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Original Research Paper

General Surgery

A CASE REPORT ON SITUS INVERSUS WITH INTESTINAL OBSTRUCTION

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ABSTRACT Situs inversus totalis is a rare congenital anomaly characterized by the complete transposition of thoracic and abdominal organs. While most individuals remain asymptomatic, this condition complicates the diagnosis and management of other medical or surgical conditions. This case report discusses a 45-year-old male presenting with acute intestinal obstruction, where situs inversus totalis was incidentally discovered. Proper imaging, timely surgical intervention, and a high index of suspicion were critical to managing this case successfully.

KEYWORDS : Situs inversus; intestinal obstruction;gangrenous bowel;band formation

INTRODUCTION

Situs Inversus Is Classified Into Two Main Types:

1. **Situs Inversus Totalis:** Complete mirror reversal of both thoracic and abdominal organs.
2. **Situs Inversus Partialis:** Isolated reversal of either thoracic or abdominal organs.

The condition is usually asymptomatic unless associated with other anomalies, such as Kartagener syndrome, congenital heart disease, or gastrointestinal malformations. When a patient with situs inversus develops intestinal obstruction, clinical suspicion may be delayed due to atypical symptom localization, leading to diagnostic confusion.

Case Presentation

Patient History

A 54-Year-Old Male Presented With:

- Severe, colicky abdominal pain localized to the left lower quadrant.
- Abdominal distension and inability to pass flatus or stool.
- Nausea and multiple episodes of bilious vomiting.

The patient denied any previous surgeries or known medical conditions. There was no family history of congenital anomalies.

Physical Examination

- **General Appearance:** The patient was moderately distressed but hemodynamically stable.
- **Abdominal Examination:** Visible distension with tenderness in the left lower quadrant, no guarding or rebound tenderness.
- **Cardiovascular Examination:** Apex beat palpated on the right side.
- **Bowel Sounds:** Hyperactive.

Initial Differential Diagnoses

- Small bowel obstruction due to adhesions, hernia, or volvulus.
- Left-sided appendicitis (due to reported pain localization).
- Neoplasm or inflammatory bowel disease.

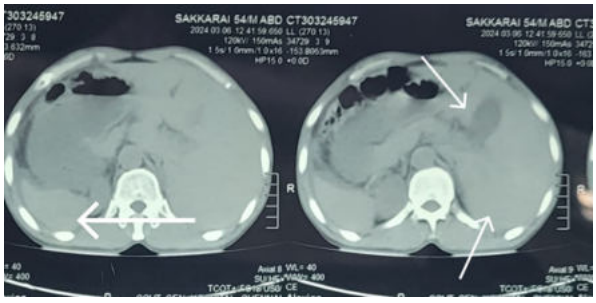
Diagnostic Workup

1. **Plain Radiography (Chest X-ray):**

- Showed dextrocardia, suggesting the possibility of situs inversus.

2. **Abdominal Ultrasound:**

- The liver was visualized on the left and spleen on the right, confirming abdominal organ transposition.
- Dilated bowel loops suggested a mechanical obstruction.



3. **Contrast-Enhanced CT (CECT):**

- Provided a detailed map of reversed visceral anatomy.
- Demonstrated dilated proximal bowel loops with a transition point in the mid-jejunum.

Definitive Diagnosis:

Situs inversus totalis with mechanical small bowel obstruction due to an adhesive band.

Management

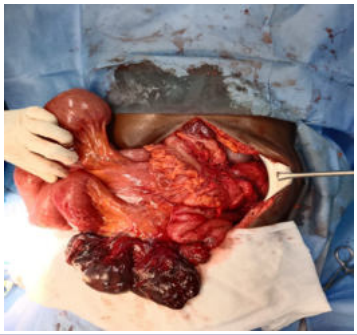
Preoperative Planning:

Given the rarity of the condition, surgical teams carefully reviewed imaging to map organ positions. This was essential for surgical navigation to prevent intraoperative errors.

Surgical Intervention:

The patient underwent an emergency exploratory laparotomy. Key findings included:

- Reversed visceral anatomy confirming situs inversus totalis.
- A dense adhesive band encircling a segment of the jejunum, causing obstruction with gangrene of jejunum



The adhesive band was carefully cut, resection of gangrenous segment and anatamosis was done The abdomen was closed without further complications.

Postoperative Course

The patient recovered uneventfully and tolerated oral intake by postoperative day 2. He was discharged on day 5 with instructions for follow-up and lifestyle modifications.

DISCUSSION

Clinical Implications Of Situs Inversus:

Delayed Diagnosis: The atypical location of pain can mislead clinicians. For instance, appendicitis may present with left lower quadrant pain instead of the classic right-sided presentation.

Surgical Challenges: Intraoperative orientation and altered vascular anatomy require meticulous preoperative planning to prevent complications.

*** Imaging Importance:** CT scans provide critical anatomical details for surgical planning and avoiding errors.

Association With Intestinal Obstruction:

Adhesions are a common cause of small bowel obstruction, but their presentation in situs inversus can vary significantly. This case underscores the need for early imaging to confirm anatomical anomalies in patients with unusual pain patterns.

Review Of Literature:

A review of similar cases highlights the challenges of diagnosing and managing situs inversus with intestinal obstruction. In many cases, delayed diagnosis increased morbidity. Awareness and prompt imaging are crucial for favorable outcomes.

CONCLUSION

Situs inversus totalis, though rare, must be considered in patients with atypical presentations of abdominal pain. Early diagnosis using imaging, careful surgical planning, and intraoperative awareness of anatomical variations are key to successful management. This case emphasizes the importance of maintaining a high index of suspicion and the value of preoperative imaging in complex clinical scenarios.

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