

Left-Sided Strangulated Obturator Hernia: A Rare Case Report and Literature Review

Abstract

Obturator hernia is a rare type of pelvic hernia and considers more common in female patients. The obturator canal is a narrow space, leading to high chances of bowel strangulation. It is rarely diagnoses, especially on the left side. The mortality rate of obturator hernia is high due to delayed diagnosis. We are presenting a case of a 70-year-old woman, admitted with the clinical features of acute intestinal obstruction. On clinical examination, she had a nontender, distended abdomen, and all hernial orifices were normal. Per rectal and vaginal examination was also normal. She diagnosed a left-sided obturator hernia with the help of a computed tomography scan abdomen. We should consider a differential diagnosis of obturator hernia, especially in old, thin-built female patients with recurrent episodes of obstructive features. Early diagnosis and timely operative intervention may reduce the chances of complications and mortality.

Keywords: *Computed tomography scan, laparotomy, obturator hernia, strangulation*

Introduction

Obturator hernia is a rare type of pelvic hernia, leading to acute clinical conditions. This hernia is not visible externally and rarely palpable, hence it is undiagnosed clinically. The incidence of obturator hernia is 0.07%–1.6% of all abdominal wall hernias. Obturator hernia leads to acute intestinal obstruction diagnosed in 0.2%–1.6% of cases.^[1,2] The mortality rate of obturator hernia is 8%–40%. More than 60% of the case diagnoses during laparotomy/laparoscopy due to nonspecific symptoms and findings.^[1,3] Early diagnosis and treatment are necessary to prevent strangulation, bowel gangrene, and poor prognosis.

Case Report

A 70-year-old female presented to the emergency department with the complaints of pain abdomen, abdominal distension, and obstipation for 2 days with no history of vomiting. The patient had similar complaints 1 year back and managed by conservative treatment. She had no previous medical or surgical history. On examination, she was thin-built, conscious, and oriented to time, place, and person. She

had a temperature of 98°F, pulse rate of 86/min, and blood pressure of 116/76 mm of Hg. On per abdominal examination, she had a nontender, distended abdomen, and all hernial orifices were normal. Per rectal and vaginal examination was also normal. Laboratory findings showed a total leucocyte count of 11,790/mm³ and other blood investigations were within the normal limits. Plain abdominal X-ray showed multiple air-fluid levels in dilated small bowel loops. Abdominal ultrasonography showed dilated bowel loops with to-and-fro peristalsis. Contrast-enhanced computed tomography (CECT) of the abdomen revealed herniation of the enhanced mid-ileal loop through the left obturator canal passing between the pectineus and obturator muscles [Figure 1a and b]. Upstream proximal ileal and jejunal loops were dilated with a maximum luminal diameter of 3.1 cm.

The patient underwent emergency laparotomy with a lower midline incision. Intraoperative findings showed mid-ileal loop herniating through the left obturator canal [Figure 2]. The herniated bowel segment was reduced in the peritoneal cavity [Figure 3]. The bowel segment was found congested initially then returned to normal color after warm saline application

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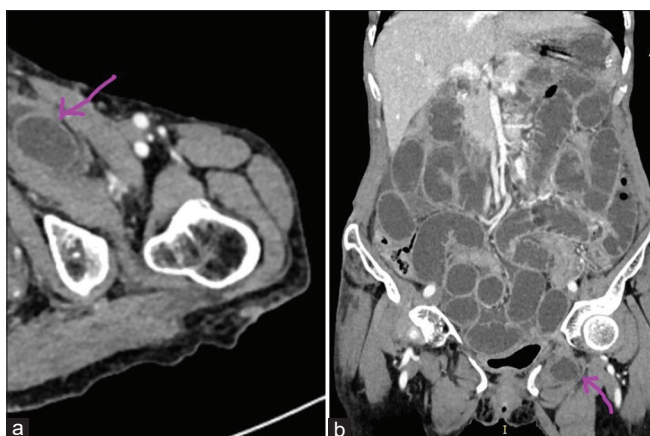


Figure 1: Computed tomography image showing a cross-sectional view of left-sided obturator hernia with bowel loop as content (a) Sagittal view of computed tomography scan showing left-sided obturator hernia with bowel loop as content (b)

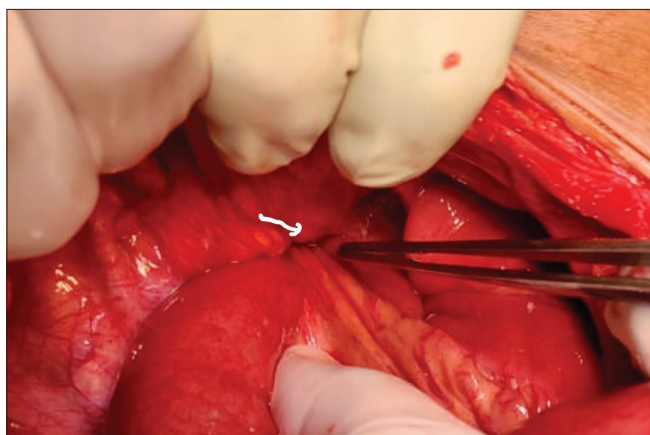


Figure 2: Loop of proximal ileum seen herniating through the left obturator canal

