

CASE REPORT

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Spontaneous transomental hernia: An interesting intraoperative cause of intestinal obstruction

Onyeyirichi Otuu, Uche Emmanuel Eni, Obinna Okah Nweke, Chidi Kingsley Enweremadu

ABSTRACT

Introduction: Transomental hernia (TOH) is the rarest form of internal hernias (IHs) accounting for approximately 4%. They can occur spontaneously through the greater or lesser omentum as a result of senile atrophy, trauma, or inflammation.

Case Report: A 56-year-old male patient presented to the emergency department with sudden onset of colicky abdominal pain, vomiting, and constipation of 12 hours duration. There was associated epigastric/periumbilical tenderness with hyperactive bowel sounds. A plain film of the abdomen demonstrated dilated small bowel loops with an air-fluid level in the epigastrium and on the right upper quadrant of the abdomen. A diagnosis of acute intestinal obstruction from small bowel volvulus was made and the patient underwent emergency exploratory laparotomy. Operative exploration showed a TOH through a defect on the inferior edge of the right side of the greater omentum measuring 5 cm in diameter and strangling a 30 cm loop of ileum. The small bowel

looked ischemic and congested but returned back to normal coloration after reduction. The hernia defect was closed with interrupted absorbable sutures after excision of the fibrotic distal edge. The patient had an uneventful postoperative recovery.

Conclusion: Surgeons should maintain a high index of clinical suspicion to reduce the risk of complications from IHs such as a TOH.

Keywords: Internal hernia, Intestinal obstruction, Transomental hernia

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Onyeyirichi Otuu¹, Uche Emmanuel Eni², Obinna Okah Nweke³, Chidi Kingsley Enweremadu⁴

Affiliations: ¹Fellow West African College of Surgeons, FWACS (Consultant General Surgeon), Department of Surgery, Alex-Ekwueme Federal University Teaching Hospital Abakaliki, Ebonyi State, Nigeria; ²Fellow West African College of Surgeons FWACS, FCIS, MPH, Consultant General Surgeon, Department of Surgery, Alex-Ekwueme Federal University Teaching Hospital Abakaliki, Ebonyi State, Nigeria; ³Member West African College of Surgeons, MWACS, Senior Registrar, Department of Surgery, Alex-Ekwueme Federal University Teaching Hospital Abakaliki, Ebonyi State, Nigeria; ⁴Junior Registrar, Department of Surgery, Alex-Ekwueme Federal University Teaching Hospital Abakaliki, Ebonyi State, Nigeria.

Corresponding Author: Dr. Onyeyirichi Otuu, General Surgery Unit, Department of Surgery, Alex-Ekwueme Federal Teaching Hospital Abakaliki, Ebonyi State, Nigeria; Email: onyeyirichiotuu@yahoo.com

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INTRODUCTION

Internal hernias (IHs) are relatively uncommon clinical conditions with an overall incidence of 0.5–0.9% and are defined as the protrusion of the viscera through a normal or an abnormal aperture within the peritoneal cavity. Internal hernia accounts for only up to 5.8% of small bowel obstructions and transomental hernia (TOH) being the rarest type represents 1–4% of the IH [1, 2].

We report a rare case of a spontaneous TOH of the small intestine causing intestinal obstruction in a male patient.

CASE REPORT

A 56-year-old man was admitted into the accident and emergency room with a 12 hour history of sudden onset

of abdominal pain which started while he was jogging in the morning. Pain was periumbilical, severe and colicky. There was associated vomiting of recently ingested food but no abdominal distension. There was also inability to pass flatus and feces since onset of symptoms. There was no prior history of trauma to the abdomen or previous abdominal surgery. For the past five years, the patient had having recurrent epigastric discomfort. He was a known hypertensive for the past 20 years. On assessment, the patient was in intermittent painful distress with tachypnea. His blood pressure (BP) was 150/100 mmHg, pulse rate of 98 beats per minute but otherwise his other vital signs were stable. The abdomen was full with an area of tenderness on the epigastric and umbilical regions. There was no palpable mass and the bowel sounds were hyperactive. On digital rectal examination, there was well-formed stool in the rectum and examining finger was smeared with brownish stool.

His hematological parameters were within normal range. He had hypokalemia of 3.1 mmol/L. Abdominal ultrasound revealed marked probe tenderness at the umbilical region and visualized bowel loops were distended with fluid with significantly reduced peristalsis. A plain film of the abdomen demonstrated dilated small bowel loops with an air-fluid level in the epigastrium and on the right upper quadrant of the abdomen. There was also paucity of luminal gas noted in the pelvic cavity (Figure 1).



