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An extraordinary cause of intestinal obstruction, incarcerated obturator hernia

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An extraordinary cause of intestinal obstruction, incarcerated obturator hernia

AIM: *Presenting an extraordinary cause of intestinal obtuction, leading to incarcerated obturator hernia.*
CASE REPORT: *We present a rare case of obturator hernia in a 90-year-old female, who presented with a three-day history of inability to defecate and abdominal pain, distension, and vomiting on the day of presentation. Hours later, a computed tomography scan revealed a bowel obstruction secondary to a right-sided obturator hernia. She underwent an emergency exploratory laparotomy and the incarcerated bowel was reduced with a repairment of the hernial defect. The patient demonstrated an uneventful postoperative period and was discharged on hospital day four.*
DISCUSSION: *Obturator hernia, a rare anterior abdominal wall hernia, in which abdominal contents protrude through the obturator canal, is an unusual cause of intestinal obstruction. It has one of the highest mortality rates of all abdominal wall hernias with a challenging diagnosis that can still be misleading even to the most experienced surgeons.*
CONCLUSION: *Providers should be aware of inability to defecate, abdominal pain, distension, and vomiting that may be due to an existence of incarcerated/strangulated obturator hernia, thus the further evaluation should be considered as the elements of the clinical picture are incongruent.*

KEY WORDS: Emergencies, Hernia, Intestines, Intestinal obstruction, Obturator

Introduction

Obturator hernias are not frequently encountered conditions accounting for 0.05-1.4% of all the abdominal wall hernias. It was early described by Arnaud de Ronsil in 1724 and the first reparation of obturator hernia was performed by Obre in 1851 [1-4]. The delayed treatment due to the difficulty in the relevant preoperative diagnosis with the bowel strangulation within the hernia sac results in increased mortality [5]. This condition is more commonly encountered in the elderly, and multiparous women. The incidence is nine times higher in females than in males since the obturator canal in the pelvis is larger in women [6]. It occurs frequently in cachectic patients between the 7th and 9th decades. Diagnosis is usually rendered by means of surgical management or widespread utilization of computed tomography (CT) preoperatively. The most common sign of obturator hernia is an intestinal obstruction with incarceration. Early diagnosis is of great importance in terms of a favorable outcome, so in time and urgent surgical procedure is the treatment of choice. The mortality rate is high since it occurs in elderly patients with a concurrent medical condition(s) and as a course of its nature in terms of the diagnostic difficulty.

Case Report

A 90-year-old female presented to our Emergency Department with a three days history of inability to defecate. She endorsed an abdominal pain, distension, and

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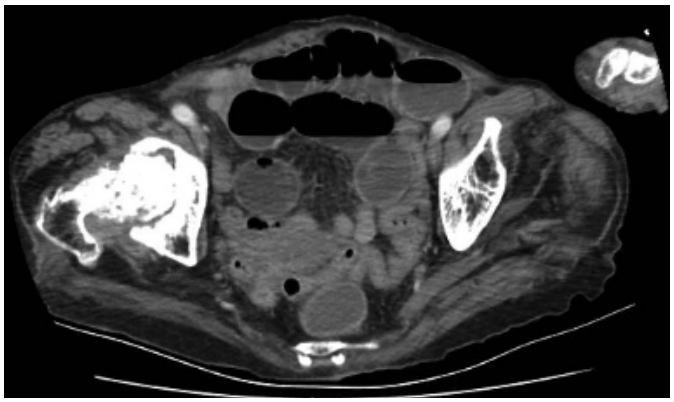

Fig. 1: A radiologic image; transverse view, demonstrating a right-sided obstructive obturator hernia (Computed tomography scan; Transverse view).

vomiting on the day of presentation. Her personal medical history was unremarkable, without any previous systemic diseases or operation and her vital signs were recorded within the normal limits. On the physical examination, the abdominal distension with abdominal guarding, pain at the level of the right inguinal arch, and an empty rectal ampulla were recognized. The labs were normal except for a white blood cell count of 14600/mm3 and blood urea nitrogen of 58 mg/dL, and creatinine of 0,58 mg/dL. Her abdominal X-ray revealed the air-fluid levels of the intestines and the formal CT scan hours after admission revealed a right-sided obstructive obturator hernia (Fig. 1). She was admitted to the Department of General Surgery and pain worsened. After pre-operative antibiotics, the patient underwent an uncomplicated exploratory laparotomy with a right-sided incarcerated obturator hernia. On the abdominal exploration, an incarcerated intestinal loop was recognized within the right obturator canal and it was reduced. The simultaneous intestinal ischemia, necrosis, or perforation was not detected, thus an additional intervention was not performed and the hernial defect was repaired with 2/0 vicryl suturation, meticulously. The patient demonstrated improved symptoms and was discharged home on hospital day four with the symptomatic treatment. Upon follow-up appointment two weeks later, the patient was symptom-free.

Discussion

Obturator hernia is a seldomly encountered condition with a challenging preoperative diagnosis [1-2]. It accounts for 0.2–1.6% of all the cases of mechanical obstruction of the small bowel [7-8]. These types of hernias are associated with certain factors such as reduction in preperitoneal fat tissue and enlargement of pelvic bone with aging and multiparity which demonstrate a slow and insidious course, diagnostic challenges, and possible life-threatening complications [9]. It has one of the highest mortality rates of all the abdominal wall hernias at 12-70% because of the past due diagnosis [10-12].

