

Case study

A Spontaneous Transomental Hernia Through The Greater Omentum

Abstract

Transomental internal hernias are an exceptionally uncommon form of internal hernias. However, they can occur even in patients without prior surgical procedures due to age-related omental atrophy. Transomental hernias, whether through the greater or lesser omentum, are infrequent, comprising only about 1-4% of all internal hernias. These hernias are typically observed in individuals over the age of fifty. Acquired transomental hernias are more common and often result from previous abdominal surgeries, such as Roux-en-Y gastric bypass, trauma, or peritoneal inflammation. The postoperative mortality rate for transomental hernias is notably high, reaching 30%, and they are frequently diagnosed during emergency laparotomies.

In this case report, we describe an extremely rare occurrence of a transomental hernia presenting as small bowel obstruction in a 50-year-old female patient and which was treated successfully in our Centre by explorative laparotomy.

Keywords

Bowel obstruction, Internal hernia, Omentum, Transomental hernia

Introduction

An internal hernia is characterized by the protrusion of an organ through a normal or abnormal opening within the peritoneal cavity. These hernias can be either congenital or acquired defects in the peritoneal or mesenteric region of the abdominal cavity and account for approximately 5.8% of all cases of intestinal obstruction. Various types of internal hernias exist, including:

1. Para-duodenal hernias-53% of cases.
2. Foramen of Winslow hernias-8% of cases.
3. Transmesenteric and transmesocolic hernias-8% of cases.
4. Intersigmoid hernias-6% of cases.
5. Retroanastomotic hernias -5% of cases.
6. Transomental hernias-1-4% of cases.[1,2,3,4]

Transomental hernias are indeed the least common among internal hernias. They can be congenital, particularly in paediatric patients, or acquired due to factors such as prior abdominal surgeries, trauma, or post-inflammatory conditions. Interestingly, transomental hernias through the greater or lesser omentum can also occur spontaneously in elderly individuals as a result of age-related omental atrophy, without any history of surgery, trauma, or inflammation.[4,5]

Case Report

On January 1, 2012, a 50-year-old woman was admitted to our centre due to complaints of abdominal pain, abdominal distension, and vomiting that had persisted for two days. Her vital signs were all within normal ranges. During the physical examination, her abdomen appeared distended and produced a tympanic sound upon percussion. The patient experienced tenderness in the epigastric region, but there was no rebound tenderness, and hyperactive bowel sounds were audible. Notably, there were no visible surgical scars on her abdomen, and laboratory tests showed normal results. A plain abdominal X-ray revealed dilated small bowel loops with air-fluid levels in the

abdomen, suggesting intestinal obstruction. Abdominal ultrasonography confirmed the presence of small bowel obstruction.

In response to this emergency, a laparotomy was promptly performed. The procedure revealed a strangulated segment of the small bowel herniating through a defect in the greater omentum, measuring 10x4 cm and having a triangular shape. Typically, the hernia orifice is a narrow, slit-like opening, up to 10 cm in size, located at the periphery of the greater omentum. The strangulated small bowel was carefully released, and it was found to be viable, eliminating the need for bowel resection. Partial omentectomy was performed to relieve the strangulation of small bowel. The postoperative course was uneventful and the patient was discharged on 8th post-operative day.

(Fig1-6)

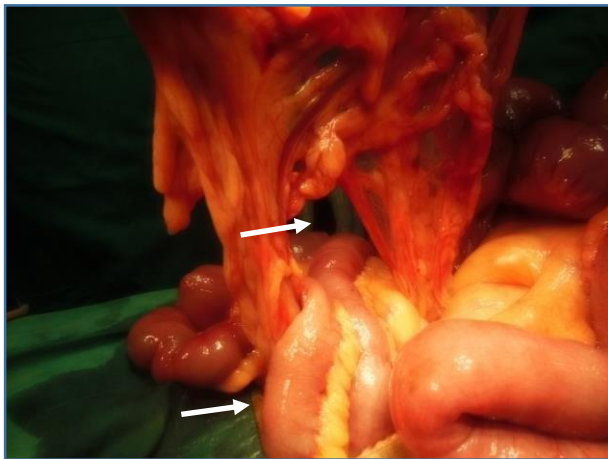


Fig-1 Intraoperative photograph showing transomental hernia

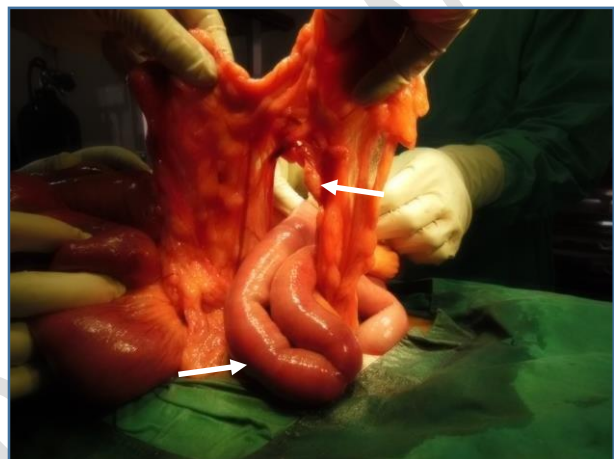


Fig-2 Intraoperative photograph showing transomental hernia with bowel herniation

