

Case Report

Left incarcerated or strangulated obturator hernia: a case report

Athira Mohanan*

Department of Surgery, KVM Superspecialty Hospital, Cherthala, Kerala, India

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***Correspondence:**

Dr. Athira Mohanan,

E-mail: mohanathira79@gmail.com

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ABSTRACT

Obturator hernia is an extremely rare type of hernia with relatively high mortality and morbidity. Its early diagnosis is challenging since the signs and symptoms are non-specific. Obturator hernia is a rare but significant cause of intestinal obstruction especially in emaciated elderly women. Here a case of 93-year frail lady with incarcerated left sided obturator hernia with small bowel as content is presented, for which she underwent resection and ileoileal anastomosis and simple closure of the hernia defect.

Keywords: Left obturator hernia, Strangulated small bowel, Resection anastomosis, Elderly woman

INTRODUCTION

Obturator hernia is a rare type of pelvic hernia with an incidence of 0.07%-1% of all intra-abdominal hernias and cause of 0.2% to 1.6% of all small bowel obstruction. They occur more commonly in thin elderly females between ages of 70-90.¹⁻³ Obturator hernia often presents as acute intestinal obstruction with strangulation and incarceration. Most commonly they are found on right side since left sided obturator foramen is covered by sigmoid colon.^{3,4} Here I present the case of a 93-year-old frail lady who presented with strangulated small bowel segment as content in obturator foramen on left side.

CASE REPORT

A 93-year-old female, poorly nourished with no previous history of surgeries presented with complaints of nausea, vomiting, loss of appetite for one week and obstipation for 3 days. On examination she had mild abdominal distension, with no tenderness and her hernial orifices were normal (Figure 1).

Abdominal X-ray erect film showed dilated small bowel loop. Contrast CT abdomen taken and it revealed a left sided obturator hernia with small bowel loop as content causing proximal small bowel obstruction (Figure 2).

She underwent exploratory laparotomy, using lower midline incision. Intraoperatively, an ileal segment approximately 10 cm from ileo-caecal junction was found herniating into the left obturator foramen, causing proximal dilatation of ileum and jejunum. The herniated segment was found to be strangulated and incarcerated. She underwent resection of the gangrenous segment followed by end-to-end ileo-ileal anastomosis. The left sided obturator defect closed using a 2-0 prolene suture, and drain placed in abdominal cavity (Figures 3-5).



Figure 1: Pre-operative image of the patients abdomen with mild distension and a loop of dilated bowel loop.



Figure 2: Contrast enhanced CT image of left sided obturator hernia with bowel as content.

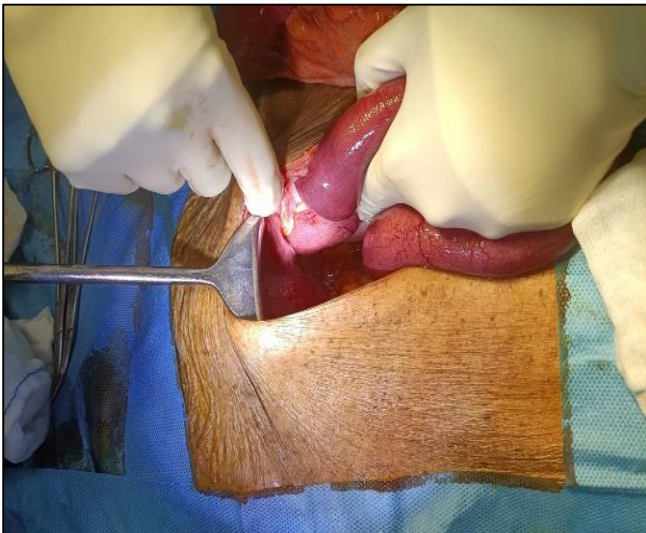


Figure 3: The incarcerated small bowel segment entrapped in the obturator foramen.



Figure 4: The hernial defect once the bowel was reduced.

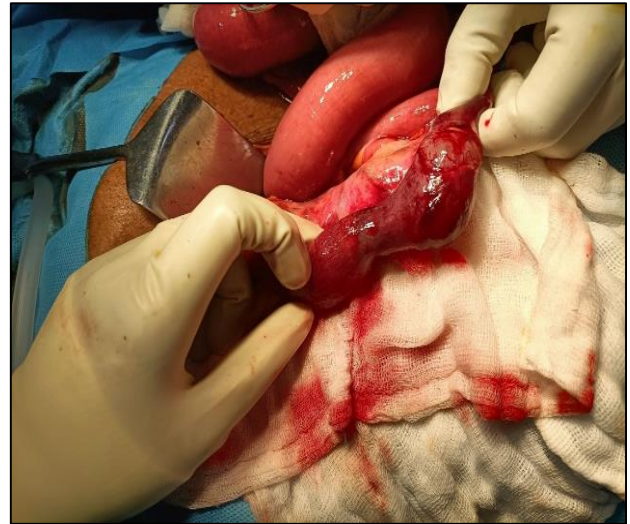


Figure 5: Gangrenous small bowel segment.

Post operative period was uneventful. The patient was started on orals once bowel sounds were appreciated. She passed stool and drain was removed and discharged on post operative day 7.

