



## PARADUODENAL HERNIA: A HIDDEN CULPRIT

### Surgery

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### ABSTRACT

Paraduodenal hernia is a congenital anomaly of developmental defects which occurs due to malrotation of gut in 12th week of embryonic life. This current study represents a case of left paraduodenal hernia with radiological imaging and intra-operative findings. A 37 years old male presented in surgery OPD, RIMS, Ranchi with complains of recurrent abdominal pain on left side of abdomen since 2 months. CT Scan whole abdomen and pelvis was suggestive of left paraduodenal hernia so patient underwent pre-anaesthetic check up and exploratory laparotomy with hernia repair was done.

### KEYWORDS

Paraduodenal hernia, abdominal pain, exploratory laparotomy, entrapped bowel.

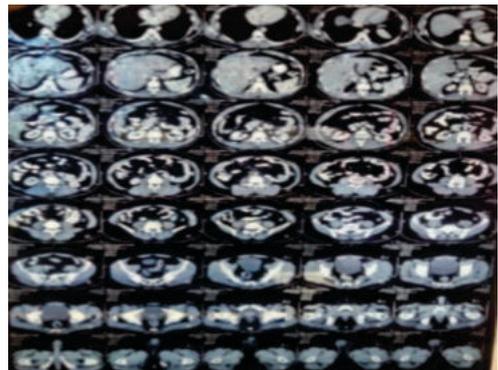
### INTRODUCTION

Paraduodenal hernia is an internal hernia also known as mesocolic hernia. It is the most common congenital anomaly of developmental defects and the most common Internal Hernia accounting for 53%<sup>[2]</sup>. It occurs due to malrotation of midgut in the 12<sup>th</sup> week of embryonic life due to which whole of the small intestine gets entrapped in a sac which forms around the umbilicus. The general mechanism by which paraduodenal hernia occurs is by abnormal retroperitoneal fixation of mesentery resulting in anomalous positioning of intestine. The small intestine herniates behind mesocolon on right or left side. Two types of paraduodenal hernia: right paraduodenal hernia and the left paraduodenal hernia. Left paraduodenal hernia is three times more common than right paraduodenal hernia<sup>[2]</sup> and have a 3:1 male:female ratio<sup>[1]</sup>. The right mesocolic hernia occurs when prearterial limb of midgut loop fails to rotate around superior mesenteric artery. Left mesocolic hernia is thought to be caused by in utero herniation of small intestine between inferior mesenteric vein and posterior parietal attachments of descending colon to retroperitoneum. Left paraduodenal hernia occurs through Congenital fossa of Landzert (2%)<sup>[2]</sup> at DJ junction behind the IMV. Right paraduodenal hernia occurs through congenital fossa of Waldeyer (2%) behind the SMA. Patients with a left paraduodenal hernia usually present during the fourth to sixth decade of life, and the mean age of presentation is 38.5 years<sup>[1]</sup>. The symptoms of paraduodenal hernia is very non specific mostly being acute or chronic abdominal pain, so most of the time it remains undiagnosed as a hidden culprit. Radiological modality of choice is CT Scan whole abdomen and pelvis<sup>[2]</sup>. A CT scan of a left paraduodenal hernia usually demonstrates clustering of loops of small bowel at or above the ligament of Treitz or behind the stomach, causing a mass effect on the posterior wall<sup>[3-5]</sup>. Sometimes, inferior displacement of the transverse colon can be seen, as well as inferior mesenteric vessel abnormalities<sup>[3-5]</sup>. We can also do Barium radiographs which will show displacement of small intestine to right or left side of abdomen. Treatment modality includes management of obstruction if present and exploratory laparotomy with hernia repair.

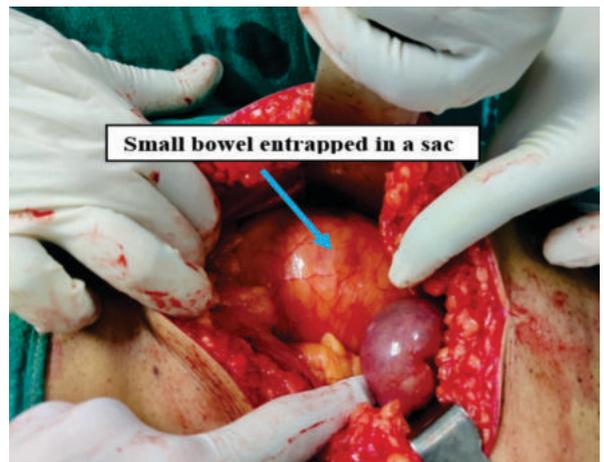
### Case Study

A 37 years old male presented in Surgery OPD, Rajendra institute of Medical Sciences (RIMS), Ranchi with complains of recurrent abdominal pain on left side of abdomen since 2 months. Pain was insidious in onset and gradually progressive in nature. It was dull aching in character and had no aggravating or relieving factor. Pain had no radiation or migration. Pain was not associated with vomiting or fever. On per abdomen examination, abdomen was soft, non distended, non-tender. Only slight abdominal fullness was noted on left side of abdomen. There was no organomegaly or obvious lump palpable. On clinical examination he had no pallor, icterus, clubbing, cyanosis, lymphadenopathy or edema but he had episodes of altered bowel habit mainly constipation. Other past medical or surgical history was unremarkable. He had no addiction to alcohol or tobacco or any substance and had a mixed diet. There was no history of similar illness

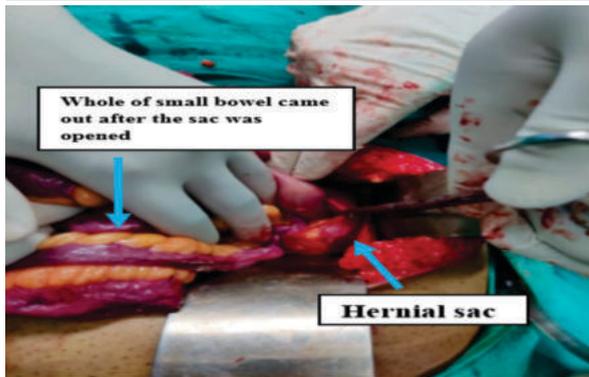
in any of the family members in the past. A thorough personal history questionnaire revealed no clinically significant information. Ultrasound whole abdomen and pelvis was done which revealed small bowel entrapped in a sac on left side. A computed tomography of whole abdomen was suggestive of left paraduodenal hernia. Exploratory laparotomy was done under general anaesthesia after pre anaesthetic check up. Intra operatively whole of the small bowel was found to be entrapped in a sac on left side of abdomen with a band attached to the mesentery. Sac was opened and whole of the small bowel was released. Band was cut and ligated and hernia repair was done. Post operative time was uneventful. Patient came in follow up in surgery OPD and was doing well.



**Figure 1:** CECT Whole Abdomen and Pelvis showing Left Paraduodenal Hernia



**Figure 2:** Showing intra-operative finding of bowel entrapped in a sac.



**Figure 3:** Showing intra-operative finding of small bowel coming out of hernial sac .

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