Figure 1: Plain abdominal X-ray showing multiple air-fluid level at the epigastrium and right hypochondrium. The arrows are pointing at the air-fluid levels.

A diagnosis of acute intestinal obstruction from small bowel volvulus was made. The patient was resuscitated and the electrolyte abnormality corrected. He was booked for emergency surgery.

The patient was operated through a midline laparotomy. Operative exploration showed a TOH through a defect on the inferior edge of the right side of the greater omentum measuring 5 cm in diameter and strangling a 30 cm loop of ileum (Figures 2–4). The small bowel looked ischemic and congested but returned back to normal coloration after reduction. The hernia defect was closed with interrupted absorbable sutures after excision of the fibrotic distal edge. The postoperative period was uneventful, and patient was discharged on day 5. He has been followed up for the past one year and has remained asymptomatic.



Figure 2: Transomental hernia trapping loops of small intestine. Proximal black arrow points to the greater omentum while the distal arrow points to the fibrotic edge of the defect.

DISCUSSION

Internal hernias are rare, the most common form of IHs is the paraduodenal hernia, while the TOH is the rarest form and represents 1–4% of all IHs [3]. While TOHs occur in both children and adults, they are most often seen in patients over the age of 50 years [1, 4].

Hernia defect could be, congenital or acquired, post-traumatic especially following surgical interventions, secondary to intraperitoneal inflammatory disease or due



Figure 3: Picture demonstrating the point of herniation of the intestine through the omentum. The arrow depicts the point of herniation.

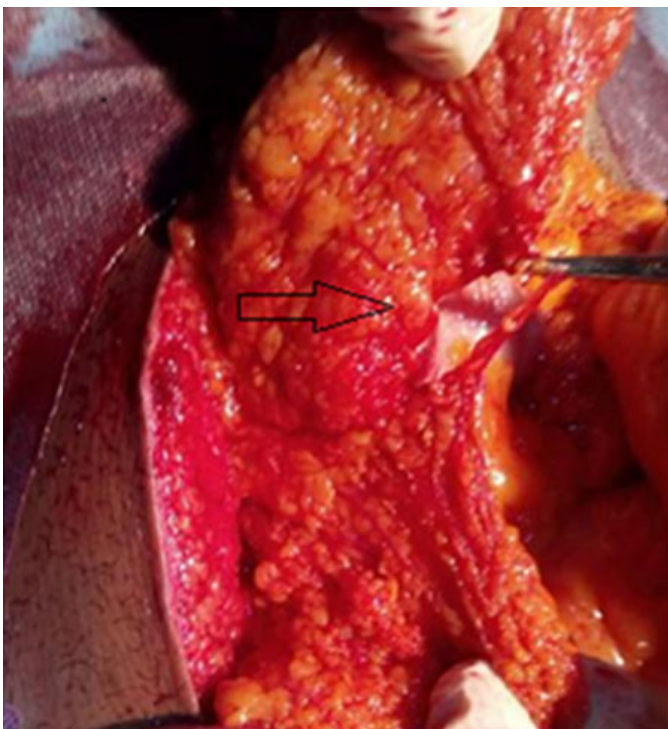


Figure 4: Picture showing the transomental hernia defect located in the periphery of the greater omentum and lacking a sac.

to the appearance of area of weaknesses related to age in the greater omentum otherwise called spontaneous TOH [1, 5, 6]. The hernia orifice is usually a slit-like opening of up to 10 cm in size located in the periphery of the greater

omentum and lacking a sac like was seen in our patient [2, 3].

Patients typically present with symptoms of acute intestinal obstruction like colicky abdominal pain, nausea, vomiting, constipation, and abdomen distension [1, 6]. There may be antecedence of recurrent paroxysmal abdominal pain, and constipation ceding quickly and spontaneously without any treatment [1, 4]. Compared with other types of IHs, patients with TOHs present more frequently with strangulation of the small bowel. In most cases, a gangrenous bowel is present at the exploratory laparotomy. For this reason, a high index of suspicion, prompt diagnosis and treatment is needed to prevent mortality [3, 7].

Preoperative diagnosis of IH is exceptional because of its rarity and the misleading imaging aspect [7, 8]. Radiography of the abdomen shows nonspecific central and small air-fluid level caused by the small bowel obstruction but otherwise contributes little to diagnosis [4–6, 8]. In a series of 49 surgically diagnosed IHs, it was reported that only 16% of preoperative computed tomography scans were considered suspicious for an IH [1]. We were unable to offer a computed tomography scan to our patient because it was not available in our facility.

