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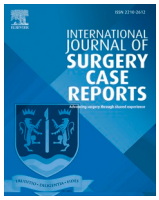

Case report

Estrangulated obturatory hernia. Case report of a challenging diagnosis of obstructive syndrome

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ABSTRACT

Introduction and importance: Obturator hernia accounts for less than 1 % of all documented cases of pelvic hernias. It most commonly presents as an obstructive syndrome in elderly, multiparous, slim women, characterized by a wider pelvis that facilitates the passage of the hernia sac through the obturator foramen alongside the obturator nerve. In this case, adhering to the SCARE (*Updating Consensus Surgical CAse REport*) checklist criteria, we present a typical scenario involving an elderly woman who was initially misdiagnosed with a fecaloma, concealing an obturator hernia.

Case report: An 85-year-old patient, displaying prodromal signs of senile disease, presented for medical attention with incapacitating abdominal pain in the right iliac fossa, accompanied by nausea and vomiting. Rectal examination revealed the presence of a fecaloma, and glycerin administration was performed rectally. The patient's condition worsened with the development of mental confusion and hyperactive delirium. Abdominal Computer tomography scan (CT scan) revealed right obturator hernia with enteral segment insinuation and dilation of the proximal bowel.

An infraumbilical laparotomy was performed. The herniation of an ileal segment and the right ovary through the obturator foramen was identified. The content proved irreducible to manual maneuvers, leading to obturator muscle section following the dissection of the Retzius space. The right round ligament of the uterus was sectioned, and we manage to preserve the Obturatory branch of the lumbar plexus throughout dissection. A polypropylene mesh was positioned and secured with non-absorbable sutures on the Cooper's ligament, iliac crest, and obturator muscle and segmental enterectomy with primary anastomosis using a linear stapler was performed.

Clinical discussion: This demanding case brings to the spotlight the importance of reevaluating even the usual cases. We provide our experience bringing together an unusual diagnosis after the conduction of a once diagnosed fecaloma that almost went down to a perforated acute abdomen. Hence the importance of suspect obturator hernia in unknown obstructive abdomen in elderly women.

Conclusion: With this report we aim to raise awareness of careful propaedeutic inquiry of acute abdomen. We provide our experience bringing together the diagnosis that agrees with our literature review. Elderly patients commonly challenge the clinical evaluation, especially those with signs of senile disease. Thereby, inkling hidden diagnosis in typical scenarios can improve the patient's care in emergency settings.

1. Introduction and importance

Obturator hernia accounts for less than 1 % of all documented cases of pelvic hernias [1–3]. It most commonly presents as an obstructive syndrome in elderly, multiparous, slim women, characterized by a wider pelvis that facilitates the passage of the hernia sac through the obturator foramen alongside the obturator nerve. In this case, adhering to the SCARE (*Updating Consensus Surgical CAse REport*) checklist criteria [4].

Due to the uncommon appearance of obturator hernia, there is no standard treatment approach to the repair. Although it can be found during laparoscopic approaches of inguinal hernia, the typical case presentation is on the emergency setting according to the literature [1]. We present on this case report a typical presented case of acute obstructive abdomen, apparently due to fecaloma, that failed clinical

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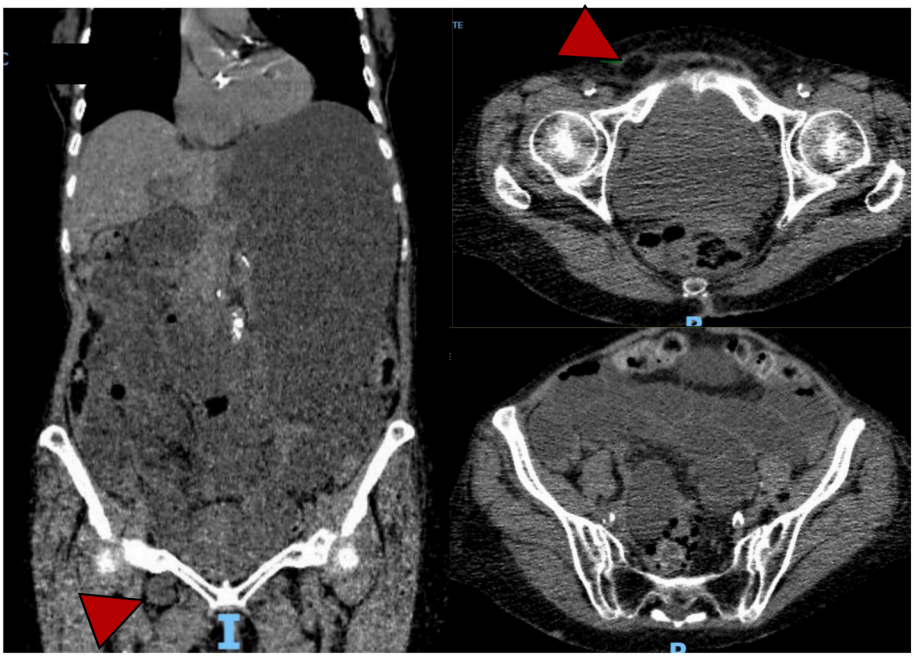

Fig. 1. No contrast CT scan reveals an obturator hernia (indicated by the arrowhead) accompanied by dilated small bowel loops and gastric cavity.

