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Trespassing Bowel: A rare case of paraduodenal hernia

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Abstract
Para-duodenal hernias are the most frequent type of congenital internal hernia. It is observed that left para-duodenal hernia is about three times more common than right counterpart.
This case serves as an example of how bowel obstruction brought on by a paraduodenal hernia typically manifests as severe abdominal pain that worsens quickly. Considering that it is a closed loop obstruction, early bowel damage results, which explains why this illness has a high death rate. The presentation is dramatic and frequently includes peritonitis and hypovolemic shock.
It is concluded that while managing a case of acute abdomen, internal hernias must always be kept in mind.

Keywords: Trespassing Bowel, Ventral abdominal hernia repair, Inguinal hernias, Umbilical hernia

Introduction
An internal hernia is defined as the protrusion of abdominal viscera, most commonly small bowel loops, through a peritoneal or mesenteric aperture into a compartment in the abdominal and pelvic cavity. For internal herniation to occur, a portion of the small intestine becomes entrapped in one of the retroperitoneal fossae or in a congenital mesenteric defect. There are some common sites where internal herniation could occur like at foramen of Winslow, defected part of mesentery, at defected transverse mesocolon, defected parts in the broad ligament, congenital or acquired diaphragmatic hernia, duodenal retroperitoneal fossae – left paraduodenal and right duodenojejunal, caecal/appendiceal retroperitoneal fossae – superior, inferior and retrocaecal, intersigmoid fossa [1].
Paraduodenal hernias comprise 53% of all internal hernias and are protrusion of an organ or part of an organ through the wall containing it. 33% of all internal hernias present as small bowel obstruction and 40% present as strangulation [2].

Case Report
A 35year old male patient came with complains of pain abdomen since 6 months, intermittent in nature which has increased in intensity and frequency since 1 day and history of vomiting since 1 day, non-bilious, non-blood stained.
On examination patient was afebrile with a heart rate of 92bpm, BP: 150/90 mmHg and saturation of 95% at room air. No known comorbidities.
Per abdomen: soft, no distension, severe tenderness present in left lumbar region with localised left lumbar region rebound tenderness, hernial orifices being normal with normal external genitalia. Bowel sounds heard normally. No any known co-morbidities and any addictions observed.

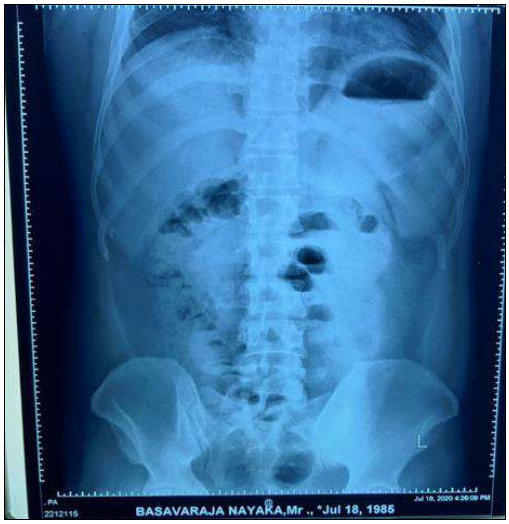

Fig 1: X-ray done suggestive of multiple air fluid levels with dilated loops of small bowel.

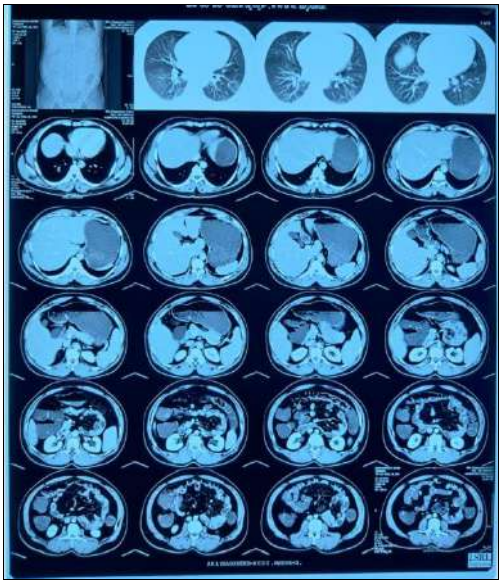

Fig 2: CECT suggestive of evidence of sac like clumped Jejunal loops located ectopically in the left side of abdomen between stomach and pancreas occupying left anterior Para duodenal space.

