

Figure 3a; 3b
Antero-posterior and lateral x-rays of the hip following total hip replacement.



Fig 3a

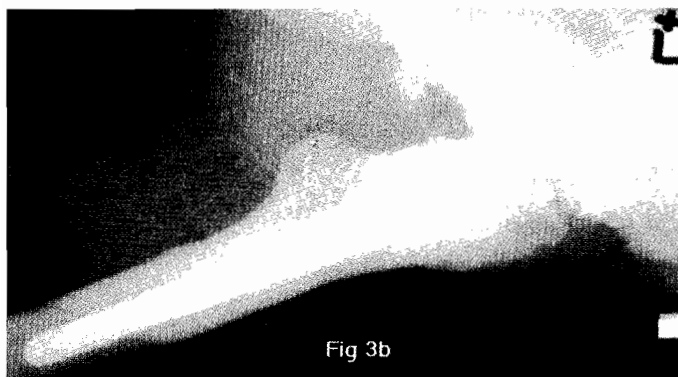


Fig 3b

Paraduodenal hernias

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CASE 1: C.M. 23 Years old female, Presented with abdominal pains and vomiting for a period of 2 months. She gave a history abdominal distension after eating which would gradually settle. She denied being constipated. Barium follow-through showed gastric stasis and a slow passage through the mid-gut. An elective operation revealed that the small bowel was in a sac of peritoneum within the peritoneal cavity below the transverse colon. The sac was opened and excised to free the small bowel trapped within.

CASE 2: L.M. 6 Years old female, Presented with a four days history of abdominal pains, constipation and vomiting. On examination she was dehydrated, had a distended, tense abdomen with visible bowel loops in the epigastrium. High pitched bowel sounds with a succussion splash were heard. Rectal exam was unremarkable.

emergency laparotomy showed a malrotation of both small and large bowels. A right paraduodenal hernia with an ischemic loop of bowel near the ilealcaecal junction was also noted. Operation included mobilization, release of mal-rotation and resection of the non-viable bowel.

PARA-DUODENAL HERNIAS (PDH)

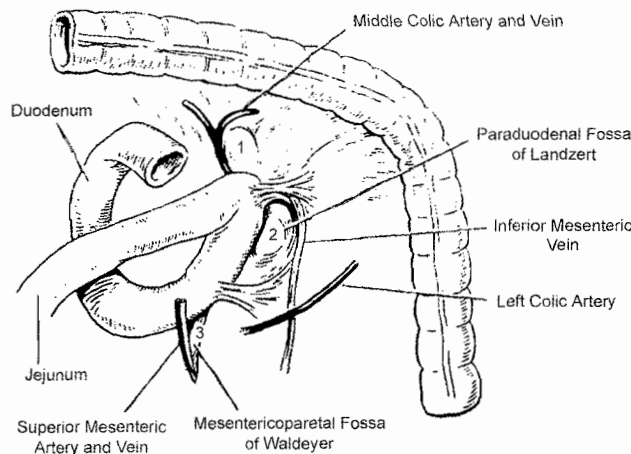
Incidence

Accounts for 0.2 - 0.9 % of all small bowel obstructions with a mortality of around 20%. Males are affected three times often than females¹.

Aetiology

Paraduodenal hernias are an uncommon congenital cause of small bowel obstruction. There are three types as characterized by Wilworth et al., I, left; II, right; and III, transverse. They are classified in order of frequency as Left PDH accounting for approximately 75% and 25%. transverse hernias are exceedingly very rare².

Fig 1. Sites for PDHs. 1 & 3 are sites for right PDHs. 2 is for left PDH.



In 1923 Andrews proposed that these hernias were the result of errors of mid-gut rotation occurring between the 5th and 11th weeks of gestation in which the gut undergoes counterclockwise rotation bringing the mesentery in contact with the posterior abdominal wall

Presentation

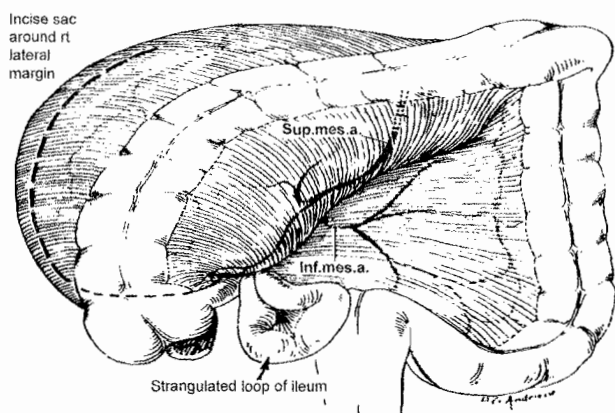
PDHs are rare in clinical practice despite being the most common internal hernias, accounting for 53% of cases³. They may be discovered at the time of operation for an acute abdominal problem as in case 2 or chronic as in case 1 with vague abdominal pains. They may be found during surgery for an unrelated condition sometimes leading to confusion even to the experienced surgeon, or at autopsy. recurrent abdominal complaints in an adult should arouse suspicion of mid-gut mal-rotation

Investigations⁴

It may be suspected on pre-operative x-rays if the small bowel loops are all on the right or on the left of the midline. Barium enema may show the caecum in a normal position or it may be incompletely rotated. A Barium follow-thru enema may give the same findings. More recently CT scans without and then with contrast has been shown to be useful. All these investigations may be performed without any diagnostic yield and patients may be assumed to have a psychosomatic illness.

