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A Rare Case of Patent Vitellointestinal Duct Causing Bowel Obstruction in an Adult

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Abstract: ***Patent Vitellointestinal duct VID is a rare congenital anomaly that usually presents in infants and neonates, with only a few cases reported in adults. We present the case of a 27-year-old female who presented with acute abdominal pain, vomiting, and a distended abdomen, ultimately diagnosed with small bowel obstruction caused by a patent VID. This unusual presentation highlights the importance of considering congenital anomalies as a potential cause of intestinal obstruction in adult patients. The discussion delves into the embryonic origins of VID and its various clinical manifestations. Surgeons should be aware of this infrequent etiology to ensure prompt diagnosis and appropriate management, leading to better patient outcomes.***

Keywords: Patent Vitellointestinal duct, Small bowel obstruction, Adolescent, Laparotomy, Intestinal complications

1. Introduction

- Patent Vitellointestinal duct occurs in about 2% of the population.[1]
- This anomaly may remain asymptomatic throughout life or may present with umbilical sinus, abscess, fistula, intussusception, and various other intraabdominal complications. [1]
- Patent Vitellointestinal duct causing intestinal obstruction is a very rare condition in an adolescent patient.[2]
- Case Summary
- 27 years old female, presented with complaints of pain abdomen, vomiting and non passage of flatus and stools from 2 days.
- On examination, Patient's pulse was 114/min, abdomen was tense , mild tender and distended. No organomegaly, no palpable lump, no shifting dullness.
- Abdominal x-ray suggestive of multiple air-fluid levels.
- CECT Abdomen shows e/o small bowel distension measuring 3.5cm. Transition point noted in distal ileum approximately 10cm proximal to ileo-caecal junction with whirl sign positive

2. Procedure

Exploratory Laparotomy with Resection and Anastomosis of patent vitellointestinal duct bearing segment of ileum
Histopathology

- Diverticulum , All 4 layers seen; unremarkable.
- Both resection margins are within normal histological limits.
- Random intestine is within normal histological limits.

3. Discussion

- Small bowel obstruction due to persistent vitellointestinal duct, particularly in an adolescent age group, is extremely rare with very few cases reported in world literature.[3]
- It is the embryonic structure connecting the primary yolk sac to the embryonic midgut which normally becomes a thin fibrous band, and eventually disintegrates and is absorbed spontaneously by 5th -9th week of gestation.
- Any failure in disintegration and absorption may lead to various anomalies as: Meckel's diverticulum, vitelline fistula, vitelline cyst, umbilical mucosal polyp, Meckel's diverticulum and vitelline cord or a fibrous cord connecting the ileum to the umbilicus.
- The complete patency of the duct is the rarest 0.0063% to 0.067% mostly seen in infants and neonates. .[3]

4. Conclusion

- Patent VID is an uncommon entity in adults
- This disorder leading to intestinal obstruction as a complication is very unusual.
- Surgeons should be aware of this infrequent cause of small bowel obstruction to facilitate better patient outcomes.

Reference

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