Diagnosis of TOH is still intraoperative [1, 4, 6]. Treatment of TOH is surgical, approached by laparoscopy or laparotomy [1, 4, 9]. Surgical treatment is the reduction of the herniated intestinal segments. If necrosis, perforation, or irreversible ischemia of the herniated viscera is present, bowel resection is necessary. In sequence, the defect of omentum must be repaired to prevent subsequent herniation [1, 5–7].

CONCLUSION

Internal hernia should be suspected in any patient with antecedence of paroxysmal abdominal pain who is hospitalized for acute intestinal obstruction. Surgeons should maintain a high index of clinical suspicion to reduce the risk of complications and mortality in patients with a TOH.

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Author Contributions

Onyeyirichi Otuu – Conception of the work, Design of the work, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Uche Emmanuel Eni – Conception of the work, Design of the work, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Obinna Okah Nweke – Conception of the work, Design of the work, Drafting the work, Revising the work critically for important intellectual content, Final approval of the

version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Chidi Kingsley Enweremadu – Conception of the work, Design of the work, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Guarantor of Submission

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Conflict of Interest

Authors declare no conflict of interest.

Data Availability

All relevant data are within the paper and its Supporting Information files.

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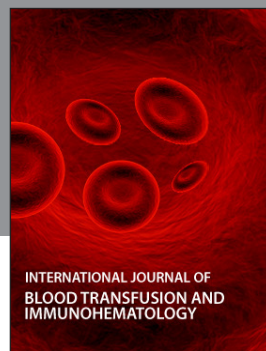
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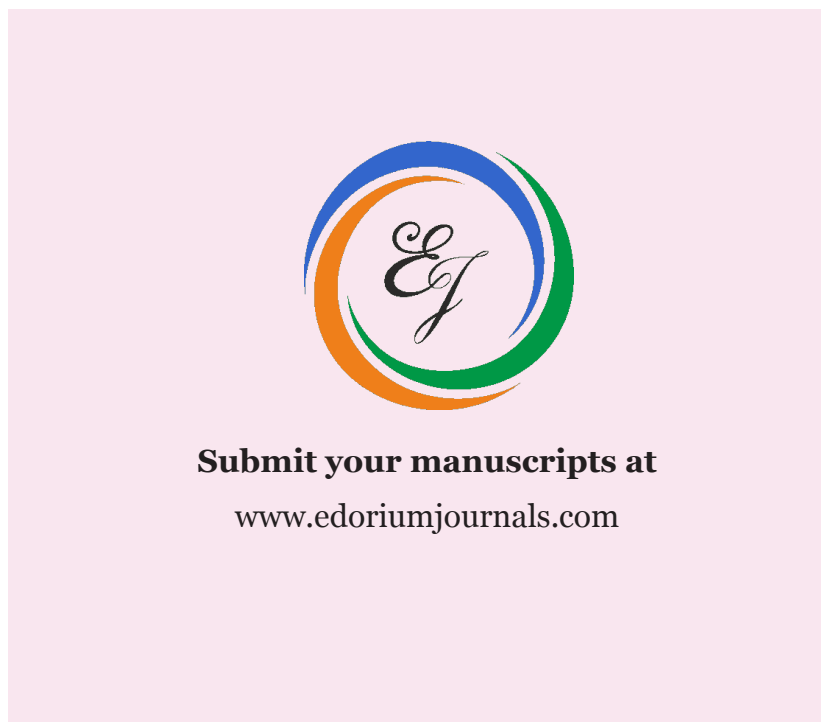
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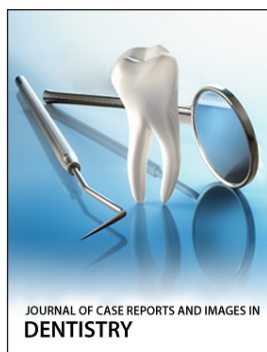
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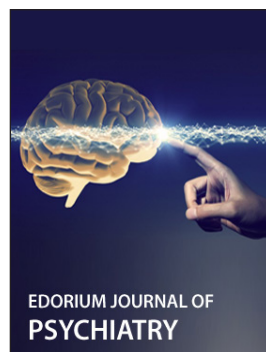
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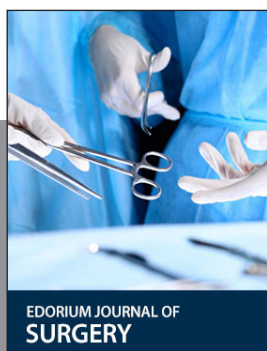
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