Diagnostic and therapeutic delays are still encountered in these patients despite the manifestation of intestinal obstruction. In these cases, the hernia sac is under the pectineus muscle and the sac cannot be palpated. The outcome may be improved as the content of the hernia sac is spontaneously reduced into the peritoneal cavity. It was reported that 75% of the cases revealed intermittent symptoms before the surgical procedure.

Approximately 15-50% of the patients may show Howship-Romberg sign due to the compression of the hernia sac onto the obturator nerve [5]. The clinical diagnosis is often difficult to make while that sign is absent and the complaints of these cases are frequently misdiagnosed and usually referred to neurologists and orthopedists, leading to the abdominal symptoms are generally ignored [5,6-9].

Early surgical procedure is an indication and mandatory if the patient exhibits signs of peritonitis, complete intestinal obstruction, incarceration, and strangulation. If there are nonspecific or subtle symptoms hampering emergency surgery, an immediate abdominal CT scan is advisable so as to confirm the diagnosis preoperatively. Moreover, it is considered that the significance of CT scan should not be ruled out throughout examination of the pelvis, particularly in the cases with a complete obstruction or peritonitis. Since the intrapelvic obturator canal is wider, it is seen nine times more frequently in women [13].

Laparotomy may be performed along with treatment modalities including retropubic, preperitoneal, the inguinal or intraabdominal modalities in the repair of obturator defect. Hernia defect may be repaired by primary closure technique or by grafting and no complications evolve after repair [14,15]. We performed intravenous contrasted abdominal CT in all the cases.

Emergency surgery was reserved for the patient with ileus developed as a result of obturator hernia and the content of the hernia was reduced into the abdominal cavity.

Conclusion

Obturator hernia is not a frequent cause of mechanical bowel obstructions and its preoperative diagnosis is usually challenging. Herein, delayed diagnosis and treatment give rise to increased mortality. To this end, emergency physicians and general surgeons should take into account the possibility the obturator hernia particularly in thin, elderly multiparous women showing clinical signs of bowel obstruction without history of abdominal laparotomy. "Of note, intravenous contrast-enhanced CT may aid in early diagnosis and thus both the morbidity and

mortality rate are decreased. Nonetheless, the physician should keep in mind this condition in those kinds of uncommon issues [16-18]. Last but not least, cases should undergo early surgical procedures as exhibiting the signs of peritonitis, complete intestinal obstruction, incarceration, and/or strangulation.

Riassunto

Si presenta il caso di un'occlusione intestinale per una eccezionale incarcerazione di un'ernia otturatoria.
Si trattava di una donna di 90 anni con crisi di stipsi da tre giorni accompagnata da dolori addominali, addome disteso e vomito fin dal ricovero. Una tomografia computerizzata di ore dopo ha dimostrato trattarsi di un'occlusione intestinale a livello della porta erniaria otturatoria di destra.
Alla laparotomia esplorativa d'urgenza si è provveduto a ridurre in addome l'intestino incarcerato e alla riparazione della porta erniaria. Il decorso postoperatorio è stato privo di complicazioni, e la paziente è stata dimessa dall'ospedale in quarta giornata postoperatoria.
L'ernia otturatoria è una di quelle rare della parete addominale anteriore, con protrusione del contenuto addominale nel canale otturatorio, e causa insolita di occlusione intestinale. È caratterizzata da uno dei più alti tassi di mortalità tra tutte le ernie della parete addominale, di diagnosi impegnativa e fuorviante anche per i chirurghi più esperti.
In conclusione gli operatori sanitari dovrebbero essere avvertiti che la stipsi prolungata, insieme a dolore e distensione addominale e vomito possono essere dovuti ad un'ernia otturatorio incarcerata o strangolata, e procedere ad una ulteriore fase diagnostica nel caso di incongruenza degli elementi del quadro clinico.

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Commento e Commentary

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Il caso clinico presentato non è così eccezionale né raro come l'Autore asserisce, perché invece è tipica la presentazione clinica di un anziano – specie se donna –, con sintomi di costipazione o occlusione addominale e con scarsa obiettività clinica. In tali caso si insegna agli studenti di medicina di indagare sulle porte erniarie e in particolare su quella crurale, tipica di questa situazioni perché meno evidente, per non parlare delle ernie ischiatiche e altre porte erniarie più rare. Il dolore suscitato alla palpazione a livello dell'arcata inguinale è patognomonico anche se, come è possibile, non si rileva nettamente la tumefazione. Naturalmente la TC offre il vantaggio di una conferma documentata, a vantaggio dei possibili risvolti medico-legali di porre sul tavolo operatoria una persona anziana con rischio operatorio aumentato, in caso di errore diagnostico.

* * *

The clinical case presented is not as exceptional or rare as the author asserts, because instead the clinical presentation of an elderly person is typical – especially if a woman –, with symptoms of constipation or abdominal occlusion and with poor clinical objectivity. In this case, medical students are taught to investigate hernia gates and in particular the crural one, typical of this situation because it is less evident, not to mention ischial hernias and other rarer hernia gates. The pain aroused on palpation at the level of the inguinal arch is pathognomonic even if, as is possible, the swelling is not clearly detected. Of course, CT offers the advantage of documented confirmation, to the advantage of the possible medico-legal implications of placing an elderly person with increased operating risk on the operating table in the event of a diagnostic error.