CASE REPORT

Obturator hernia: What to do with the other side?

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SUMMARY

Obturator hernia is a rare variant of abdominal hernia that occurs in thin elderly women, invariably causing intestinal obstruction requiring surgical intervention. A contrast-enhanced computerised tomography (CECT) scan of the abdomen and pelvis is an invaluable tool in the diagnosis and surgical planning. Rarely, an incidental contralateral obturator hernia can be found intraoperatively, but there is limited evidence available to guide as to repair simultaneously or treat conservatively. We present a case of a 90-year-old woman with intestinal obstruction. Preoperative CECT scan of the abdomen and pelvis was suggestive of small bowel obstruction due to strangulated obturator hernia. Intraoperative findings were a Richter right obturator hernia with a loop of viable distal ileum and an incidental left obturator hernia with empty content present. Primary repair was done on both obturator hernias with a prolene® 2/0 suture. Due to the diagnostic challenge and high mortality rate, we advocate for the keen exploration for a possible asymptomatic contralateral obturator hernia in cases with symptomatic unilateral obturator hernia and both to be repaired at the same sitting.

INTRODUCTION

Obturator hernias are rare and known to affect thin elderly multiparous women, attributed to a wider pelvis, enlargement of the obturator canal after pregnancy, loss of fat pad around the obturator canal and increased tissue laxity with aging. They are thought to occur more often on the right side due to the presence of the sigmoid colon.[1] Patients often present with acute small bowel obstruction. The Howship-Romberg sign may be demonstrated by the patient noting pain radiating along the medial thigh when the ipsilateral leg is extended or abducted and is due to irritation of the obturator nerve by the hernia sac causing obturator neuralgia. A high index of clinical suspicion is required as the lack of specific symptoms poses a clinical challenge in early diagnosis. Obturator hernias present bilaterally only in a small percentage of cases and are associated with significant mortality and morbidity often due to delayed diagnosis and management.

CASE PRESENTATION

A 90-year-old, para five woman, independent in activities of daily living (ADL), presented with severe generalised colicky abdominal pain with bloating for 4 days with right medial thigh pain radiating to the right buttock and down the right lower limb. She had no bowel output for 1 week, had not passed flatus and had a poor appetite. She also had non-bilious vomiting, mainly food content and no blood. She had been seen and treated symptomatically 2 days before admission. She has hypertension and a right hip replacement done 2 years ago. She was frail, underweight and in severe pain on admission. She exhibited severe distention of the abdomen with visible bowel peristalsis which was tender on palpation. No peritoneal signs. Inguinal and femoral hernias were not found on palpation. Rectal examination revealed no frank blood or palpable masses with an empty rectum noted.

A CECT scan of the abdomen and pelvis showed small bowel obstruction with a transition point at the distal ileum of the right side of pelvis with no evidence of abdominal malignancy. Fluid-filled loops were seen between pectineus and obturator muscles bilaterally containing short segment non-dilated small bowel loops (Figure 1). She underwent an emergency exploratory laparotomy. Intraoperatively, a Richter right obturator hernia with incarcerated but viable distal ileum was found. A contralateral obturator hernia was noted. Bilateral obturator hernia was repaired with a prolene® 2/0 suture. The patient was discharged on postoperative day 5.

She was followed up on day 17 post-operation to remove her staples. The lower midline laparotomy wound has healed well. The patient had no major complaints, is tolerating orally, and has her usual bowel habits, but is yet to ambulate.

DISCUSSION

Not to operate was not an option for our patient when the diagnosis was evident on CECT imaging. Despite her age, ADL independence was a promising pre-operative feature in her case. Operating on the contralateral hernia did not add significant metabolic stress to her recovery. Her good recovery, returning to active life validated the surgery.

The rare incidence of obturator hernia appears to be increasing with growing awareness, better understanding, and improved documentation among healthcare professionals. Advancements in diagnostic techniques such as the CECT scan or diagnostic laparoscopy have led to more accurate identification of obturator hernias. The Danish Hernia Database from 1998 to 2023, presented a prevalence of obturator hernias in hernia surgery as 0.084% (95% CI: 0.071-0.098%), with an incidence of one per 400,000 inhabitants annually.[2] Obturator hernias carry a high

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Fig. 1: CT abdomen and pelvis with contrast coronal view shows right and left obturator hernia containing fluid-filled short segment non-dilated small intestines (white arrows), with small intestine dilatation and artifact from right hip implant seen.

