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Strange Obturator Hernia: A Case Report with Literature Review

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Abstract **Case Report**

Obturator hernia is a rare pelvic hernia with incidence of 1%. It's a significant cause of intestinal obstruction in emaciated elderly women. Delayed diagnosis and surgical intervention contributed to its relatively high morbidity and mortality. We present a case of an elderly woman with occlusive syndrome. The diagnosis of a strange obturator hernia was confirmed by a spiral CT scan. The bowel was located between the external obturator and pectineal muscles, corresponding to a mechanical obstruction upstream of a right obturator hernia. During the emergency laparotomy, the surgeon performed a gentle reduction of the incarcerated small bowel which was viable and closure of the obturator foramen by plication of the parietal peritoneum. The patient recovered uneventfully and no recurrence occurred during the follow-up. The obturator hernia should be included in the differential diagnosis if clinically suspected. Early diagnosis and prompt surgical treatment are essential to reduce the morbidity and mortality associated with obturator hernia.

Keywords: Intestinal obstruction; Obturator hernia; strangulated hernia.

INTRODUCTION

Obturator hernia is defined as the issue of part of the abdominal contents through the subpubic canal following the path of the obturator nerves and muscles [1]. The first case was observed in 1718 (Lemaire, Strasbourg). It is a relatively rare pathology. Reported incidence of obturator hernia ranges from 0.05% to 1.4% of all hernias.

Here we present a typical case of obturator hernia which was diagnosed by spiral CT preoperatively and the emergency operation was performed successfully.

CASE REPORT

A 69-year-old women, was sent to our emergency department because of recurrent abdominal pain and constipation for 8 days without any history of previous abdominal operations. The colicky pain was getting worse in recent nearly six days, accompanied with nausea and vomiting.

Examination showed a lean woman with a distended abdomen without tenderness (Figure 1a). Intestinal peristalsis was visible and no mass was palpated in the bilateral groin. The digital rectal examination was painful. The abdominal x-ray proved the small bowel obstruction, the exact cause remained uncertain preoperatively.

The unprepared abdomen X-ray shows hydro aeric levels which are wider than high (Figure 1). The abdominal CT showing intestine lying between the obturator externus and pectineus muscles, corresponding to a mechanical occlusion upstream of a right obturator hernia (Figure 2).

The patient underwent a median laparotomy showing a right strangulated obturator hernia (Figure 3). The surgeon performed a gentle reduction of the incarcerated small bowel which was viable and closure of the obturator foramen by plication of the parietal peritoneum.

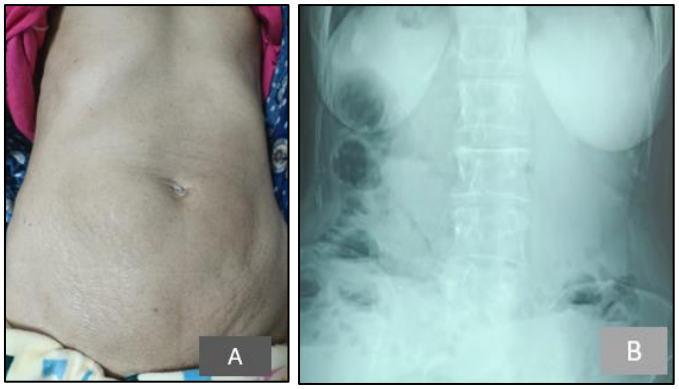

Figure 1: A: lean woman with a distended abdomen. B: Unprepared abdomen X-ray shows hydroaeric levels which are wider than high

