

Strangulated Obturator Hernia – An Unusual Presentation of Intestinal Obstruction

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ABSTRACT

An 81-year-old Caucasian emaciated female presented with 3 days history of colicky abdominal pain nausea, projectile vomiting and abdominal distension. A pre-operative diagnosis of mechanical bowel obstruction was made. The absence of characteristic clinical signs in this thin elderly woman with a small bowel obstruction failed to provide a pre-operative diagnosis. She underwent a midline laparotomy and resection and anastomosis of small bowel and repair of the strangulated right obturator hernia. The high mortality rate associated with this type of abdominal hernias requires a high index of suspicion to facilitate rapid diagnosis and prompt surgical intervention if the survival rate is to be improved.

Key words: *Obturator hernia. Laparotomy. Intestinal obstruction. Strangulation.*

INTRODUCTION

Obturator hernia is rare and its diagnosis is frequently missed. It is a rare cause of intestinal obstruction. Patients present with few clinical signs to identify the cause, apart from symptoms of intestinal obstruction. Therefore, obturator hernias are often diagnosed at laparotomy with a high mortality rate.¹ The use of Computed-Tomography (CT) has increased the chance of a pre-operative diagnosis. However, despite these advances, patients who present acutely undergo an open procedure rather than laparoscopy.

The real incidence of obturator hernias is unknown. They are thought to constitute fewer than 1% of all hernias worldwide.^{2,3} Bjork and colleagues reported the incidence at about 0.073% of all hernias repaired at the Mayo Clinic.¹ Obturator hernia was initially described by Arnaud de Ronsil in 1724 and was first successfully repaired in 1851 by Henry Obre. Females are affected 6 times more frequently than males.¹ A thin body habitus is a strong risk factor.

CASE REPORT

An 81-year-old woman was admitted from the casualty section with 3 days history of diffuse abdominal pain, followed by nausea, projectile vomiting and abdominal distension. Medical history was marked by pernicious anaemia, emphysema and recurrent chest infection but there had been no previous abdominal surgery. Physical examination revealed a cachectic, elderly woman with

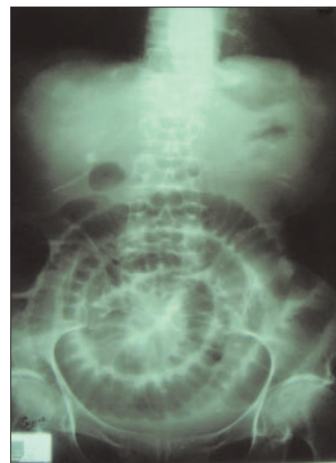


Figure 1: Plain film abdomen: showing dilated loops of small intestine, indicating mechanical small bowel obstruction.

BMI of 17.2. She was dehydrated and tachycardia. The abdomen was distended, tender all over and silent. Hernial orifices were intact. No palpable masses or organomegaly was noted. The digital rectal examination was normal and rectum was empty. Laboratory values showed Hb 16.0 gm, Hct 0.51, urea 13.3, creatinine was normal. Abdominal radiographs showed dilated small bowel loops consistent with small bowel obstruction (Figure 1).

The patient underwent emergency exploratory laparotomy 2 hours after hospital admission. A strangulated hernia was seen in the right obturator foramen containing terminal ileum which was ischemic. Ischemic bowel was resected and primary side to side anastomosis performed followed by primary repair of the defect with simple sutures using No. 0 polypropylene, to avoid the entrapment of the obturator vessels and nerve. She was discharged after 27 days with an eventful recovery.

DISCUSSION

The purpose of this case report is to emphasize the difficulty in making a pre-operative diagnosis of obturator hernia unless there is a high index of suspicion for this rare condition. Obturator hernia has a right to left ratio of 3:1. Bilateral obturator hernias though rare have been reported. There is a female pre-ponderance because of their wider pelvis and parity which causes the pelvic peritoneum to go lax. Other predisposing

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factors include emaciation, chronic constipation, Chronic Obstructive Airway Disease (COAD) and ascites.¹

Signs and symptoms of small bowel obstruction are present in more than 75% of the symptomatic patients.⁴ Compression of the obturator nerve by the hernia causes pain along the medial aspect of the thigh which is increased by abduction, extension and medial rotation and is relieved by flexion of the hip. This is called the Howship-Romberg sign.^{1,4} The loss of adductor reflex due to compression of the obturator nerve is called Hannington-Kiff sign. Rarely a mass may be found in the inguinal area or on digital rectal examination. Correct pre-operative diagnosis is rare and is reported to be 20%. The use of CT scanning and/or barium/gastrogaffin studies and ultrasound scan may be helpful for establishing the diagnosis and planning surgical intervention. The presence of an intestinal obstruction mandates urgent laparotomy which should not be delayed for diagnostic testing as done in this case. Delay in diagnosis and/or operative management contributes substantially to morbidity and mortality. Patients without a gangrenous small intestine at surgery have a better outcome since only reduction is required.⁵

Lower midline incision is usually used for laparotomy in patients with intestinal obstruction,⁶ though a laparoscopic pre-peritoneal or intraperitoneal approach may be used if pre-operative diagnosis has been made.^{7,8} Obturator hernia is usually a Richter's type hernia containing ileum but jejunum, colon, appendix, ovaries, fallopian tubes, and omentum have also been reported.⁴ Incarcerated small bowel loop should be reduced with gentle traction, if failed, attempt should be made to stretch and correct the defect.⁶ If that is not possible, the obturator membrane can be safely incised in its lower margin which avoids the neurovascular bundle.³ It is critical to identify these three structures (obturator artery, vein, and nerve) that go through the foramen and avoid them in the repair.

The hernia can be successfully repaired with a range of methods from single suture closure or use of synthetic mesh employed in a plug and patch fashion to more elaborate techniques that use the urinary bladder, uterine fundus, and round ligament or pectineus

muscle.^{4,9} Closure of the defect with simple interrupted sutures using a non-absorbable suture results in a recurrence of less than 10% and is the wiser option in these sick patients. Occasionally, when it is not possible to close the defect with simple sutures, a mesh may be used. Contralateral obturator defects are rare and seldom repaired if found; due to the additional time required for repair.¹⁰

For patients with an obturator hernia, the clinical course is usually favourable. The reported mortality rate is between 8% and 13%, which is the highest for all abdominal hernias.³ Most of the mortalities occur secondary to peritonitis, cardiovascular events and pulmonary embolism and are linked to co-morbidities and underlying pre-operative status than to the procedure itself.

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