CASE REPORT PEER REVIEWED | OPEN ACCESS

Small bowel obstruction due to recurrent obturator hernia: A case report

Yasser Arafat, Marianna Zukiwskyj

ABSTRACT

Introduction: A diagnostic challenge, the obturator hernia is an uncommon cause for small bowel obstruction. It is classically described in thin elderly women. Delay to diagnosis may result in strangulation and gangrenous bowel at subsequent laparotomy. The classically described signs, whilst useful when present, are absent in greater than 50% of cases, and preoperative diagnosis is made on radiological imaging. Case Report: We report a case of small bowel obstruction secondary to a strangulated obturator hernia in an elderly female. Laparotomy, bowel resection and suture hernia repair was undertaken. A subsequent presentation of small bowel obstruction was due to recurrence of the obturator hernia. However, resolved without operative management. Conclusion: A high index of suspicion is required to diagnose an obturator hernia clinically. Failure to do so results in greater mortality and morbidity. Early cross sectional imaging can make the diagnosis and lead to earlier surgical repair. A diagnostic challenge, an obturator hernia is a rare cause of small bowel obstruction. Delay in diagnosis is associated with adverse outcome. Computed tomography scan has proved invaluable to early detection and repair.

Yasser Arafat[1], Marianna Zukiwskyj[2]

Affiliations: [1]MBBS, Principle House Officer, General Surgery, Bundaberg Hospital, Bundaberg, Queensland, Australia; [2]MBBS, Registrar, General Surgery, Rockhampton Hospital, Rockhampton, Queensland, Australia.

Corresponding Author: Marianna Zukiwskyj, Rabaul Street Moorooka Queensland, Australia, 4015; Email: marianna.zukiwskyj@uqconnect.edu.au

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INTRODUCTION

An obturator hernia is a result of weakening of the obturator membrane, allowing a hernial sac to pass through the obturator foramen [1]. An uncommon type of hernia, and a rare cause of bowel obstruction, it is often clinically difficult to diagnose as the cause of obstruction. The pathognomonic sign, present in up to 50% of cases, is the Howship-Romberg sign; compression of the obturator nerve causing pain with or without paraesthesia in the anterior-medial thigh [2, 3]. The Hannington-Kiff sign is positive when there is loss of the adductor reflex in the presence of an active patellar reflex [4]. Cross-sectional imaging with either computed tomography (CT) or magnetic resonance imaging plays an important role in preoperative diagnosis of this uncommon hernia [3]. This report discusses a case of recurrent obturator hernia and the value of CT scan for diagnosis.

CASE REPORT

An 86-year-old Caucasian female presented to hospital with a five-day history of vomiting, generalized

colicky abdominal pain and constipation as well as right hip pain. Past medical history included congested cardiac failure, pulmonary hypertension, transient ischemic attack, mitral valve replacement on warfarin, previous surgery for rectal prolapse and bilateral inguinal herniae.

Initially, the patient was noted to be nauseated with a tender, distended abdomen. An initial working diagnosis of constipation or gastroenteritis was made, and enemas and supportive treatment was initiated overnight. The following day, a surgical review was sought for failure to progress and an abdominal X-ray suggesting a subacute or developing bowel obstruction. Clinical findings of ascites, lower abdominal tenderness and no palpable herniae prompted a CT abdomen for further evaluation. The Howship-Romberg sign was not present. Imaging confirmed a right sided obturator hernia (Figure 1) containing a loop of small bowel as the cause of the obstruction, with multiple dilated loops of small bowel and moderate intraperitoneal fluid. The patient underwent emergency laparotomy, suture repair with omental plug of the obturator hernia and small bowel resection for gangrenous constriction rings of the small bowel.

Once recovered, the patient presented a further three times in the next year with small bowel obstruction, with symptoms of nausea, vomiting, bowels not opening and abdominal pain and lower abdominal tenderness on examination. All episodes were managed conservatively, and CT imaging confirmed the diagnosis in every case. During the second presentation, the CT scan confirmed a recurrence of the right-sided obturator hernia and identified it as the cause of the acute obstruction (Figures 2 and 3). The patient was planned for surgery, however, improved with non-operative measures, and given the high anesthetic risk secondary to multiple comorbidities, the procedure was abandoned. No elective repair was planned. The final presentation identified a transition point in the right iliac fossa on imaging, however, in this episode, the obturator hernia was not thought to be the cause, and management was as for adhesive obturator hernia. The patient died not long after from complications secondary to a cerebrovascular accident.

Figure 1: Computed tomography scan of abdomen/pelvis, portal venous phase demonstrating a right obturator hernia containing small bowel (arrow).