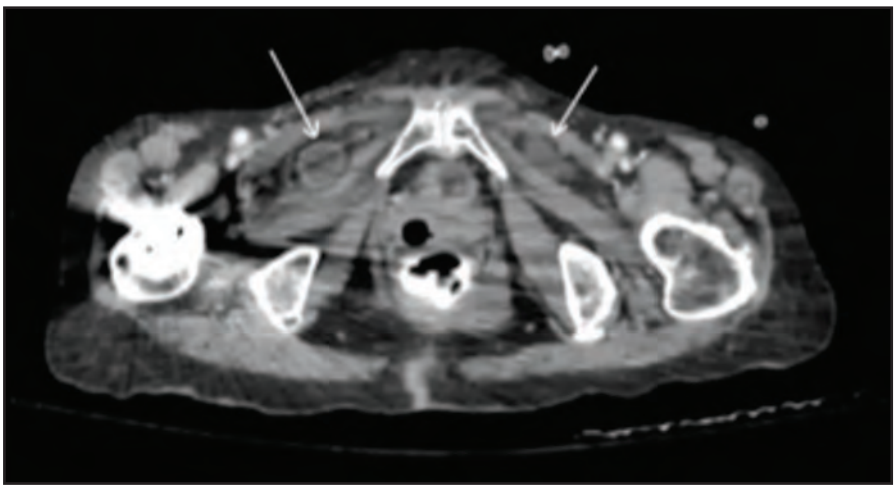


Fig. 2: CT abdomen axial view shows right and left fluid-filled loop seen between right and left pectineus and obturator muscles respectively, representing bilateral obturator hernia (white arrows).

mortality rate ranging from 12 to 70% as they are often diagnosed late and have an operative mortality rate of 11%.[3] A retrospective study done by Chan et al, reported an overall mortality rate of 47.6%.[4] This highlights the need for prompt diagnosis and timely surgical intervention.

Obturator hernias, unlike most hernias, have no specific clinical signs, but the Howship-Romberg sign is noteworthy. CT scan has been reported to improve the preoperative diagnosis of obturator hernias to 78%. A non-invasive pre-operative diagnosis is favoured to avoid misdiagnosis and surgical complications of an exploratory laparotomy.[3] Obturator hernias can be seen on the CT scan as a peritoneal sac or bowel loop passing through the obturator foramen and extending between the pectineus and obturator muscles.[5]

A retrospective analysis by Zhengzheng et al[6] reported that 100% of their patients had been diagnosed with obturator hernia based on preoperative CT findings. This shows that such details on CT scan can almost always be picked up with confidence, especially in patients with high clinical suspicion. An accurate preoperative diagnosis is also needed to facilitate the planning of a minimally invasive surgical approach, either open or laparoscopic.

To Fix or not to Fix the Asymptomatic Contralateral Side?

Contrary to the challenges faced in diagnosis, an obturator hernia is easy to repair. When an obturator hernia presents unilaterally, the contralateral side must be investigated for an asymptomatic obturator hernia. The decision whether to repair the asymptomatic contralateral side requires clinical judgment involving several factors such as the fitness of the

patient, comorbidities, difficulty of the repair on the affected side as well as complications such as bowel gangrene the hernia may have caused. In our patient who is 90-years old, there was little hesitation to repair the contralateral asymptomatic obturator hernia as her morbidity and mortality risk was expected to be increased should she need to undergo a second repair at a later date. We advocate for the timely prophylactic repair of the incidental finding of an asymptomatic obturator hernia during abdominal surgery to avoid a future diagnostic challenge and the need for another surgical intervention.

Primary Tissue vs Mesh Repair

The choice of an open laparotomy or laparoscopic approach depends on the surgeon. The argument for primary tissue repair or mesh repair depends on factors such as the age of the patient, probability of recurrence and potential post-operative complications. Although the primary repair is quick and a common method as reported by Holm et al in a scoping review, it is associated with a recurrence rate of 10%. On the other hand, no recurrences were reported with the mesh repair,[7] suggesting that the mesh repair may be better. In a systematic review and meta-analysis by Burla et al,[8] they similarly reported a significantly higher recurrence in patients who underwent primary tissue repair, however noted that there were no differences in mortality or complication rates between both groups. In our patient, however, a primary tissue repair was preferred considering her age (90 years) and the average life expectancy of Chinese women in Malaysia being 80.2 years.[9] The risk of recurrence can be arguably negligible and primary repair also avoids mesh-related complications. Looking retrospectively, we would like to advocate for a laparoscopic approach should a confident preoperative diagnosis have been made on the CECT scan of our patient, as less manipulation of the intestines and a smaller surgical wound would probably have drastically improved her post-operative outcomes.

CONCLUSION

There is no consensus on the best surgical approach in the repair of an obturator hernia, thus we recommend a national retrospective audit of obturator hernias to identify their prevalence in the past decade in relation to the advancements of imaging techniques, to report on the latest data of the demographic characteristics, the accuracy of CT scan in pre-operative diagnosis, common surgical approaches and the associated postoperative outcomes. CT scan has proven to be an invaluable tool in the diagnosis and surgical planning of the patient with an obturator hernia, hence detailed attention should be given to identifying obturator hernias in patients with high clinical suspicion. Considering the challenges in diagnosis and high mortality rate, we advocate for the keen exploration for an asymptomatic contralateral obturator hernia when a patient presents with a symptomatic unilateral obturator hernia, and both to be repaired in the same sitting to prevent a future diagnostic challenge and the need for another surgical intervention in the same patient.

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DECLARATION

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