Obturator Hernia: Laparoscopic Diagnosis and Repair

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ABSTRACT

Objective: Review of international literature reveals eight reported cases of laparoscopic obturator hernia repair. Non-specific signs and symptoms make the diagnosis of an obturator hernia difficult. Laparoscopic intervention provides a minimally invasive method to simultaneously diagnose and repair these hernias.

Methods and Procedures: A 35 year old woman presented with lower abdominal pain, vaginal bleeding, and dyspareunia. During gynecological diagnostic laparoscopy, a pelvic floor hernia was suspected, and a general surgical evaluation was sought. At a subsequent laparoscopy, the diagnosis of a left direct inguinal and a right obturator hernia was made. Both were repaired laparoscopically with polypropylene mesh.

Results: At follow-up at one and six weeks postoperatively, the patient’s complaints of pain had completely resolved.

Conclusion: The diagnosis of obturator hernia is problematic. The usual presenting signs and symptoms are non-specific. Without conclusive historical or physical findings, laparoscopy is an excellent method for diagnosing obturator hernia. This entity, once diagnosed laparoscopically, can be repaired simultaneously via laparoscopic mesh technique.

Key Words: Laparoscopy, Obturator hernia.

INTRODUCTION

Obturator hernia is an anterior pelvic floor hernia which occurs through the obturator canal, adjacent to the obturator vessels and nerve. The vessels lie lateral to the sac in about half the cases.1 Obturator hernias are acquired lesions that are thought to result from progressive laxity of the pelvic floor which may be associated with multiparity, increasing age1 and chronically elevated intra-abdominal pressure. Reported incidence of obturator hernia ranges from 0.05%2 to 0.07%3 of all hernias, making them the most common of all the rare pelvic floor hernias.

Previous authors have characterized the typical obturator hernia patient as an emaciated, dehydrated, multiparous female.1,4-8 Two thirds of reported cases occurred in the seventh and eighth decades of life.6 Although we may define characteristics of susceptible patients, symptoms of obturator hernia are often vague, making the preoperative diagnosis challenging. Symptoms may include abdominal pain, vomiting, Howship-Romberg Sign, recurrent bouts of intestinal obstruction, or a palpable upper thigh mass.6 For diagnosis and treatment, some authors advocate early use of laparotomy6,8 while others prefer preoperative non-invasive diagnostic methods such as CT5,9 or contrast radiographs.10,12 We present a case of a relatively young woman with an atypically symptomatic obturator hernia diagnosed and repaired laparoscopically.

CASE REPORT

A 35 year old, 72 kg, female presented to her gynecologist with a one year history of lower abdominal pain, dyspareunia, and vaginal bleeding after intercourse. The patient denied nausea, vomiting, or change in bowel or bladder habits. Her menstrual history was noncontributory. She had two prior uncomplicated vaginal deliveries of three healthy children. Her only abdominal surgery was a tubal ligation 18 months prior to presentation. Her physical examination was unremarkable including normal pelvic and rectal examinations. The patient’s gynecologist made a preoperative diagnosis of dysfunctional uterine bleeding. Hysteroscopy, fractional dilation and curettage (D&C), and diagnostic laparoscopy were planned.

Diagnostic laparoscopy revealed an anteverted uterus of normal contour. Anterior and posterior cul-de-sacs were...
clear, and both ovaries were normal. Photographs of the pelvic floor were taken because of a suspicion of possible disruption in the continuity of the peritoneum. When the images were subsequently reviewed by the general surgeon, bilateral pelvic hernias without incarceration were identified.

A laparoscopic approach was chosen to repair both hernias. The patient was positioned in lithotomy. Open technique, utilizing a Hasson trocar, was employed to establish a pneumoperitoneum. Two additional 12 mm trocars were placed on either side of the abdomen at the umbilical level. A small left direct inguinal and a right obturator hernia were visualized. The left direct inguinal hernia was treated by simple sac ligation utilizing 2-0 vicryl Endo loops. The repair of the obturator defect was performed by incising the peritoneum of the anterior abdominal wall above the inguinal ligament, then medially to the right umbilical ligament, and laterally to the right inferior epigastric vessels. The peritoneal flap was further developed down to the most caudal aspect of the obturator hernia. The skeletonized obturator defect was then closed by application of two pieces of 3 by 5 inch polypropylene mesh over the right obturator, femoral and inguinal areas. The mesh was stapled to the abdominal wall and Cooper's ligament, with care taken to avoid the epigastric vessels. The peritoneum was then closed over the mesh with staples. The abdominal wall fascial defects were closed with #1 PDS suture using an Endoclose device. There were no complications; the patient recovered uneventfully and was discharged on postoperative day one. At follow-up at one and six months, the patient’s symptoms had completely resolved.

**DISCUSSION**

Obturator hernias account for 1.4% (17 of 1178) of all hernias of the abdominopelvic wall. To date, approximately 743 cases of obturator hernia have been reported in the English language literature, eight of which were repaired laparoscopically. The majority of patients are between 70 and 90 years old at presentation—exceptionally, a patient as young as 32 days old has been reported. Obturator hernia is associated with a number of predisposing conditions. Women are affected six times more frequently than men. The female pelvis is wider and the obturator canal opening is more triangular with a greater transverse diameter, perhaps providing less resistance to herniation. Emaciation may also be an important factor. It is postulated that with severe weight loss there is a decrease in the protective preperitoneal fat from the obturator canal. Similarly, conditions associated with increased intra-abdominal pressure (e.g., chronic constipation, pulmonary disease, and ascites) may also thin the preperitoneal fat and predispose patients to all types of hernias. Pregnancy and chronic illness also predispose patients to hernia formation by increasing intra-abdominal pressure and relaxing the peritoneum.

There are four “classic” features of an obturator hernia: (1) a palpable mass in the groin with the patient supine, and the thigh flexed, adducted and rotated laterally; (2) intestinal obstruction; (3) previous attacks of bowel obstruction resolving spontaneously; (4) the Howship-Romberg Sign. The Howship-Romberg Sign is medial thigh and hip pain exacerbated by adduction and medial rotation of the thigh and relieved by thigh flexion. It is reportedly present in 15% - 50% of obturator hernia patients.

The characteristic clinical profile of previously reported patients is that of an elderly, emaciated woman with concomitant medical illness, but without previous abdominal surgery, presenting with intestinal obstruction. Our patient was young, of average weight, and had two prior pregnancies (although one for twins). She had no abnormalities detected on physical examination, nor episodes of bowel obstruction, but had pain with intercourse as her most prominent symptom. This symptom has not previously been described.

Although there is no consensus of opinion, previous authors have recommended the abdominal approach to suspected obturator hernias because one can establish the diagnosis, obtain adequate exposure, protect the obturator vessels, and identify and resect compromised bowel when necessary. An abdominal approach through a lower midline incision is most favored, although the inguinal approach and the Cheatle-Henry retropubic approach may also be used. We believe that a laparoscopic approach for suspected obturator hernia is superior to described open techniques. Because variable symptomatology makes its preoperative diagnosis difficult, laparoscopy offers a relatively noninvasive method to identify and treat obturator hernias. No special skills are required beyond those now commonly in use for laparoscopic repair of inguinal hernias, and recovery should be shorter than after laparotomy. Controversies regarding costs and operative time are analogous to those regarding groin hernias and will be ongoing.

**CONCLUSION**

The laparoscopic approach to obturator hernia repair is an effective alternative to conventional methods. Appropriate patient selection, sound surgical judgment, and adherence to established principles of laparoscopic repair of the pelvic floor are essential to success. Continued scrutiny
and critical review of this technique are, of course, necessary.

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