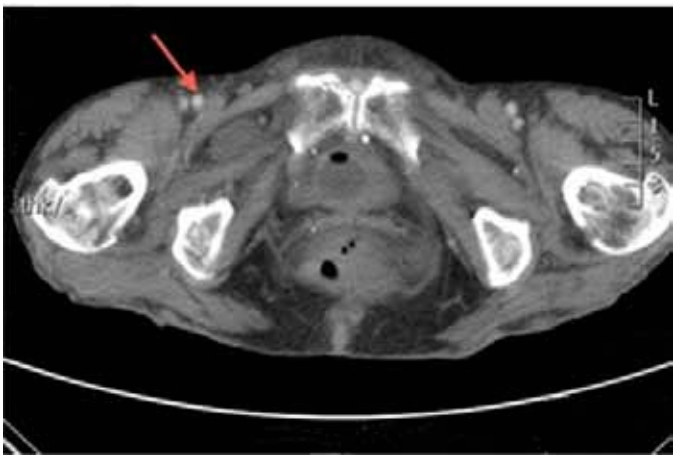

Figure 2: Computed tomography scan of abdomen/pelvis, portal venous phase demonstrating mechanical small bowel obstruction secondary to right obturator hernia (arrow).

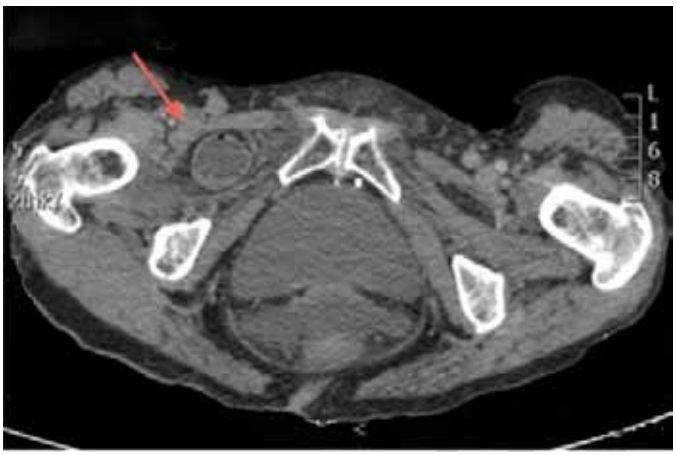

Figure 3: Computed tomography scan of abdomen/pelvis, portal venous phase, demonstrating the recurrence of the right obturator hernia (arrow).

DISCUSSION

The obturator hernia was first described by Arnaud de Ronsil in 1724 [2]. Its incidence has been reported as 0.07–1% and it accounts for up to 1.6% of small bowel obstructions [3, 4]. The first laparotomy for a strangulated obturator hernia was performed by Hilton in 1848, however, Obre performed the first successful repair in 1851 [4, 5]. Predisposing factors include increasing age, female gender (6:1 F:M ratio), multiparity, emaciation and condition associated with chronically raised intra-abdominal pressure (e.g., ascites, chronic pulmonary disease, chronic constipation) [4]. Most often, obturator herniae are diagnosed in elderly,

emaciated females, and so have been named the little old ladies' hernia. Diagnostically, they pose a challenge, as the pathognomonic features are present in fewer than 50% of patients. Cross-sectional imaging has increased the rate of preoperative diagnosis, as well as decreasing morbidity and mortality it results in earlier intervention [6–8].

Various approaches are available for operative repair of an obturator hernia. Most commonly, an open abdominal approach has been employed, however, retropubic, obturator and inguinal approaches have been described. Laparoscopic repair is possible via transabdominal and extraperitoneal approaches. Mesh repairs have been reported to have a lower recurrence rate compared with suture repair, which has been reported as less than 10% [9].

In our case, perioperative diagnosis was confirmed by CT scan and the patient underwent intervention in a timely fashion. Due to the delay in seeking medical attention from onset of symptoms, non-viable bowel and subsequent resection, precluded the use of mesh for hernia repair. The obturator hernia had recurred by the second presentation of bowel obstruction, only two months later.

This reiterates the point that a high index of suspicion is required when presented with the case of small bowel obstruction in an elderly female patient. One must therefore, also consider that any subsequent presentations of small bowel obstruction may be due to recurrence of the obturator hernia, the differential being adhesive bowel obstruction, and delay to definitive treatment is associated with poorer prognosis.

CONCLUSION

The consideration of an obturator hernia as a cause of small bowel obstruction remains an important differential, especially in the absence of palpable herniae and a negative history for abdominal surgery. Obturator herniae usually present in elderly patients in their seventh or eighth decade of life, with a low body mass. There is a female predominance. The classical findings are present in fewer than half of cases and early employment of computed tomography scan in the acute setting to confirm the diagnosis results in timely surgical intervention.

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Author Contributions

Yasser Arafat – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Marianna Zukiwskyj – Substantial contributions to conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Revising it critically for important intellectual content, Final approval of the version to be published

Guarantor

The corresponding author is the guarantor of submission.

Conflict of Interest

Authors declare no conflict of interest.

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