STRANGULATED OBTURATOR HERNIA - A RARE CASE OF INTESTINAL OBSTRUCTION AND REVIEW OF THE LITERATURE

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CASE REPORT

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Abstract

Comprising merely 1% of all abdominal wall hernias, obturator hernias exhibit a notable morbidity and mortality, with reported rates ranging from 15-25%, and in certain instances, escalating up to 70%. We present the case of a 79-year-old thin, frail lady who was admitted with a 5-day history of nausea, vomiting, constipation, and lower left quadrant abdominal pain that radiated down the left medial thigh. Howship-Romberg sign was positive. Plain X-rays revealed dilated bowel loops with multiple central air-fluid levels suggestive of complete small bowel (SB) obstruction with no signs of perforation. An urgent CT scan of the abdomen and pelvis was performed which found a dilated SB loop with a transition point caused by herniation through the left obturator foramen, suggestive of a strangulated obturator hernia. Decision to take the patient to surgery was adopted. After laparotomy, a segment of ileum was strangulated in the left obturator foramen. The SB segment was freed and found to be viable. A plug mesh repair was performed. This case report highlights the importance of considering obturator hernia in elderly, thin, multiparous women with chronic health conditions presenting with symptoms such as bowel obstruction or thigh pain. The diagnostic utility of imaging modalities, particularly CT scans, is crucial in accurately identifying obturator hernias preoperatively. Surgical intervention remains the mainstay of treatment, with a lower midline laparotomy being the preferred approach in emergency situations.

Keywords: strangulated, obturator, hernia, intestinal, obstruction

Introduction

Obturator hernias were initially documented in 1724 by Pierre Roland Arnaud de Ronsil as an uncommon form of pelvic hernia [1]. Comprising merely 1% of all abdominal wall hernias, obturator hernias exhibit a notable morbidity and mortality, with reported rates ranging from 15-25%, and in certain instances, escalating up to 70% [1], [2]. The identification of obturator hernias is frequently delayed, and approximately 60%-75% of cases involve infarcted bowel. Characteristically, individuals affected by obturator hernias are elderly, multiparous, chronically ill, and slender women [3]. The precise preoperative diagnosis of obturator

hernia proves challenging, leading to the majority of patients undergoing surgery for intestinal obstruction with an unknown etiology [4].

Presentations of patients with obturator hernias manifest nonspecifically, encompassing symptoms such as thigh or knee pain on the affected side and recurrent episodes of intestinal obstruction accompanied by cramping abdominal pain, nausea, and vomiting [5], [6].

Radiographic images commonly reveal nonspecific indications of small bowel obstruction and are rarely effective in suspecting obturator hernia [7]. Ultrasonography serves as a valuable and dependable diagnostic tool for obturator hernia; however, its utility may be constrained due to the challenging accessibility of the deep region and its reliance on the operator's skill [8]. In contrast, a computed tomography scan not only accurately identifies obturator hernia but also detects other bowel obstruction conditions, thus making it the best option for diagnosing this condition [9].

When managing obturator hernia, the preferred strategy involves surgical intervention via a midline abdominal incision. This approach guarantees sufficient exposure, allows for the reduction of hernia content, and allows for bowel resection if deemed necessary. Laparoscopic approach could be useful in stable patients undergoing exploratory laparoscopy for bowel obstruction in selected cases [10].

Case presentation

We present the case of a 79-year-old thin, frail lady who was admitted with a 5-day history of nausea, vomiting, constipation, and lower left quadrant abdominal pain that radiated down the left medial thigh. The patient had no history of abdominal surgery. Co-morbidities included arterial hypertension and dysplidemia under medical treatment.

On examination her abdomen was soft, mildly distended, with tenderness on palpation of the left iliac fossa. Clinically no masses were found and the patient had clear hernial orifices. Howship-Romberg sign was positive. The patient was in a stable condition with no signs of shock installed.

Complete blood count and liver function were within normal parameters. Renal function was not impaired. Coagulation was within normal range.

Plain X-rays revealed dilated bowel loops with multiple central air-fluid levels suggestive of complete small bowel (SB) obstruction with no signs of perforation. An urgent CT scan of the abdomen and pelvis was performed which found a dilated SB loop with a transition point caused by herniation through the left obturator foramen, suggestive of a strangulated obturator hernia (Figure 1). The colon was normal and not distended. The diagnosis of strangulated small bowel obstruction secondary to a left obturator hernia was confirmed and the decision was to take the patient to theatre for emergency surgery.

