Case Report

Obturator Hernia Presenting Partial Obstruction in An Elderly Patient

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Abstract

Obturator hernia (OH) is a relatively rare pelvic hernia. OH is usually seen in elderly, multiparous females and patients with a low body weight. Obturator hernia accounts for 0.07-0.4% of all intraabdominal hernias and 0.2-5.8% of small bowel hernias. The diagnosis of obturator hernia can be difficult and often delayed. Any therapeutic delay is associated with serious complications and higher mortality rates. The correct preoperative diagnosis of obturator hernia is facilitated by computed tomography (CT). Our case was admitted to our emergency unit with intolerance to oral intake for one week. Abdominal ultrasonography was not helpful. The CT of the abdomen revealed the incarcerated intestinal segment. Diagnostic laparoscopy confirmed the CT findings. The intestine was gangrenous and perforated. Segmental resection and anastomosis was performed. Early diagnosis and surgical intervention are essential. This demonstrates that emergency CT scan is useful for the diagnosis of obturator hernia in patients presenting with mechanical intestinal obstruction of unknown origin.

Keywords: *Computed tomography, ileus, obturator hernia*

Introduction

Obturator hernias are extremely rare in surgical practice. Only about 600 cases are described in the world medical literature.[1] They account for 0.073% of all hernias and 0.2-5.8% of small bowel hernias. The mortality rate for acutely incarcerated OH can be as high as 70%.[2] Obturator hernia was first described by Arnauld de Ronsil in 1724 and and successfully repaired surgically by Henry Obre in 1851.[3] It is a rare type of abdominal hernia which classically presents more often in elderly and thin women.[4] It is an exceedingly rare occurrence among pelvic hernias, constitutes part of the diagnostic challenge for surgeons today.[4,5]

These elderly patients often have multiple concurrent medical problems.Consequently they are subject to higher morbidity and mortality rates associated with late presentation and delayed surgical intervention.[6,7] Non-specific signs and symptoms make the diagnosis of an obturator hernia difficult.[8] The vast majority of patients with obturator hernias are admitted with signs and symptoms of intestinal obstruction namely anorexia, nausea, vomiting, constipation, and distension of 2-3 days' duration.[9,10] The patient may also present with evidence of compression of the obturator nerve, resulting in pain in the medial aspect on thigh. This was described by John Howship in 1820 and independently by Moritz Heinrich Romberg in 1848. The obturator canal, which is 2 to 3 cm long, may contain a fat pad that is considered by many surgeons to be pathologic.[11]

The only treatment of obturator hernia is surgical. Laparoscopic approach is more beneficial in elderly patients as this tends to reduce the hospital stay and the incedence of postoperative pain, ileus and pulmonary complications.[7] OH has the highest mortality rate among all types of hernias with a mortality rate of 13-40%.

In this paper, we discuss an obturator hernia patient, with obstructive symptoms, and do well after semi-elective repair.

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Case Report

A 75-year-old woman presented with a 2-week history of partial mechanical small bowel obstruction that is intolerance to oral feeding and do well otherwise. In the following days, her abdomen started to swell and became more and more painful. She started vomiting. Therefore, the patient came to our hospital's emergency department. Systemic examination of the patient revealed no abdominal distension, muscle guarding, and no swelling in the inguinal and femoral regions. The patient was thin; weighed 52 kg with no previous abdominal surgery. There was no evidence of ileus or subileus (e.g. air liquid level in the intestines) found by abdominal plain X-ray studies of small bowel obstruction. Abdominal ultrasonography was inconclusive. The abdominopelvic CT scan of the abdomen revealed an incarcerated bowel in the obturator foramen [Figure 1].

Findings from the diagnostic laparoscopy revealed a richter-type hernia in her right obturator orifice. Reduction of the herniated ileal segments was done laparoscopically. Consequently, an inguinal incision was made.The retroperitoneal space was dissected to access incarcerated ileal segments of the bowel. A perforation was identified in the reduced bowel segment which necessitated a resection and anastomosis. Because the hernial opening was so narrow, it could not be closed with stapler or stitches without mesh. Surgical repair of the obturator orifice was done with a polypropylene mesh plug.

