

Abstruse Diagnosis of Obturator Hernia – A Case Series

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ABSTRACT

The diagnosis of obturator hernia is one of suspicion as it is almost never seen and rarely palpated. The incidence is less than 1% of all hernias worldwide. Five cases of obturator hernias are reported where the diagnosis of obturator hernia were overlooked.

Keywords: obstruction, obturator hernia, small intestine

INTRODUCTION

The incidence of obturator hernia is unknown, these hernias are thought to constitute less than 1% of all hernias worldwide.^{1,2} Incidence has been reported to be about 0.073% of all hernias repaired at the Mayo Clinic.³

The most common clinical indicator is pain with or without paresthesias felt down the anteromedial thigh to the knee upon movement of the hip or thigh, the Howship-Romberg sign. Other symptoms include recurrent attacks of obstruction that resolve spontaneously, weight loss or emaciation, and, although rarely, a palpable mass.⁴ The current approach for treatment includes; closing the defect is essential, although the rate of recurrence without closure is unknown.⁵ In presence of bowel resection for ischemia, hernia is repaired immediately after primary anastomosis of the bowel.⁶ Laparoscopic approach is suggested as treatment when a nonstrangulated obturator hernia is diagnosed preoperatively.⁷

CASE REPORTS

CASE 1

A frail, debilitated, 73-year-old woman presented to the emergency department with complaints of colicky abdominal pain, associated with distension, vomiting, and absolute constipation for 2 days. She had several episodes of distension and constipation for past 5 months which resolved spontaneously. Her medical history was unremarkable and did not include any previous abdominal surgery. There was diffuse abdominal distension, with visible peristalsis. No mass was palpable in bilateral inguinal region and rectum was empty with no abnormalities on digital rectal examination. Hyperactive bowel sounds were audible on auscultation. Initial abdominal radiographs demonstrated dilated loops of small bowel, consistent with obstruction. She was admitted and exploratory laparotomy performed. A right sided Richter's hernia in obturator canal was discovered. Reduction of the involved segment was done. The segment appeared viable with visible peristalsis and was salvaged. Simple closure of the obturator orifice was performed with

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interrupted polypropylene sutures. Post-operatively the patient made an uneventful recovery and she was discharged on the fifth day. She came for the regular follow-up with no new complaints.

CASE 2

A 73-year-old ill looking, emaciated woman was brought to the emergency department with pain abdomen, distension and vomiting for 5 days. She had constipation on and off for last one year, which resolved spontaneously. She had a history of hysterectomy twelve years back. The abdominal findings were similar. A working diagnosis of band obstruction or adhesions was made. After resuscitation and correction of fluid and electrolyte imbalance, exploratory laparotomy was performed. On exploratory laparotomy, a right sided obturator hernia with about 5 centimeters of strangulated small bowel loop was discovered. Reduction of the involved segment and resection with primary anastomosis (end-to-end) were undertaken, followed by repair of the defect using a polypropylene mesh in the obturator canal and extraperitoneal closure of the neck, avoiding the entrapment of the obturator vessels and the obturator nerve. Postoperative period and regular follow-ups were uneventful.

CASE 3

A 64-year-old woman presented with pain abdomen and distension for 4 days. She was also chronically constipated, but passing flatus. Provisional diagnosis of subacute bowel obstruction was made. Since there was no clinical improvement in three days of conservative management and progressive distension of abdomen, exploratory laparotomy was performed. A left sided strangulated Richter's hernia in the obturator canal was found. Resection and anastomosis of the involved segment and closure of the obturator canal with polypropylene interrupted suture was performed. She made an uneventful recovery.

CASE 4

A 59-year-old woman presented with pain abdomen, distension and vomiting for 7 days. Abdominal findings were suggestive of acute intestinal obstruction, which prompted for exploratory laparotomy. A left sided obturator hernia with about 8 centimeters of strangulated small bowel loop was discovered (Figure 1). Resection of the strangulated segment with end to end anastomosis of the bowel, followed by repair of the defect with polypropylene mesh and extraperitoneal closure of the neck was done. She also made an uneventful recovery.



