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A Rare Case of Right-Sided Diaphragmatic Hernia in an Adult Presenting as Subacute Intestinal Obstruction with Transverse Colon as Content

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Abstract: ***Background: Right-sided diaphragmatic hernias in adults are rare and often present a diagnostic challenge. Their presentation as subacute intestinal obstruction without prior trauma is exceedingly uncommon [1]. Case Presentation: We report a case of a 70-year-old female who presented with upper abdominal pain, vomiting, and non-passage of stool and flatus for 4 days. Imaging suggested subacute intestinal obstruction. Exploratory laparotomy revealed a right-sided diaphragmatic hernia containing a loop of transverse colon. Hernial content was reduced and the diaphragmatic defect repaired successfully. Conclusion: A high index of suspicion is crucial for diagnosing diaphragmatic hernia in atypical adult presentations. Prompt imaging and surgical management are essential to avoid complications [2, 3].***

Keywords: Diaphragmatic hernia, Right-sided hernia, Subacute intestinal obstruction, Transverse colon, Exploratory laparotomy

1. Introduction

Diaphragmatic hernia (DH) refers to the protrusion of abdominal contents into the thoracic cavity through a defect in the diaphragm. While most are congenital (e. g., Bochdalek, Morgagni) or acquired post-trauma, spontaneous right-sided DH in adults without trauma is exceedingly rare [1, 4].

The liver offers protection to the right hemidiaphragm, making right-sided hernias less common and often misdiagnosed [5]. Presentation with intestinal obstruction further complicates diagnosis. Here we report a rare case of a right-sided DH in an elderly female, presenting as subacute intestinal obstruction without history of trauma.

2. Case Report

A 70-year-old female presented to the emergency department with a 4-day history of increasing upper abdominal pain, vomiting, and absence of flatus and stool. There was no history of trauma or previous surgeries. On examination, the patient was hemodynamically stable, with abdominal tenderness and guarding. Chest and abdominal X-rays were suggestive of intestinal obstruction.

Following resuscitation, exploratory laparotomy was performed. Intraoperative findings revealed a right-sided anterior diaphragmatic hernia containing a dilated loop of transverse colon, approximately 15 cm in length. There were no signs of ischemia or strangulation. Hernial content was reduced, a 28 Fr chest tube was placed in the right pleural cavity, and the diaphragmatic defect was closed primarily.

The patient recovered uneventfully and was discharged with no postoperative complications.

3. Discussion

Right-sided DHs in adults are uncommon and often underdiagnosed due to nonspecific symptoms and rarity [4, 6]. Most cases occur after trauma or as congenital defects presenting in childhood. However, spontaneous presentations in elderly patients without trauma are sparsely documented [2, 3, 5].

Complications of DH include:

- Respiratory distress due to lung compression
- Gastrointestinal symptoms: obstruction, incarceration, strangulation [7]
- Delayed diagnosis due to overlap with other thoracoabdominal conditions

Radiographs may suggest obstruction, but CT scans are superior in identifying the hernial content and diaphragmatic defect [6]. In emergency presentations, exploratory laparotomy remains the gold standard for diagnosis and management.

Primary repair is preferred when feasible; mesh reinforcement may be required in larger defects [8]. Early surgical intervention is vital to prevent strangulation or ischemia.

4. Conclusion

Right-sided diaphragmatic hernias in adults are exceptionally rare and may present with atypical symptoms such as subacute intestinal obstruction. A high index of clinical suspicion, appropriate imaging, and timely surgical intervention are crucial for effective management and to avoid complications.

Figure

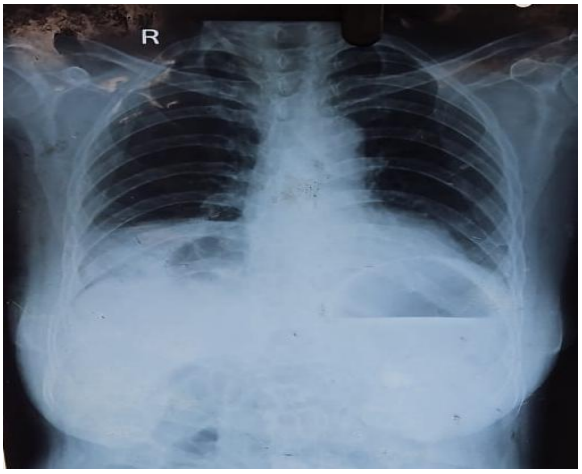

Figure 1: Preoperative Chest X-Ray. The arrow highlights and abnormal shadow over right hemidiaphragm, suggestive of diaphragmatic defect, later confirmed intraoperatively

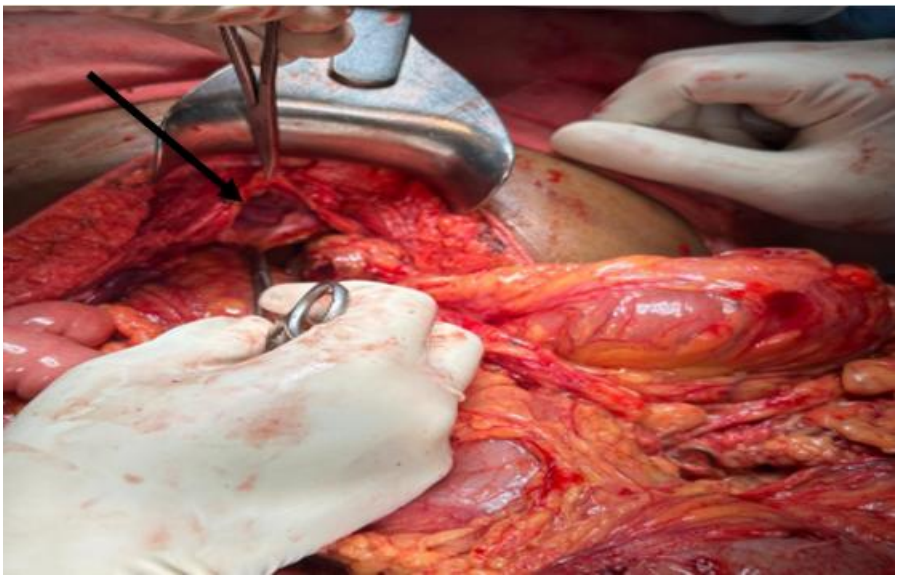

Figure 2: Intraoperative image showing right-sided anterior diaphragmatic hernia defect. The arrow indicates right anterior diaphragmatic defect through which transverse colon had herniated.

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