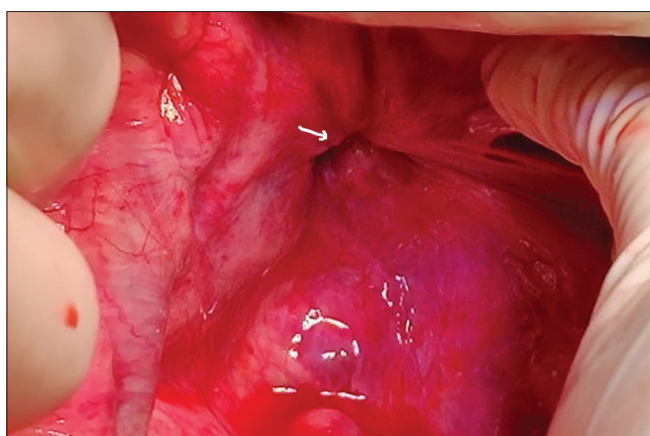


Figure 3: Hernial defect seen after the reduction of the proximal ileal loop

and observation. The other hernial sites were normal and no other pathology was found in the remaining bowel. The obturator hernia defect was closed by approximation surrounding tissues with prolene sutures. The patient discharged on the postoperative day 5 without complication

and no recurrence of symptoms during follow-up of 1-month.

Discussion

According to the literature, the obturator hernia was first time reported by Arnaud de Ronsil (1724) and successfully repaired by Henry Ombre (1851). Obturator hernia is a rare type of pelvic hernia, causing intestinal obstruction. Due to the wide pelvis, greater transverse diameter and more triangular obturator canal, this type of hernia is commonly seen in thin-built elderly females. Hence this type of hernia is also called “Little old lady’s hernia.” The obturator canal is 2–3 cm long and contains the obturator nerve and vessels. An Obturator hernia is more commonly seen on the right side as the presence of sigmoid colon on the left side.^[4,5] The diagnosis of obturator hernia by ultrasound may be difficult due to the deep location of the hernia. The CECT abdomen is more precise in making an early diagnosis of pelvic hernia as it has a higher sensitivity and specificity. The anatomy of the hernia pathway and vascularity of the herniated bowel can be easily detected in a contrast scan.^[6]

Obturator hernia usually missed due to vague clinical symptoms. Sometimes patients may have pain on the medial aspect of the thigh up to the knee due to compression of the obturator nerve by the hernia itself in 50% of the cases. This is known as Howship-Romberg sign. Hannington-Kiff sign which is the absence of an adductor reflex of the thigh is also seen.^[7] The formation of an obturator hernia occurs in three stages. Firstly, the preperitoneal fat and connective tissue enter the obturator canal. Secondly, there is the formation of a dimple over the peritoneum near the internal orifice of the canal and progresses in the formation of a sac. Thirdly, viscera enter the sac. Most commonly obturator hernia is diagnosed in the third stage.^[8] Surgical intervention is required in all cases of obturator hernia. The various surgical approaches include lower midline laparotomy, retroperitoneal approach, obturator or crural approach, inguinal approach, laparoscopy, or combined. The lower midline approach is the most commonly used approach as the diagnosis is usually not available at the time of surgery, and it helps in exploring bilaterally.^[8,9]

Other abdominal hernias such as inguinal hernia, umbilical, paraumbilical hernia, postoperative adhesions, and intestinal tuberculosis may have the same clinical features of recurrent bowel obstruction. The patient had no family history of tuberculosis or lymphadenopathy and any kind of previous abdominal surgery.^[10]

In this case, the patient had a history of recurrent episodes of intestinal obstruction. On admission, she had constant symptoms of pain abdomen, obstipation, and abdomen distension which were not relieved for the past 3 days. There was no sign of abdominal hernia detected clinically; however, history favors some recurrent type of obstructed hernia. The ultrasound findings suggested dilated bowels

with unknown etiology. We made an early diagnosis with the help of a CT abdomen; hence early intervention was done and could prevent bowel resection.

Conclusion

Obturator hernia is a rare type of pelvic hernia, especially the left-sided and it may cause acute intestinal obstruction. The obturator hernia should be considered a differential diagnosis in the elderly, thin-built women presenting with a history of recurrent features of intestinal obstruction. Early radiological investigations in the form of a CT scan of the abdomen may help in the early diagnosis and prevent postoperative morbidity and mortality.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understand that name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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