DISCUSSION

Arnaud de Ronsil was the first to describe obturator hernia in 1724 and Obre performed the first successful operation in 1851.⁵ Obturator hernia is a very rare pelvic hernia.

It occurs through the obturator canal, which is approximately 2-3 cm long and 1 cm wide.⁶ Obturator foramen is formed by pubis and ischium and covered by obturator membrane anterosuperiorly. The foramen is closed by a strong quadrilamellar musculoaponeurotic barrier consisting of an internal and external obturator membrane and internal and external obturator muscle. The membranes are joined below and separated above and are encased by the muscles on both sides. The obturator canal is situated in the large cranial part of the foramen. The obturator nerve and blood vessels pass through this canal and are covered peripherally by fatty tissue. Usually, this fatty tissue helps fill the space in obturator canal, thus decreasing the risk of herniation of small bowel. With severe cachexia there is loss of this fatty tissue which can increase the risk of obturator hernia development.⁷⁻⁹

Obturator hernias are much more common in elderly female and post-pregnancy patients owing to the greater width of the pelvis, larger obturator canal, and increased laxity of the pelvic tissues. The hernia has a female predilection because they have a broader pelvis with a larger triangular canal opening with a greater transverse diameter. The condition has been nicknamed the 'little old ladies' hernia' as it affects this group due to atrophy and loss of the pre-peritoneal fat around the obturator vessels in the canal predisposing hernia formation. The

other risk factors include chronic obstructive pulmonary disease, chronic constipation and ascites.¹⁰

The symptoms are vague and are usually in the form of nausea and vomiting or other signs of bowel obstruction such as abdominal pain and a lack of bowel movement such as in this case though there was no past history of recurrent intestinal obstruction attacks. The literature has shown that up to 80% of patients with obturator hernias usually have symptoms of bowel obstruction, which is often partial due to a high proportion exhibiting Richter's herniation of the bowel into the obturator canal. This tends to give rise to a clinical picture of intermittent bowel obstruction symptoms, which is an important factor to identify in the clinical history if accurate diagnosis is to be made.¹¹ Three signs: Obturator neuralgia, Howship-Romberg sign, Hannington-Kiff sign (absent adductor reflex in the thigh in the presence of positive patellar reflex due to compression of obturator nerve) are the signs of obturator hernia. Obturator hernia sacs often compress or irritate the obturator nerve running in the canal, giving rise to medial thigh pain, known as the Howship-Romberg Sign and has been shown to be present in 15-50% of obturator hernia cases.⁴ Patients with advanced gangrene and delayed presentation can present with thigh sepsis.¹²

The early diagnosis is challenging when the symptoms and signs are nonspecific. Various imaging modalities have been applied to establish the diagnosis, including ultrasonography, CT scan. Among them, CT scan has superior sensitivity and accuracy. CT of the pelvis and upper thigh is the most useful imaging tool when an obturator hernia is suspected clinically. CT imaging of bowel herniating through the obturator foramen and lying between the pectineus and obturator muscles is shown to be the best diagnostic clue.¹³ This is demonstrated clearly by low axial CT image in Figure 2.

The only treatment for obturator hernia is surgery. There are a variety of operative approaches including inguinal, retropubic and transperitoneal, laparoscopic approach.^{14,15} In the emergency setting, the abdominal approach via a low midline incision is most commonly favored, as it allows adequate exposure of the obturator ring as well as the identification and resection of any ischemic bowel. Laparotomy via low midline incision was done in this case. Simple closure of the hernial defect with interrupted sutures or placement of a synthetic mesh are the preferred methods of herniorrhaphy as they are associated with the lowest complication rates. Many surgeons preferred a simple closure of the hernial defect with one or more interrupted sutures, in case of bowel resection.^{16,17} Laparoscopic surgery for obturator hernia is another alternative approach. The advantages of laparoscopic surgery include less postoperative pain, shorter hospital stay and lower complications. However, it is usually reserved for the non-strangulated hernia because of more challenging techniques and longer learning curve. Both transabdominal and extraperitoneal

approaches have been described. Transabdominal approach is appropriate for the emergency setting, as it allows exploration of the abdominal cavity, diagnosis of the cause of the bowel obstruction, reduction of the hernia, thorough inspection and identification of ischemic bowel, and resection of bowel if required. The laparoscopic total extraperitoneal (TEP) approach is more feasible if the diagnosis is established before surgery in symptomatic patients.¹⁸ More often than not, obturator hernia is detected during TEP repair for inguinal hernias. This reflects the importance of inspecting all the myopectineal orifices during the TEP approach to allow for the diagnosis and repair of asymptomatic obturator hernias.¹⁵ In this case simple suture of the hernial product was done and outcome was satisfactory.

CONCLUSION

Obturator hernias carry significant morbidity and mortality rates, therefore rapid clinical and radiological assessment followed by early surgery is critical to successful treatment. Lack of specific diagnostic findings in a patient with features of intestinal obstruction especially in an old frail woman should raise suspicion of obturator hernia and contrast CT scan should be advised at the earliest to confirm the same, it should be followed by prompt surgery. Conventionally open approaches are used, the abdominal approach via lower midline incision. Recently laparoscopic techniques both trans abdominal and extraperitoneal are increasingly used. The use of prosthetic mesh in a contaminated field is not advocated.

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