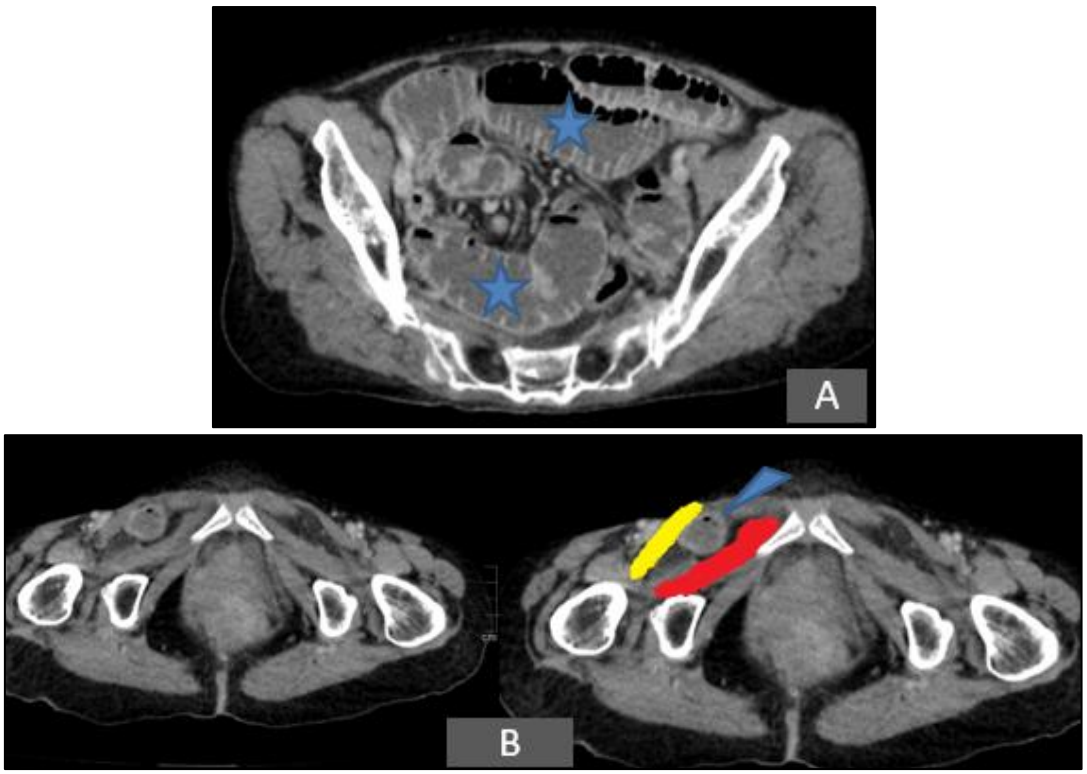

Figure 2: Abdominal-pelvic CT scan after portal injection of PDC; A: Intestinal dilatation of the small intestine with a hydroaeric levels (asterisk) upstream of an intestinal loop (arrowhead) located between the external obturator (red area) and pectineal muscles (yellow area) corresponding to a mechanical occlusion upstream of a right obturator hernia

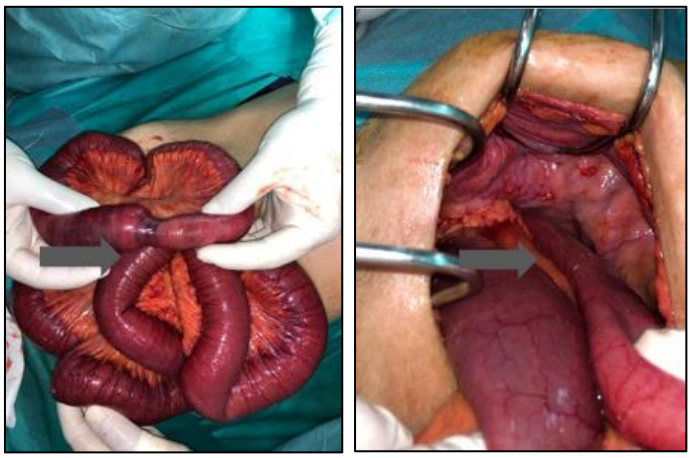

Figure 3: Median laparotomy showing a right strangulated obturator hernia (arrow)