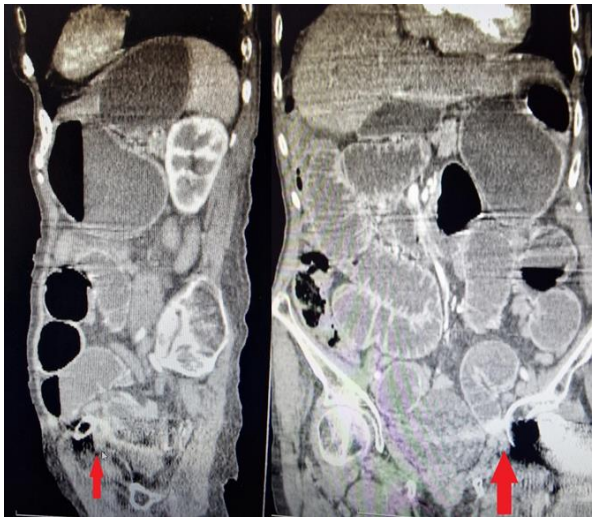

Figure 1 - Computed tomography with intravenous contrast in frontal and sagital reconstruction planes reveal left sided obturator hernia

Surgical approach was a midline pubo-ombilical laparotomy. Upon access of the peritoneal cavity, dilated SB was found, with

air-liquid content, and a normal, non-distended colon was observed. During exploration, a segment of ileum was strangulated in the left obturator foramen (Figure 2). The SB segment was freed and found to be viable (Figure 3). A plug mesh repair was performed. Postoperative evolution was favorable, patient was discharged on the 3rd postoperative day.

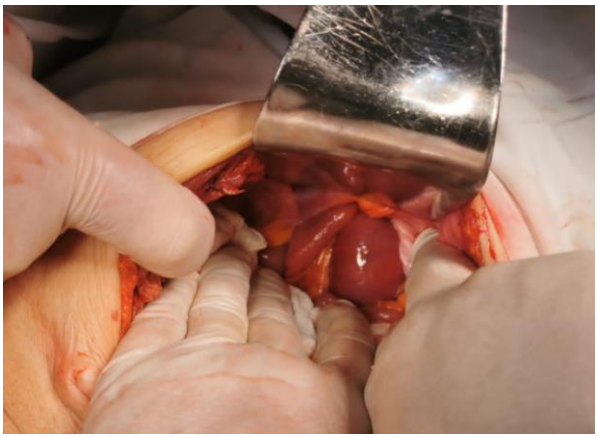

Figure 2 - Intraoperative aspect - Loop of small bowel entering the left obturator formanen, dilated afferent small bowel and supple efferent small bowel

Figure 3 - Viable small bowel after it was freed from hernia

Discussions

The obturator canal is situated in the supero-lateral region of the obturator foramen and houses the obturator nerve and vessels. With dimensions of 2–3 cm in length and 1 cm in width, it typically contains adipose tissue, preventing the occurrence of hernias due to the absence of available space. The primary contributors to hernia formation are the reduction of body fat and the elevation of intra-abdominal pressure [3].

The manifestation of clinical symptoms lacks specificity. Approximately 90% of cases exhibit a prevalent presentation of mechanical small bowel obstruction [11]. Obturator hernia should be considered in thin, multiparous, elderly women with chronic health conditions and no prior surgical history, when such individuals present with symptoms such as bowel obstruction or pain in the base of the thigh. Occasionally, a pseudotumoral mass may be present in the upper part of the medial thigh, accompanied by intermittent abdominal pain.

Rectal or vaginal examination may allow for palpation of a pseudotumoral mass in the obturator area [11]. Differential diagnoses can include abscesses, especially of the psoas, femoral hernias, perineal hernias, inguinal lymphadenopathy, and coxo-femoral diseases [12].

Ultrasonography can show a hypoechoic mass reflecting a dilated, edematous portion of the bowel, and in selected cases, may be used for reduction of the hernia [13]. However, CT scan has a superior sensitivity and accuracy. In our case, the diagnosis was correctly made preoperatively after performing CT scans.

The Howship-Romberg sign (inner thigh pain on internal rotation of the hip) is present in 15%–50% of obturator hernias but it is not pathognomonic [14]. However, the Hannington-Kiff sign is less well known but more specific. It refers to the absence of the thigh adductor reflex, with a present patellar reflex, due to compression of the obturator nerve [15], [16].

Mainstay of treatment is surgery. The approach can be via transperitoneal approach (lower midline laparotomy), abdominal extraperitoneal approach or laparoscopically [8]. The primary surgical method employed in

emergency situations is a lower midline laparotomy, chosen for its optimal exposure, capacity to reduce hernia content, and ease of performing bowel resection when required. Hernia repair options include a straightforward closure of the canal entrance using interrupted sutures or utilizing mesh for reinforcement.

Conclusions

In conclusion, obturator hernias, although rare, present a significant challenge in diagnosis due to nonspecific clinical manifestations and the frequent delay in identification. This case report highlights the importance of considering obturator hernia in elderly, thin, multiparous women with chronic health conditions presenting with symptoms such as bowel obstruction or thigh pain. The diagnostic utility of imaging modalities, particularly CT scans, is crucial in accurately identifying obturator hernias preoperatively. Surgical intervention remains the mainstay of treatment, with a lower midline laparotomy being the preferred approach in emergency situations. This case emphasizes the successful management of a strangulated obturator hernia through prompt diagnosis, appropriate surgical intervention, and a favorable postoperative outcome.

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