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Bowel obstruction in obturator hernia: A challenging diagnosis

L. Conti^{a,*}, E. Baldini^a, P. Capelli^a, C. Capelli^b^a Department of General, Vascular and Breast Surgery, G. Da Saliceto Hospital, Cantone del Cristo 50, Piacenza, Italy^b Faculty of Medicine, University of Milan, Via Festa del Perdono 7, Milano, Italy

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ABSTRACT

INTRODUCTION: The obturator hernia is a rare pelvic hernia that often comes in the shape of bowel obstruction caused by the presence of an intestinal segment, more often ileum, passing through the obturator foramen of the pelvic wall (Fig. 1). This type of hernia accounts for 0.5–1.4% of all hernias.

CASE PRESENTATION: We report the clinical case of a 84-year-old woman with no previous surgical interventions, who went to the emergency room complaining of vomit and nausea, bowels closed to gas and stool, which she had experienced for three previous days. Routine blood test showed impaired renal function and hydroelectrolyte imbalance. A CT scan revealed a right ileal, strangulated obturator hernia. The patient underwent an emergency surgical intervention with laparoscopic *trans*-abdominal peritoneal approach (TAP): after the reduction of the herniated segment, a primary suturing of the parietal defect was performed without ileal resection.

DISCUSSION: Because of the non-specific symptoms the diagnosis of this kind of hernia is often unclear; female are 6–9 times more likely than men to be subject to the aforementioned pathology, mostly occurring in multiparous, emaciated, elderly woman so it is also called “the little old lady’s hernia”. Risk factors are loss of weight, chronic pulmonary disease and ascites which increase the abdominal pressure. An infrequent presenting sign is a palpable mass, or the Howship-Romberg sign – a pain radiating from the inner thigh and knee – but it could be misleading when confused with symptoms of gonarthrosis or lumbar vertebral disc pathology. CT scan has superior sensitivity and accuracy with respect to other radiological exams to assess the presence of an obturator hernia.

CONCLUSION: Obturator hernia is a rare type of hernia due to its diagnosis, which is often unclear; a prompt suspect based on the non-specific symptoms is crucial for the diagnosis. Surgical management depends on early diagnosis and it is the only possible treatment for this pathology.

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1. Introduction

This work has been reported in line with the SCARE criteria [3].

Obturator hernia is a rare pelvic hernia, accounting for 0.5–1.4% of all hernias [4] that frequently causes bowel obstruction (Fig. 1); it is observed in elderly emaciated and multiparous women, so it’s also called “little old’s lady hernia” [5]. The hernia sac usually contains small bowel, rarely appendix, colon, Meckel diverticulum or omentum [6].

A prompt diagnosis and treatment could avoid complications such as necrosis of intestine which increases morbidity and mortality.

2. Presentation of case

An 84-years-old, emaciated woman was brought to the emergency department of our hospital complaining of abdominal pain, nausea and vomit which she had experienced for three previous days.

The patient appeared to be debilitated and scrawny. The physical exam revealed a palpable thyroid goiter. The patient was afebrile, tachycardic, with a blood pressure of 115/60; the abdominal exam was negative, faint borborygmis were audible, no palpable mass was detected and there were no feces on the rectal digital exploration.

Blood routine test revealed an increase value of creatinine, which was a new finding, low serum sodium and chlorine and raised levels of inflammatory values. A chest and abdomen X-ray revealed air–fluid level in the mesogastric region and no pulmonary lesions were observed. An abdominal ultrasound showed the gallbladder filled with biliary sludge with no pathological findings. A nasogastric tube and a urinary catheter were placed. The patient

* Corresponding author.

E-mail addresses: dr.luigiconti@gmail.com (L. Conti), e.baldini@ausl.pc.it (E. Baldini), p.capelli@ausl.pc.it (P. Capelli), ceciliacapelli1912@gmail.com (C. Capelli).