DISCUSSION

The obturator foramen is the largest opening in the abdomen [1]. The obturator membrane closes most of the surface of this orifice, leaving free a passage at its supero-external angle: the obturator canal. The obturator artery and nerve pass to the external part of the obturator canal. They are accompanied by fat, not allowing the creation of a hernia. The clinical latency of obturator hernias does not make it possible to define their prevalence; in fact only strangulated hernias are appreciated. They represent 0.05 to 1.4% of all operated hernias and 0.2 to 1.6% of bowel obstructions [3]. Indeed, latent until it is strangulated, the obturator hernia is revealed by an aspecific acute occlusive syndrome, sometimes preceded by episodes of spontaneously reduced strangulation (23.5% in our series). We find in the literature a rate of subocclusive episodes varying from. In the majority of cases, the patient is a woman, elderly (76 to 98 years old) and emaciated. It is in fact nine times more common in women [4-6]. Women are most often affected because their obturator foramen is wider and the obturator canal is more horizontal [7]. The average weight of patients with obturator hernia is 34.5–39 kg [7, 8]. Weight loss is a major factor in the formation of obturator hernias. It results in the melting of the fat pad in the subpubic canal, as well as the disappearance of the subperitoneal fat. The peritoneum, having no longer any attachment to the pelvic wall, will slip easily into the obturator canal emptied of its fat and form a hernial sac. These are usually small hernias [7]. The obturator hernia is most often located on the right, like oar case [4] (65% of hernias in our series). It is actually more symptomatic on the right. This seems to be explained by the presence of the sigmoid colon on the left, covering the obturator foramen and thus reducing the risk of strangulation. The obturator hernia is burdened with the highest mortality rate of strangulated hernias. The mortality rate literature data of between 11 and 70% [4]. This is perhaps due to a difficult preoperative diagnosis. The symptomatology was usually that of an acute occlusion but without any specificity. The absence of external hernia and anterior laparotomy could guide the preoperative diagnosis. The best clinical argument is the Romberg-Howship sign. Its frequency varies between 15 and 50% of cases (23.5% in our series) [4, 9, 10]. It corresponds to a hyper- (even sometimes hypo-) esthesia along the territory of the obturator nerve (from the inguinal hollow to the anterior aspect of the thigh [11] and is known to be pathognomonic for obturator hernia. Classically, this pain is exacerbated by extension and abduction of the thigh painful digital rectal examination, corresponding to palpation of the incarcerated loop, can be found.

Radiological explorations can help with the diagnosis. The interest of scanner and echography has been studied on small series. Ultrasound, highlighting a hypoechoic mass in the region of incarceration, suggests the presence of a dilated small intestine [3]. It is quick and easy to do. It thus makes it possible to evaluate the degree of intestinal dilation and to locate the level of the obstruction [12, 13]. In trained hands, ultrasound is considered by some authors to be the diagnostic examination of choice [3]. The scanner has an interest in the etiological diagnosis of small bowel occlusions [14] and allows in the case of strangulated obturator hernia to show a tissue low-density mass lying between the obturator externus and pectineus muscles, corresponding to incarcerated small intestine [7, 15]. It is considered specific for the preoperative diagnosis of obturator hernia, being able to give an image allowing the diagnosis, without opacification [12]. It thus makes it possible to reduce the diagnostic delay and by the same that of the surgical management. The difficulty of diagnosis is responsible for a delay in surgical management. It is not necessary to make the preoperative diagnosis of strangulated obturator hernia (about 10% in the literature), but that of occlusion and strangulation, in order to carry out emergency treatment. The ASP easily show direct or indirect signs of incarceration of an ileal loop in an obturator orifice. Delay in diagnosis increases the risk of intestinal necrosis, responsible for a high rate of postoperative morbidity and mortality. The advanced age of the patients is also a cofactor of poor prognosis. Some series in the literature report an intestinal resection rate of 50 to 100% [3, 7]. Treatment of strangulated obturator hernia is surgical. Different approaches can be envisaged, varying both in terms of their approach and the repair technique. Intestinal obstruction and necrosis most often require emergency laparotomy when the diagnosis is uncertain. It is indeed the fastest and safest approach (it facilitates bowel resection and protects against vascular damage).

CONCLUSION

Obturator hernias are a rare cause of gastrointestinal obstruction whose preoperative diagnosis is difficult due to the low clinical specificity causing a relatively high morbidity and mortality. The computed tomography examination seems to be a major aid in the etiological diagnosis. But once the diagnosis of occlusion has been made, an emergency intervention will make it possible to specify the etiology and to carry out the treatment.

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