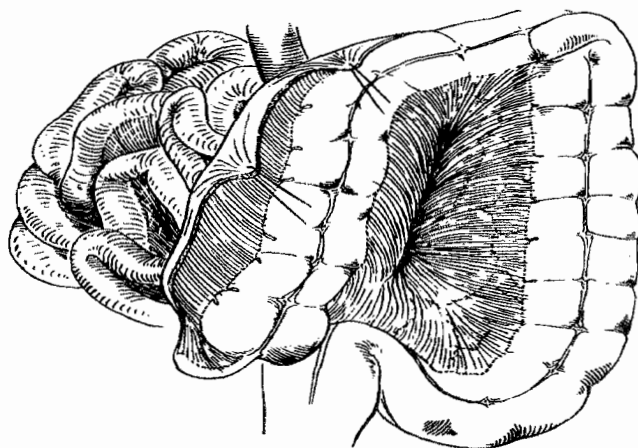
Treatment

Sometimes it is necessary to close the herina orifice, otherwise the hernia sac is opened widely and made part of the peritoneal cavity⁵. See Fig 2 to 4.



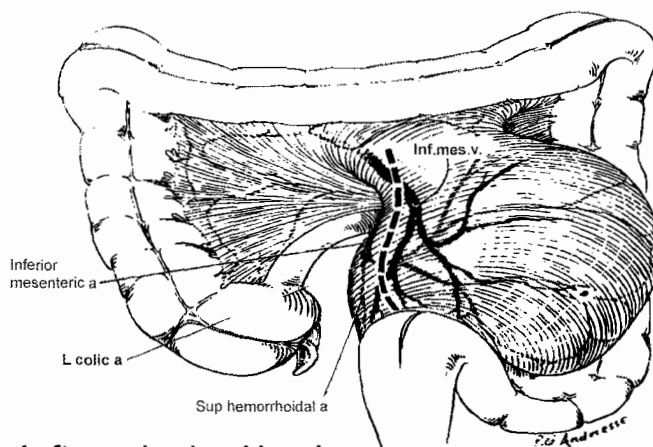
Right paraduodenal hernia

Fig 2. Right PDH. Incise the sac along the dotted line.



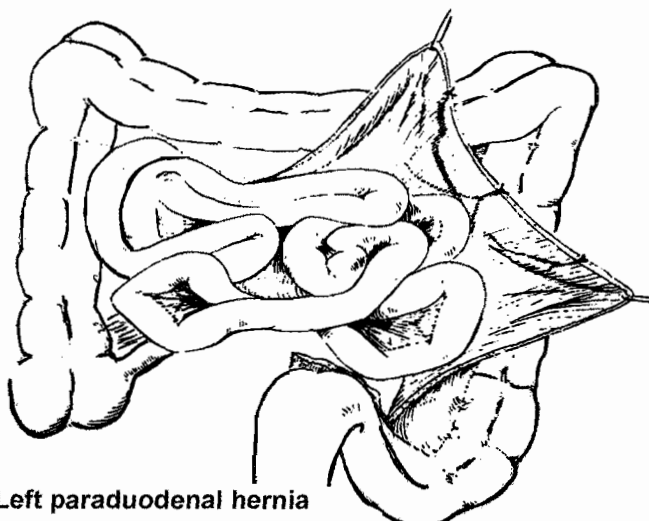
Right paraduodenal hernia

Fig 3. Right PDH. The sac is opened widely so that it becomes part of the general peritoneal cavity.



Left paraduodenal hernia

Fig 4. Left PDH with the sac to the left of the inferior mesenteric artery. Open sac along the dotted line.



Left paraduodenal hernia

Fig 5. The neck is opened by dividing the inferior mesenteric vessels and feeling the hernia contents

References

1. Rizwan Manji, Garth Warnock. Left Paraduodenal Hernia: An unusual cause of SBO. Canadian Journal of Surgery Vol 44, No 6, Dec 2001.
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3. Akram Khan et al. Paraduodenal Hernia. The American Surgeon Vol 64, Dec 1998.
4. Kanazawa T. Midgut Mal-rotation in Adulthood. Internal Medicine Vol 39, No 8 (Aug 2000).
5. Bartlett M., Wang C. and Williams W. The Surgical Management of Paraduodenal Hernia. The Annals of Surgery, pp. 249-254, 1968.