

UNCOVERING THE UNUSUAL: RADIOLOGIC INSIGHTS INTO RARE ABDOMINAL HERNIA PRESENTATIONS

Radio-Diagnosis

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ABSTRACT

This paper discusses two rare presentations of abdominal hernias evaluated using advanced imaging modalities. The first case involves a 61-year-old male presenting with bowel perforation and bilateral inguinal hernias, while the second describes a 69-year-old female with spigelian hernias and small bowel obstruction caused by a displaced stent. These cases emphasize the importance of radiological assessment in diagnosing and managing unusual hernia presentations, with a multidisciplinary approach proving pivotal for optimal outcomes.

KEYWORDS

Abdominal hernia, inguinal hernia, spigelian hernia, radiology, small bowel obstruction, imaging modalities.

INTRODUCTION

Abdominal hernias are common, yet certain presentations pose significant diagnostic and management challenges due to their rarity (1,5). Inguinal and spigelian hernias, although distinct in their clinical manifestation, require precise imaging for accurate diagnosis and treatment planning (4). Advanced imaging techniques, including computed tomography (CT), play a critical role in assessing hernia contents, complications, and associated findings (2). This paper presents two intriguing cases highlighting the radiological insights into rare abdominal hernia presentations.

Case Presentations

Case 1:

A 61-year-old male presented to the emergency department with acute abdominal pain and clinical signs of peritonitis. His medical history included chronic constipation but no prior abdominal surgeries. On examination, bilateral reducible inguinal hernias were noted with generalized abdominal tenderness.

Radiological Assessment:

CT imaging revealed:

- Pneumoperitoneum with free air pockets concentrated around the transverse colon (Figure-1) and tracking to the pericholecystic and periportal regions.
- A bowel perforation at the transverse colon with air and fecal matter in the small bowel.
- Bilateral inguinal hernias containing omentum and bowel loops. (Figure-2) The right-sided defect measured 2 cm, while the left-sided defect measured 1.3 cm.
- Thickened hyper-enhanced small bowel loops indicative of inflammation or ischemia.

Additional findings included a mildly enlarged liver with a calcified granuloma in segment VIII and multiple renal cortical cysts (Figure-1).



Figure 1:



Figure 2:

CT axial sections highlighting the findings of pneumoperitoneum, transverse colon perforation (Figure-1) and bilateral inguinal hernias (Figure-2).

The patient underwent an exploratory laparotomy, confirming the transverse colon perforation and incarcerated inguinal hernias. Surgical repair involved resection of the affected bowel segment and bilateral hernia repairs.

Case 2:

A 69-year-old female with a history of hernia repair surgery presented with abdominal pain, vomiting, and localized tenderness in the right lumbar region for three days. There was no fever or other systemic symptoms.

Radiological Assessment:

CT imaging showed:

- Prominent ileal loops with a maximum diameter of 3 cm, containing air-fluid levels suggestive of obstruction (Figure-4).
- Two anterior abdominal wall defects along the linea semilunaris in the right lumbar region:
- The larger defect (3.5 cm) allowed herniation of distal ileal loops and caecum, with edematous bowel loops showing minimal adjacent fluid and fat stranding (Figure-4).
- The smaller defect (2.5 cm) contained herniated omentum.
- A displaced stent was observed within the herniated bowel loops, appearing to pierce the bowel wall, causing obstruction (Figure-3).
- Minimal pelvic fluid and subcutaneous edema were also noted.



Figure 3:

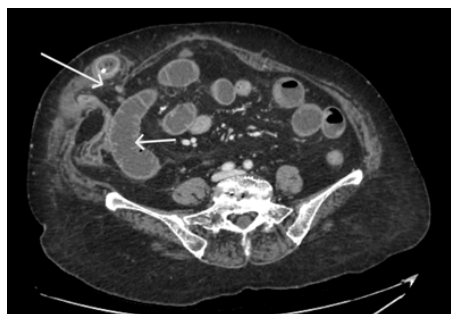


Figure 4:

CT axial images demonstrating spigelian hernias with herniation of distal ileal loops and caecum (Figure-4). One of the images also shows the displaced stent causing small bowel obstruction (Figure-3).

A provisional diagnosis of spigelian hernias complicated by small bowel obstruction and bowel wall perforation secondary to the displaced stent was made. The patient underwent emergency surgery, during which the displaced stent was retrieved, and the hernia defects were repaired with mesh placement.

DISCUSSION

Inguinal hernias are among the most common abdominal hernias but can present with rare complications such as bowel perforation (1). Spigelian hernias, on the other hand, are uncommon and often misdiagnosed due to their location along the linea semilunaris (4). Imaging modalities such as CT are indispensable for identifying hernia contents, associated complications, and guiding surgical intervention (2,5).

In Case 1, the combination of pneumoperitoneum, bowel thickening, and bilateral hernias underscores the complexity of diagnosing hernia-related complications.

In Case 2, the displaced stent piercing the bowel wall added another layer of complexity, emphasizing the need for detailed imaging to plan surgical management.

These cases highlight the role of radiology in accurately diagnosing and managing rare abdominal hernias. Collaboration between radiologists, surgeons, and other specialists ensures comprehensive patient care.

CONCLUSION

These cases underscore the critical role of imaging in diagnosing rare and complex hernia presentations. Advanced imaging modalities enable detailed evaluation of hernia contents, complications, and surrounding anatomy, facilitating timely and effective treatment. A multidisciplinary approach is essential for managing such challenging cases, ensuring optimal outcomes.

Acknowledgments

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Conflict Of Interest

The authors declare no conflict of interest regarding this publication.

Ethical Clearance

This study was conducted following ethical guidelines and received approval from the institutional review board.

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