Lessons Learnt In The Management of Para-Duodenal Hernias: A Case Series

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Future Works

Expansion to a multi-institutional study to analyze the outcomes and management lessons of open versus laparoscopic management of PDH.

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Introduction





Para-duodenal hernia (PDH) are rare congenital internal hernias with non specific symptoms.

0.2-0.9% of population on autopsy

Clinical diagnosis is a challenge, it is likely to be detected as an incidental finding during laparotomy.

Left sided PDH is three times more common than right sided PDH with similar clinical presentation but different embryological origin.

Clinical Presentation of Paraduodenal Hernias

Vague abdominal pain
40 %

Features of intestinal obstruction
40 %

Incidental Finding
20 %

Male : Female Ratio
3:1

Left Sided
75 %

Age
21 to 68 years

75%

CECT abdomen revealed encapsulated cluster of small bowel loops in left upper quadrant

40%

40% of patients had features of subacute intestinal obstruction

Management of Paraduodenal Hernias: Our Experience

7 OUT OF 8
Underwent surgery:
4 laparotomies and 3 laparoscopic repair.

1 OUT OF 8
intestinal obstruction with gangrene of a segment of small bowel. A limited resection and anastomosis was performed.

LAPAROSCOPIC REPAIR
All 3 cases that underwent laparoscopic repair initially underwent a diagnostic laparoscopy.
The contents were reduced and assessed for viability, sac was excised completely, and defect was closed using non-absorbable suture material.

OUR PREFERENCE
Barbed polypropylene sutures

LAPAROTOMIES
Patients were approached through a midline laparotomy and the remaining steps followed were similar to that of laparoscopic repair.
These patients had frank small bowel obstruction and a laparoscopic approach was not possible.

Intraoperative Images

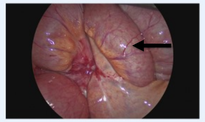


Figure A
Obstructed afferent bowel loops

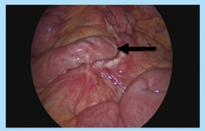


Figure B
Left PDH defect with small bowel as contents



Figure C
Fossa of Landzert

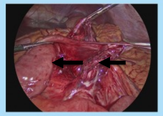


Figure D
3rd part of duodenum and PDH sac

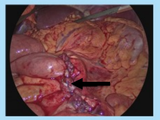
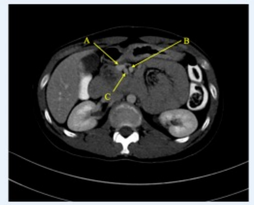
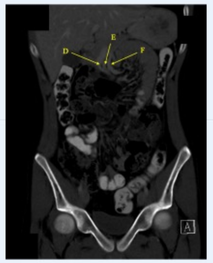


Figure E
After reduction of contents, closure of hernial sac

Imaging



Multiphase CECT Abdomen
Venous Phase
Showing SMV (A), IMV (B), SMA (C).
IMV seen along the anterior margin of the hernial sac indicating a left sided PDH.



Multiphase CECT Abdomen showing SMV (D), SMA (E), IMV (F) in relation to the hernial sac. Cluster of jejunal bowel loops noted within a sac in the left upper quadrant of abdomen. Engorgement of mesenteric vessels entering the hernial sac visualized.

Results

- One case had a recurrence and was re-operated four months later.
- One case developed entero-cutaneous fistula following resection and anastomosis, and had prolonged hospitalization.
- There were no mortality amongst any of the cases.
- However, one case was unwilling to undergo surgery.

Discussion and Conclusion

- Although it is an uncommon cause for acute abomen , PDH must be considered a differential diagnosis.
- Three out of eight patients in our case series presented with features of intestinal obstruction.
- A strong clinical suspicion and a thorough knowledge of the intra-abdominal anatomy allow for more efficient pre-operative planning and better outcomes.

Laparoscopic surgery is safe in select cases and is found to be beneficial