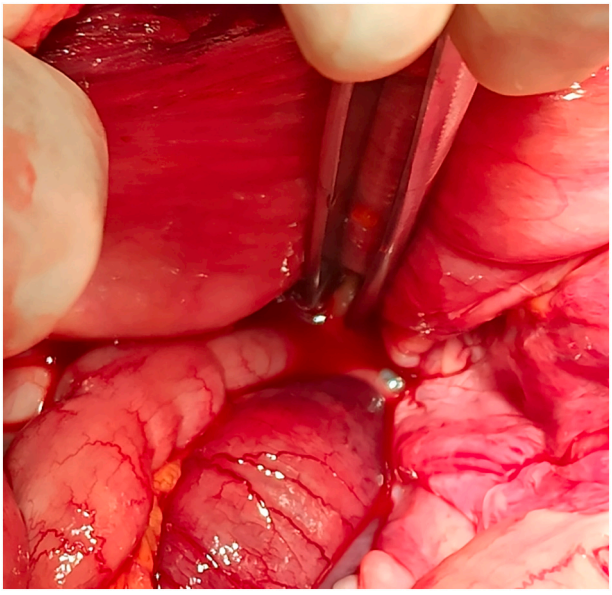

Fig. 2. Intestinal bowel loop insinuating through the obturator canal, with the obturator nerve branch visible at the tip of the anatomical forceps.

management revealing after careful image study a unusual, strangulated hernia.

2. Case report

An 85-year-old patient, hypertense and dyslipidemia, displaying prodromal signs of senile disease, presented for medical attention with incapacitating abdominal pain in the right iliac fossa, accompanied by nausea and vomiting evolving in the last 48 h previous the admission. Physical examination showed abdominal distention, with compression pain but without signs of peritonitis, rectal examination revealed the presence of a fecaloma, and glycerin administration was performed rectally. Even after nasogastric tube passage the patient's condition

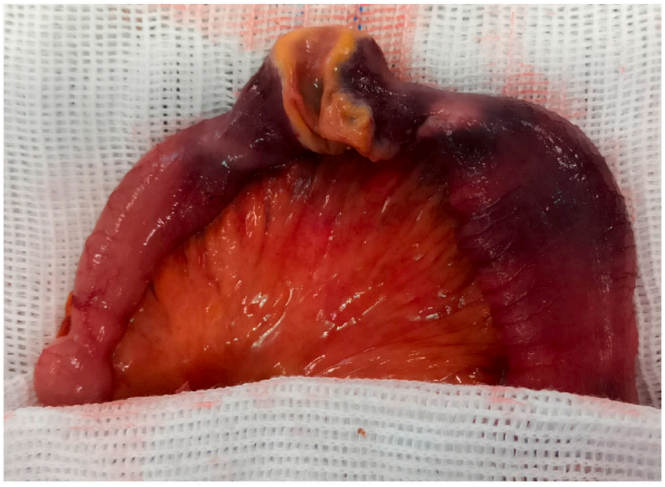

Fig. 3. Ischemic bowel loop observed following the reduction of a strangulated hernia.

worsened with development of mental confusion and hyperactive delirium, although, without need for intensive care management due to hemodynamic stability after a litter of saline volume expansion.

Laboratory review showed leukocytosis, deteriorating perfusion parameters with a lactate level of 3.2 without other remarkable laboratory changes. Abdominal Computer tomography scan (CT scan) (Fig. 1) revealed right obturator hernia with enteral segment insinuation and dilation of the proximal bowel, suggesting obstructive processes.

Surgical treatment for the obturator hernia was indicated on the same day of admission, and an infraumbilical laparotomy was performed. The herniation of an ileal segment and the right ovary through the obturator foramen was identified. The content proved irreducible to manual maneuvers, leading to obturator muscle section following the dissection of the Retzius space. The right round ligament of the uterus was sectioned, and we manage to preserve the Obturatory branch of the lumbar plexus throughout dissection (Fig. 2). A polypropylene mesh was positioned and secured with non-absorbable sutures on the Cooper's

