



TRANSMESOCOLIC INTERNAL HERNIATION PRESENTING AS SMALL BOWEL OBSTRUCTION IN A VIRGIN-ABDOMEN: A DIAGNOSTIC CHALLENGE

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ABSTRACT

Background: Transmesocolic hernias are a rare subtype of internal hernia and an uncommon cause of small bowel obstruction. Preoperative diagnosis remains challenging because of their nonspecific clinical and radiological presentation, particularly in surgery-naïve patients. Delayed recognition may result in bowel strangulation, ischemia, and significant mortality. We report a case of transmesocolic internal hernia presenting as acute intestinal obstruction in a patient without previous abdominal surgery. **Case Presentation:** A middle-aged gentleman presented with acute history which suggests intestinal obstruction. Contrast-enhanced computed tomography (CT) demonstrated dilated small bowel loops with twisting of the mesentery. An emergency exploratory laparotomy was performed. Intraoperatively, small bowel had herniated through a defect in the transverse mesocolon into the lesser sac. The herniated bowel loops appeared congested but remained viable. The postoperative recovery was uneventful, and the patient was discharged well. **Conclusion:** Transmesocolic hernia is a rare but important differential diagnosis in surgery-naïve patients presenting with small bowel obstruction. Due to the difficulty in establishing a preoperative diagnosis, a high index of suspicion and prompt surgical intervention are essential to prevent bowel ischemia and improve patient outcomes.

KEYWORD(S): Transmesocolic, Internal hernia, Small bowel Obstruction.

INTRODUCTION

Transmesocolic hernias represent an uncommon subtype and are particularly challenging to diagnose due to their nonspecific clinical presentation, especially in patients without prior abdominal surgery.^[1,2] Delayed recognition is associated with a high risk of strangulation and bowel ischemia, with reported mortality exceeding 50% in untreated cases.^[2] This case highlights the diagnostic difficulty and clinical importance of early surgical intervention in such patients.

CASE PRESENTATION

A middle-aged gentleman presented with a 2-day history of cardinal symptoms of intestinal obstruction. There

was no prior history of abdominal surgery, trauma or significant illness. Physical examination revealed findings which were parallel of intestinal obstruction. Contrast-enhanced computed tomography (CT) revealed dilated small bowel loops with twisting of mesentery, raising suspicion of midgut volvulus.

Given the acute presentation, an emergency exploratory laparotomy was undertaken. Intraoperatively, markedly dilated small bowel loops with a collapsed large bowel were noted. The small bowel had herniated through a defect in the transverse mesocolon into the lesser sac. Although the herniated bowel loops appeared congested, no evidence of bowel ischemia or perforation was

identified, and bowel was viable.

The mesocolic defect was widened, bowel decompression done and herniated portion of bowel was successfully reduced. Bowel resection was not required.

The patient recovered uneventfully postoperatively. During subsequent outpatient follow-up, he remained asymptomatic and was later discharged from surgical care.

DISCUSSION

Internal hernias are an uncommon cause of small bowel obstruction and result from protrusion of intra-abdominal viscera through congenital or acquired mesenteric or peritoneal defect.^[1] In patients without a previous history of abdominal surgery or trauma, congenital mesenteric defects are probable which is similar to our case.

Anatomically, they could be further classified into several subtypes, with paraduodenal hernias being the most common (53%), followed by pericecal (13%),

foramen of Winslow (8%), transmesenteric/transmesocolic (8%), intersigmoid (6%), and retroanastomotic (5%).^[3] Despite their lower incidence, transmesenteric hernias are of clinical significance due to their rapid progression and high risk of strangulation.

Computed tomography (CT) is currently regarded as the imaging modality of choice in suspected cases. Characteristic CT findings include clustered dilated small bowel loops, mesenteric vessel crowding or twisting, displacement of adjacent bowel loops, and signs of closed-loop obstruction.^[4,5,6] In the present case, CT findings of mesenteric twisting raised suspicion for midgut volvulus, prompting urgent surgical exploration.

Despite advance in imaging technology, definite diagnosis is often made intraoperative. This case underscores the importance of considering internal hernia as a differential diagnosis in small bowel obstruction even in surgery-naïve patients. Timely surgical management is essential to prevent ischemia and reduce morbidity.



Diagram 1: Intraoperative picture showing small bowel transverse mesocolon defect.



Diagram 2: Area showing small bowel dilatation with whirlpool appearance.

CONCLUSION

Transmesocolic hernias, although rare, should be considered in patients presenting with small bowel obstruction without prior abdominal surgery. A high index of suspicion, appropriate consideration of CT imaging, and early surgical exploration are critical to achieving favorable outcomes and preventing life-threatening complications.

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