



A Spontaneous Transomental Hernia: A Rare Cause of Bowel Obstruction

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Abstract

Internal hernias (IH) are rare situations that account for 0.5–3% of all cases of intestinal obstruction. Transomental hernia is a rare subtype, hardly diagnosed, and represents approximately only 2% of internal hernias. In 2018, a 41-year-old female patient presented to Marmara University Hospital emergency service with abdominal pain, nausea, and vomiting. Her medical history included asthma, and she had no abdominal surgery. With the preliminary diagnosis of small bowel obstruction, laparotomy was done and showed a loop of ileum was herniated through into an unusual defect of the omentum. The obstructed loop of the small intestine into the hernia site was reduced. It was seen as viable, so no resection was necessitated. We divided the greater omentum into two parts from the edge of the defect area to prevent recurrences. The patient's postoperative period was uneventful, and she was discharged on the second postoperative day. Small bowel strangulation is more seen in transomental hernia than in other internal hernia types. So it is related to high morbidity and mortality. Surgery should not be delayed to reduce complications.

Keywords: Transomental hernia; Internal hernias; Small bowel obstruction; Omentum

Introduction

Internal hernia (IH) defines as viscera herniating through the congenital or acquired peritoneal, mesenteric or omental openings in the intra-abdominal cavity. It is a rare situation related to high morbidity and mortality, which accounts for 0.5–3% of all cases of intestinal obstruction (1).

IH is classified into the following types; paraduodenal hernias, 53%; pericecal hernias, 13%; foramen of Winslow hernias, 8%; transmesenteric hernias, 8%; hernias into pelvic structures, 7%; transmesosigmoid hernias, 6%, and other types 5%. Transomental hernia is a rare

subtype, hardly preoperatively diagnosed, which is approximately only 2% of internal hernias (1-3).

We report a rare case of a spontaneous transomental hernia of the small bowel causing intestinal obstruction.

Case Report

In 2018, a 41-year-old female patient presented to the emergency department with abdominal pain, nausea, and vomiting at Marmara University



Hospital, Istanbul, Turkey. Her pain had started three days ago, and abdominal distension was added. She had experienced similar abdominal pain two months ago, but it resolved spontaneously. Her medical history included asthma, and she had no abdominal surgery. The patient's vital signs were normal and physical examination presented with mildly abdominal distension. White blood cell count was $13.2 \times 10^3/\mu\text{L}$, and other laboratory parameters were in the normal range.

Oral and intravenous contrast-enhanced abdominal computed tomography (IV-CT) showed dilated and collapsed small bowel segments, fluid-filled bowel loops, multiple air-fluid levels, and free fluid interposed between bowel loops, pelvis, and around solid organs. In the primary diagnosis, small bowel obstruction

probably caused by the distal ileal bowel segment was considered (Fig. 1).

We performed an explorative laparotomy. A loop of the ileum was herniated through into an unusual defect of the omentum. The hernia defect was approximately 6 cm in diameter orifice and located close to the distal free edge of the greater omentum (Fig. 1). The small bowel part just proximal to the incarcerated segment was completely dilated. The obstructed loop of the small intestine into the hernia site was reduced, and it was seen as viable, so no resection was necessitated. We divided the greater omentum into two parts from the edge of the defect area to prevent recurrences. Her postoperative period was uneventful, and she was discharged on the second postoperative day.