She was ambulant on the first postoperative day, and her postoperative period was uneventful. Early diagnosis and surgical intervention are essential for this rare entity. Recent reports have highlighted the importance of pelvic CT for the preoperative diagnosis in cases of suspected small bowel obstruction with the high index of suspicion of obturator hernia.[9]

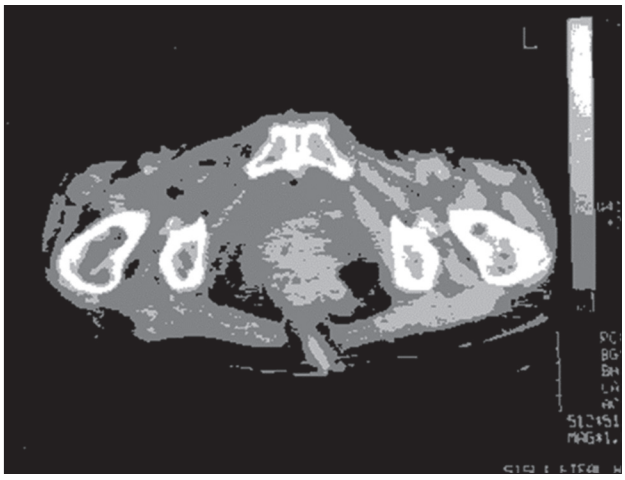

Figure 1: It can be seen incarserated intestinal loop in the region of right obturator foramen

CT may confirm the diagnosis and demonstrate the cause of obstruction, also prevents a delay in surgical treatment. It may also differentiate simple from strangulated small bowel obstruction. Despite the rarity of this disorder, surgical repair of an obturator hernia has been performed through various approaches. The abdominal approach, open or laparoscopic, is preferred when compromised bowel is suspected. The retropubic (preperitoneal) approach is preferred by many surgeons when there are no signs of obstruction or intestinal involvement. The obturator, inguinal and combination approaches have been described.

Regardless of the approach, reduction in the contents and inversion of the hernia sac are the initial steps in the surgical treatment of obturator hernias.

Discussion

A high index of clinical suspicion is important in the diagnosis of obturator hernia. It should be suspected whenever small bowel obstruction occurs in elderly thin female with no previous abdominal surgery. The female: male ratio is 6:1. The wider obturator foramen and pelvic angle are the predisposing factors in the development of OH in the female population. Since sigmoid colon covers the left foramen, OH is encountered on the right side in general. However, bilateral OH can also be seen in 6% of the cases.[5]

The complaints of more than 90% of the patients at the time of admission are nausea, vomiting abdominal distension, acute intestinal obstruction, and abdominal pain.[6] Symptoms can be insignificant and the diagnosis can be delayed when the obstruction is partial (i.e. Richter's hernia). The hernia may be felt as a tender swelling in the region of the obturator foramen on vaginal or rectal examination. According to the literature, Howship-Romberg sign (inner thigh pain on internal rotation of the hip) and groin mass are seen in 13-65% and 20% of the patients, respectively.

CT scan will confirm the diagnosis. Mortality (10% to 50%) is common due to the poor condition of the patients. In all patients, a delay of several days occurred between the onset of symptoms and hospital admission, and a further delay occurred in some of the patients between hospital admission and definitive diagnosis and surgery. Therefore, earlier diagnosis may lower the high morbidity and mortality rate in these emergent patients.[6,7] Our patient, as we present in this paper, indicates that emergent CT scan[12-15] is useful for the diagnosis of obturator hernia, particularly in elderly patients presenting with ileus of unknown origin.

Ultrasonography is also useful and reliable for the diagnosis of strangulated obturator hernia and can decrease the morbidity and mortality associated with delayed diagnosis.[15,16] But the experience of the physician who performed the ultrasonography is an important limitation. Laparoscopic intervention provides a minimally invasive method simultaneously to diagnose and repair these hernias.[17-19] This entity, once diagnosed laparoscopically, can be repaired simultaneously using a laparoscopic mesh repair technique.[20]

The hernia may be felt as a tender swelling in the region of the obturator foramen on vaginal or rectal examination. The most specific finding is a positive Howship-Romberg sign. However, this is present in less than half of the cases and diagnosis should be suspected in any elderly debilitated woman without previous abdominal operations who presents with small bowel obstruction. CT scan will confirm the diagnosis.

Conclusion

Obturator hernia is a rare but significant cause of intestinal obstruction especially in emaciated elderly and thin woman. The high mortality rate associated with this most lethal of all abdominal hernias requires a high index of suspicion to facilitate rapid diagnosis. At the time of doubt, a challenge begins for diagnosis among doctors at the time of doubt. Timely diagnosis is important for survival. Surgery either open or laproscopic, is the only treatment. So it can be said that early diagnosis is the key to a good outcome for this rare condition.

Declaration of patient consent

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

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Conflicts of interest

There are no conflicts of interest.

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