Patient was taken up for Emergency Laparotomy

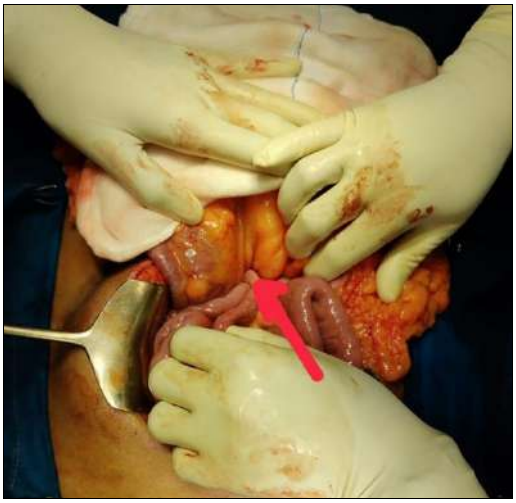

Fig 3: Intra-operatively obstructed left paraduodenal hernia was noted in the left paraduodenal space with jejunal loops as a content. Distal bowel loops was found to be collapsed but healthy

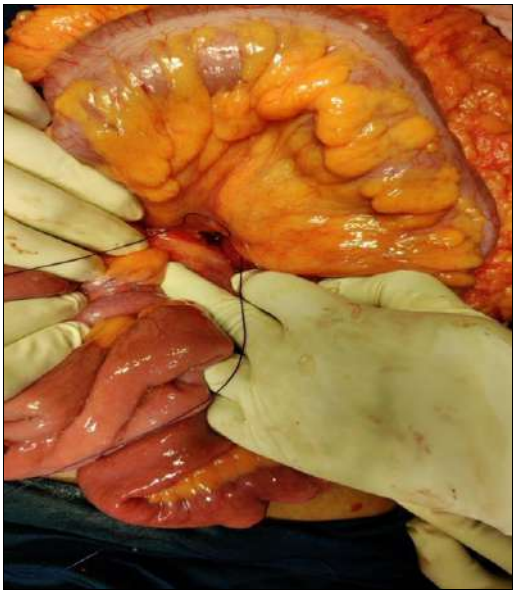

Fig 4: The left paraduodenal space was then obliterated with purse string sutures and pelvic drain was placed.

Post-operatively patient improved symptomatically and pelvic drain was removed on POD#3 and patient was discharged after tolerating orally.

Discussion

Para duodenal hernias comprises of 53% of all the internal hernias, are protrusion of abdominal viscera, most commonly small bowel loops, through a peritoneal or mesenteric aperture into a compartment in the abdominal and pelvic cavity. 33% of internal hernias usually present as small bowel obstruction whereas 40% present as strangulation.

Left Para duodenal hernia comprises 40% of all internal hernias and is the most common type. Bowel loops are seen herniating through the congenital fossa of Landzert at duodenojejunal junction behind the Inferior mesenteric vein most commonly presenting with chronic postprandial pain. Right Para duodenal hernia comprises of 13% of all internal hernias with bowel loops protruding through the congenital fossa of Waldayer behind the superior mesenteric artery [3].

Line of treatment would mainly be reduction of incarcerated bowel, resection of non-viable bowel and closure of defect to avoid recurrences.

This case illustrates the typical onset of bowel obstruction caused by Para duodenal hernia, with rapidly progressing acute abdominal pain from ischaemic bowel. As it is a closed loop obstruction, damage to the bowel occurs early, accounting for the high mortality rate in this condition. Presentation is dramatic, often with hypovolaemic shock and peritonitis [4].

Conclusion

Primary internal hernias are rare and knowledge of Para duodenal fossa and relation to mesenteric vessels during release of strangulated bowel is necessary while treating a case of small bowel obstruction. In cases of internal hernia, early intervention prevails better survival. One must always keep internal hernias in mind while dealing with a case of acute abdomen.

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