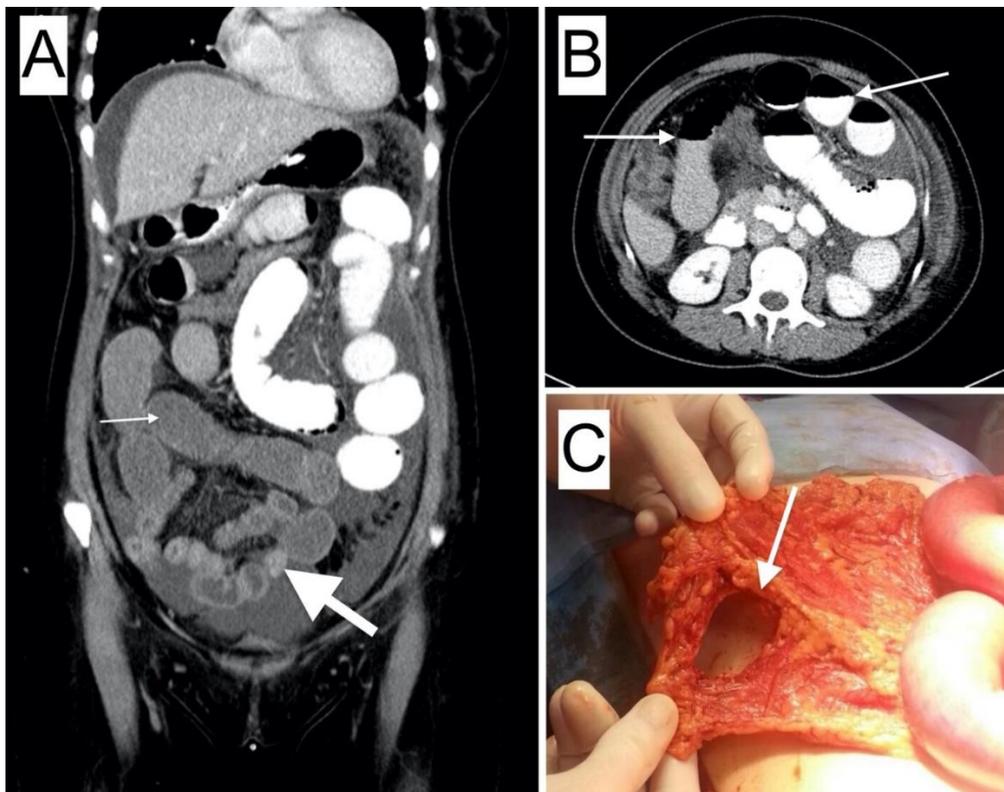


Fig. 1: A Coronal image of the abdomen CT scan showing dilated (thin arrow) and collapsed (thick arrow) small bowel segments, oral contrast material filled bowel loops
B Axial image of CT scan showing multiple air-fluid levels (white arrows)
C Intraoperative view of the greater omentum defect (white arrow)

This case report was conducted with full respect to ethical issues with the consent and permission of the patient.

Discussion

Transomental hernia is without a hernia sac, commonly small bowel herniation through an omental defect, and accounts for 1-4% of internal hernias (1, 3, 4). The omentum defect occurs congenital or acquired for surgical operation, trauma, and abdominal inflammations (4, 5).

Spontaneous transomental hernia, like our case, defects occur by senile atrophy of the omentum without these predisposing factors. It is most commonly seen after the fifth decade. The clinical symptoms and signs of transomental hernia are seen in a wide range: intermittent abdominal pain, acute abdomen, and intestinal obstruction with nausea or vomiting (6). If bowel obstruction causes ischemia, it will result in septic signs, so early diagnosis is more important for these patients. We assumed that our patient had an episode of an omental hernia two months ago which resolved spontaneously but finally needed surgery. Omental hernia can be kept in mind in the differential diagnosis of recurrent abdominal pain and partial obstruction symptoms.

Diagnosis of transomental hernia is difficult before surgery in most patients (4). Small bowel strangulation is more seen in transomental hernia than in other internal hernia types. So it is related to high morbidity and mortality (30%) (3). The most common radiological modality used preoperatively is computed tomography. CT shows one or more of these signs; dilated air-fluid-filled small bowel segments, the transition zone between the proximal and distal segment of the herniated bowel, "beak-like" appearance of the hernial ring, signs of bowel infarction, swirling pattern of the mesenteric vessels (5). However, in most cases, it is difficult to make a definitive preoperative diagnosis with CT, as in our patient.

Transomental hernia treatment is the reduction of the herniated bowel segment with surgery. Surgery performed by laparotomy or laparoscopy can be used in selected patients (7). Resection and anastomosis of the bowel are necessary for an unviable segment. The omental defect is closed by suture or divided, and sometimes partial omentectomy is performed to prevent relapse (6). In our case, we preferred to divide the omentum because the orifice was close to the free edge.

Conclusion

We should keep in mind internal hernia in patients with signs of bowel obstruction without findings leading to the diagnosis, such as an abnormal examination of hernia sites, previous abdominal surgery, trauma, or intra-abdominal inflammation. Surgery should not be delayed to reduce complications.

Journalism Ethics considerations

The authors have completely observed ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.).

Conflict of interest

The authors declare that there is no conflict of interest.

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