior mesenteric vein and left branches of middle colic vessels. All the herniated bowel loops were reduced. Large remnant cavity after reduction of the bowel was plicated with multiple non-absorbable sutures obliterating the cavity. Post-operative period was uneventful and patient was discharged in good general condition.

**DISCUSSION**
Treitz defined an internal hernia as a retroperitoneal protrusion of an abdominal organ through a peritoneal...
fold[2]. These hernias may be either congenital or acquired. Meyers classified internal hernias based on their location as para-duodenal, trans-mesenteric, pericecal, transmesosigmoid, perivesical, supravesical etc.[2]. Internal hernias are an uncommon cause of small bowel obstruction with a reported incidence of 0.2–0.9%[3] with paraduodenal hernia being the most common entity half of the time (M:F = 3:1)[4].

Left para-duodenal hernia involves fossa of Landzert located lateral to the fourth portion of the duodenum to the left side and posterior to the inferior mesenteric vein and left colic artery. Right para-duodenal hernia involves fossa of Waldeyer located inferior to 3rd part of duodenum and posterior to superior mesenteric artery and right colic vein. Left para-duodenal hernias (75%) are more common than right para-duodenal hernias (25%).

The diagnosis of para-duodenal hernia is almost never achieved clinically[5]. Patients usually present with abdominal pain, vomiting and abdominal distension. They give history of recurrent vague and general abdominal symptoms. Plain erect x-ray abdomen shows only air fluid levels like any other case of intestinal obstruction. Barium studies, CECT and MRI shows presence of clustered and well-circumscribed loops of small bowel in an abnormal location.

The patient should be prepared for emergency laparotomy with initial resuscitation and nasogastric decompression. Intra-operatively bowel loops are seen herniating into the orifice. The contents of internal hernia are reduced slowly taking care of the surrounding vital structures like vessels which form the boundaries of hernial orifices. If any segment of bowel is necrosed, ischemic or perforated, resection and anastomosis should be done. Enlargement of the orifice for the reduction of contents should be withheld as it involves risk of injuring vessels. The hernialorifice should be closed to prevent recurrences with non-absorbable sutures or mesh[6] Repair of the para-duodenal hernia can also be done through laparoscopy.
CONCLUSION

Though para-duodenal hernia is a rare cause of small bowel obstruction, one should consider this diagnosis if a patient presents with symptoms of intestinal obstruction without any previous history of laparotomies or in the absence of any inflammatory pathology. The diagnosis of an internal hernia should be borne in mind when there is a previous history of recurrent pain abdomen with vague abdominal symptoms and clinical features of acute intestinal obstruction. A thorough knowledge of the anatomy and boundaries of various peritoneal fossae is required inorder to reduce the postoperative morbidity and mortality.

REFERENCES