Figure 1. Small bowel entrapped in the Left Obturator Canal

CASE 5



Figure 2. Small bowel and omentum entrapped in the Right Obturator Canal

A 94 year-old woman was referred from a hospital outside the Kathmandu valley, where she was being managed conservatively with a diagnosis of subacute bowel obstruction. On presentation, along with abdominal findings suggestive of acute bowel obstruction, she was in shock. After resuscitation, with a suspicion of obstructed obturator hernia, exploratory laparotomy was performed. A right sided obturator hernia with about 10 centimeters of bowel loop and part of omentum in the obturator canal (Figure 2) was discovered. Reduction of the viable bowel loop, along with repair of the defect with polypropylene mesh was done. The patient made an uneventful recovery.

DISCUSSION

As in our cases, pre-operative diagnosis of an obturator hernia is exceptionally difficult and is usually one of suspicion. It is more common in debilitated women, occurring after loss of the protective fat in the obturator canal.³ Women are affected nine times more often than men because of their broader pelvis and larger obturator canal.⁸ It is associated with multiparity and increased abdominal pressure.^{9,10} All our patients were debilitated multipara. Obturator hernia is more common on the right side and 20 % may be bilateral.²

Many obturator hernias present as mechanical small bowel obstruction which fails to resolve, leading to exploratory laparotomy and subsequent discovery of the hernia.² Although Romberg-Howship sign, obturator neuralgia, and different clinical signs have been described, probability of obturator hernia is usually overlooked and misdiagnosed. Cases have been reported where obturator hernia presented as thigh abscesses and were incised and drained.¹¹⁻¹³ In our cases, neither the Romberg-Howship sign nor obvious palpable mass were noted and the clinical presentations consisted solely of intestinal obstruction. This could be due to incomplete history taking, physical examination, or less emphasis given to history of leg pain due to high prevalence of arthritis in patients of this age group.

CT scanning or other radiologic studies may be helpful for establishing the diagnosis and planning surgical intervention.^{14,15} Barium enema, fluoroscopy, ultrasonography, herniography have also been recommended for preoperative diagnosis. CT scans may demonstrate a low-density mass that lies between the obturator externus and pectineus muscles, contributing to a successful diagnosis in most cases.¹⁶ None of our patients had preoperative CT scan, mainly because obturator hernia was not suspected preoperatively. CT scan is not done routinely in cases of intestinal obstruction because of high cost.

Obturator hernia invariably requires surgical intervention because intestinal occlusion and strangulation often occur. It is recommended that the defect be identified and closed, but which type of repair to use is solely the surgeons' preference.⁵ The hernia can be successfully repaired with a range of methods from single suture closure or 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.¹⁷⁻¹⁹ In our cases, we plugged the canal with a polypropylene mesh and closed the neck of the sac in three and simple interruption of the canal was done in the other two.

During the operation, it is critical to identify the three structures (artery, vein, and nerve) that go through the foramen and avoid them in the repair.⁵ If a loop of small bowel is encountered incarcerated in the hernia, it is advised to employ gentle traction on the bowel segment and attempt to stretch the defect.²⁰ If that is not possible, the obturator membrane can be safely incised in its lower margin, because in more than 50% of cases, the sac lies just superior to this border and below the vessels and nerve.¹

The jejunum and ileum should be inspected thoroughly to assess the need for resection and anastomosis, which is required in fewer than half of obturator hernia patients.^{1,21} In our patients, the decision for resection and anastomosis were prompted by discovery of an area of ischemia in the incarcerated segment of the ileum.

Although many patients require small bowel resection, the clinical course for patients with an obturator hernia is usually favorable. The reported mortality rate for the procedure is between 8% and 13%.^{1,20} Most of the mortalities occur secondary to cardiovascular events, peritonitis, and pulmonary embolism and are linked more to associated comorbidities and underlying preoperative status than to the procedure itself.¹ Delay in diagnosis and surgical intervention also directly contribute to high morbidity and mortality rates.²² None of our patients had postoperative morbidity and mortality.

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