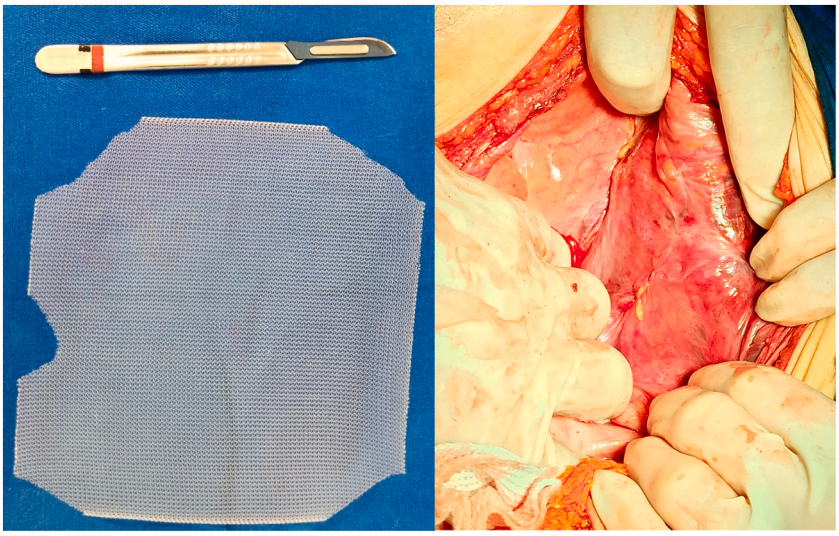

Fig. 4. Mesh implant in the preperitoneal space for abdominal wall reconstruction, along with the final appearance post-operation.

ligament, iliac crest, and obturator muscle (Fig. 4).

Due to ischemia in the ileal segment (Fig. 3), a segmental enterectomy with primary anastomosis using a linear stapler was performed. The patient was diagnosed with significant diastolic dysfunction during the hospitalization, exacerbated by pulmonary hypertension, resulting in a slow postoperative recovery. Consequently, the patient was discharged on the 13th day post-operation after clinical optimization with usual oral diet tolerance.

In the following week, the patient was readmitted due to hyperactive delirium associated with non-obstructive renal dysfunction and with no signs of intestinal obstruction. The patient was followed up postoperatively for one year without evidence of hernia recurrence. Unfortunately, the patient passed away a year later due to causes unrelated to postoperative complications.

3. Clinical discussion

Previously published systematic review of literature described the most common clinical presentation of obturator hernia after screening of 11 case reports. In this paper it was most common presented on multiparous women, between 71 and 87 years old with at least five days of intestinal obstructive syndrome clinical evolution. Usually, patients had other comorbidities such as dementia, heart failure or some signs of cognitive disorder. In this review, the authors remarked the usual need for a tomographic study aiming to pin down the diagnosis [5].

Concomitant conditions, such as chronic constipation, poor general condition of the patient and associated mental disease can delay the diagnosis and management, leading to a heightened morbidity and mortality following obturator hernia operation [7].

The Howship-Romberg sign (described as pain exacerbated by extension, abduction, and internal rotation of the hip due to compression of the obturator nerve) is considered pathognomonic, although, it's not present in more than half of the cases. If elderly patient presents itself with medial thigh pain and mild abdominal distention a high suspicion level should direct differential diagnosis to obturator hernia [1–3,6,8,9].

Mainly, most of the cases reported were repaired with infraumbilical laparotomy due to complications related to delayed diagnosis and clinical aspects of the patient, which is also associated with high mortality rates. A meta-analysis that included 74 studies compared the usual approach with laparoscopy treatment of obturator hernia, and the experimental group was associated with lower morbidity when compared to the laparotomy approach [5,7]. Our approach was conducted in accordance with the literature, once we performed an open mesh repair with safe direct complications related to the hernioplasty.

On the other hand, it's recommended that if there is suspicion of intestinal ischemia or worsening clinical conditions, the laparotomy approach provide wide exposure of the obturator foramen and can achieve safer and faster redress of the perforated intestine loop [1,2,3,10].

4. Conclusion

With this report we aim to raise awareness of careful propaedeutic inquiry of acute abdomen. We provide our experience bringing together the diagnosis that agrees with our literature review. Elderly patients commonly challenge the clinical evaluation, especially those with signs of senile disease. Thereby, inkling hidden diagnosis in typical scenarios can improve the patient's care in emergency settings.

Consent

We deliberated ask for written consent absence for the ethical committee since the patient was dead by the time of publication of this paper.

Ethical approval

The publication of this case report has been authorized by the quality service of the Brazilian committee of research and ethics and approved by our Institution (Hospital Felício Rocho).

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Author contribution

Carvalho, A.C.: conceptualization, methodology, writing original.
Garcia, D.P.C.: writing, reviewing.
Furtado, AT: conducted the case during hospitalization and reviewing the text.

Guarantor

Álvaro Cota Carvalho.

Research registration number

This is a retrospective study, don't have any previous registration.

Conflict of interest statement

None of the authors that contributed to this paper has any disclosure to declare.

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