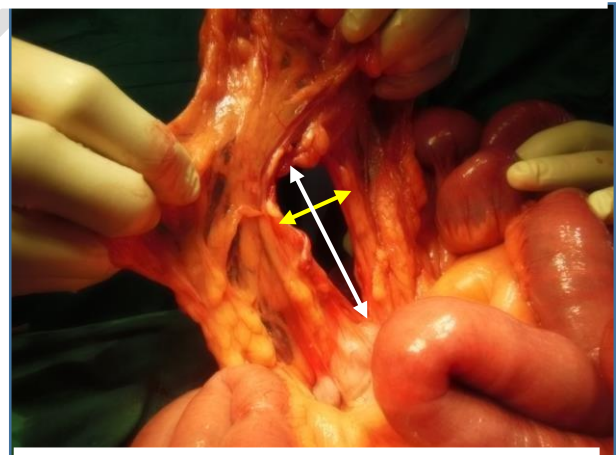


Fig-4 Intraoperative photograph showing triangular transomental defect

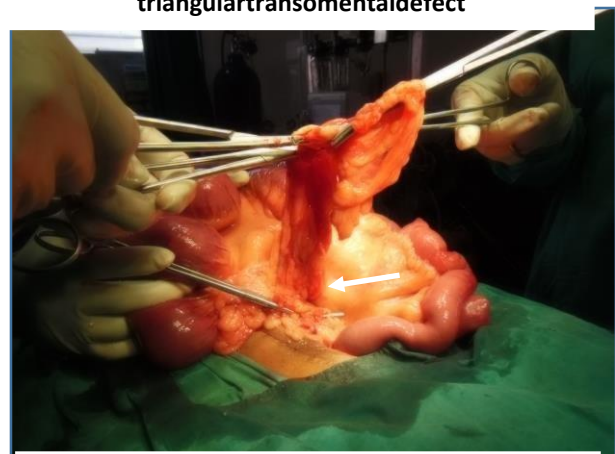


Fig-6 Partial omentectomy done

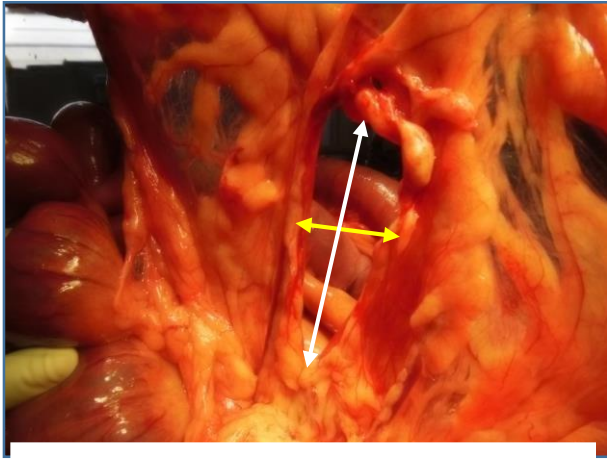


Fig-3Intraoperativephotographshowing
triangulartransmentaldefectofsize10x4cm

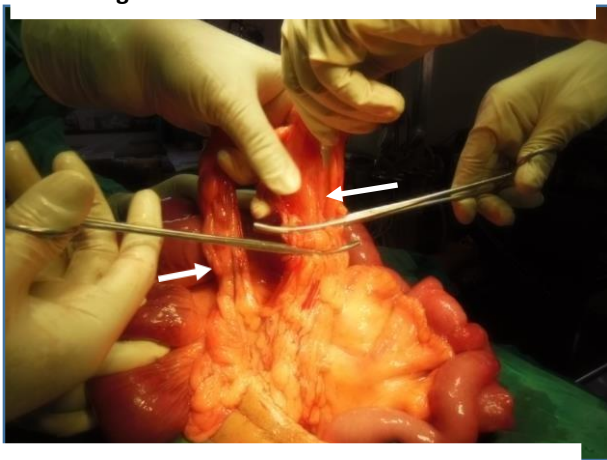


Fig-5Partialexcisionofgreateromentum

UNDER PLEER REVIEW

Discussion

The overall incidence of internal hernias ranges from approximately 0.2% to 0.9%. These hernias account for 0.6% to 5.8% of all cases of intestinal obstruction, with transomental hernias constituting 1-4% of all internal hernias. To gather information, we conducted a PubMed search using the keyword "Transomental Hernia" for reports published between 1960 and 2017, identifying 24 cases, including our 25th case, which involved herniation through the greater omentum. [1,2,3]

Congenital transomental hernias are relatively common in children, whereas in adults, transomental hernias are typically reported in individuals over 50 years old. In adults, internal hernias through the greater and lesser omentum can occur spontaneously due to senile atrophy, with or without a history of surgery, trauma, or inflammation. Yamuguchi's classification categorizes transomental hernias as follows: [2,3,4]

1. Type A – Herniation within the peritoneal cavity through the greater omentum to peritoneal cavity.
2. Type B – Herniation within the peritoneal cavity into the omental bursa to peritoneal cavity.
3. Type C – Herniation within the peritoneal cavity involving the omental bursa.

Our case falls under Type A. It's important to note that transomental hernias carry a high mortality rate of 30%. Abdominal CT scans are considered the gold standard for assessing bowel obstruction and internal hernias. These scans can reveal characteristic signs such as the "Beak Sign" and "Whirl Sign," which indicate a swirling pattern of the mesenteric vessels. Surgical treatment typically involves reducing the herniated intestinal segment, and if there is gangrene present, bowel resection becomes necessary. In recent years, laparoscopic surgery has become a common approach for diagnosing and treating transomental hernias. [5,6,7]

Conclusion

Spontaneous transomental hernias are exceptionally uncommon. The primary treatment for transomental hernias involves a surgical approach, which can be carried out using either laparoscopy or laparotomy. The essential steps in the surgical procedure include reducing the herniated bowel and addressing the omental defect. This may involve closing the defect or performing an omentectomy to prevent the possibility of future herniation's.

References

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