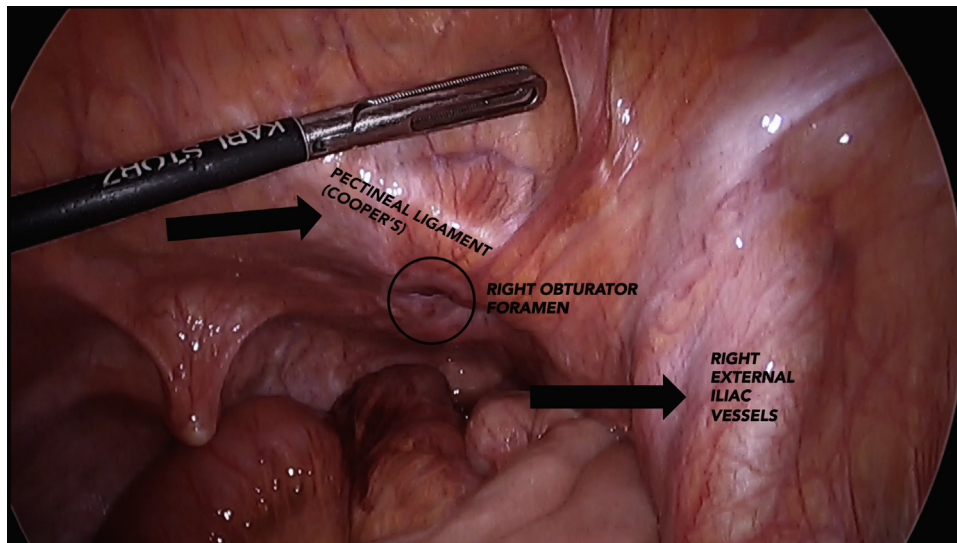


Fig. 1. Anatomy and limits of the right obturator foramen.

was referred to the nephrology unit with a diagnosis of an acute pre-renal failure.

After rehydration with saline solutions and total parenteral nutrition, the blood values of the patient ranged to normality, the 24 h/volume of urine increased.

As days passed the patient still complained of nausea, vomit and abdominal pain with bowel closed to gas and stool and the nasogastric tube draining 500 mL of fecaloid fluid daily. Her abdomen was tender, bloated and tympanic to palpation and percussion, an X-ray of the abdomen demonstrated air-fluid levels. Based on the suspicion of an acute bowel obstruction, a CT scan was the best applicable solution, without using contrast agent due to low renal excretion. The scan revealed a small intestine segment strangulated through

the obturator right foramen (Fig. 2) with surrounding peritoneal free fluid.

The patient was transferred to the operating room and underwent to a laparoscopic emergency intervention: the exploration of the peritoneal cavity confirmed the radiological diagnosis of bowel obstruction due to a strangulated loop of small intestine entering the right obturator foramen (Fig. 3). A primary suture of the parietal defect was performed using non-absorbable 2/0 ticron (Fig. 4), no ileal resection was performed because of the vital aspect of the intestine.

The patient started oral feeding and passed stool on the third post-operative day; discharge was on fourth post-operative day after a complete restoration of the bowel function.

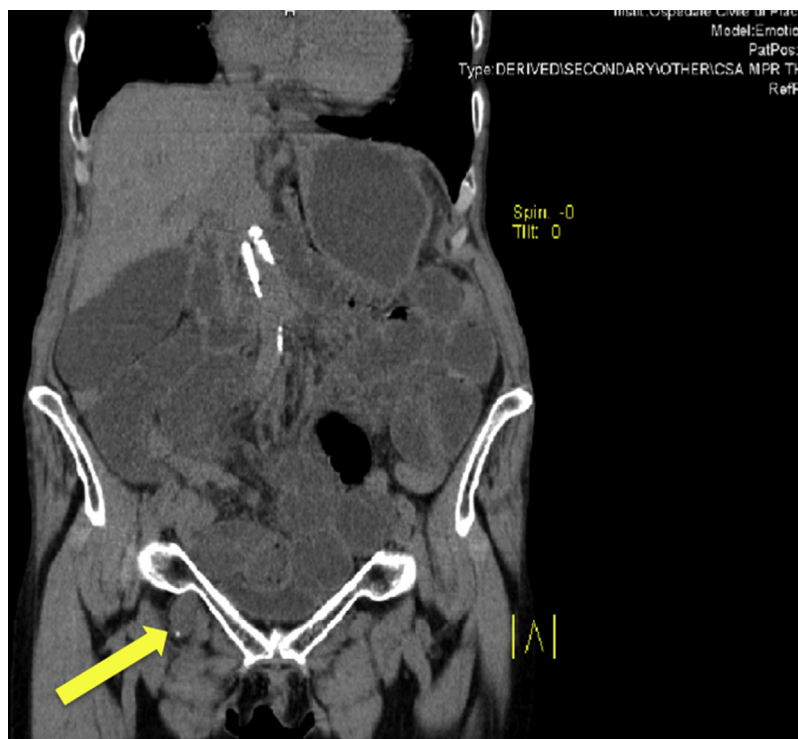


Fig 2. CT scan, sagittal section: right obturator hernia.

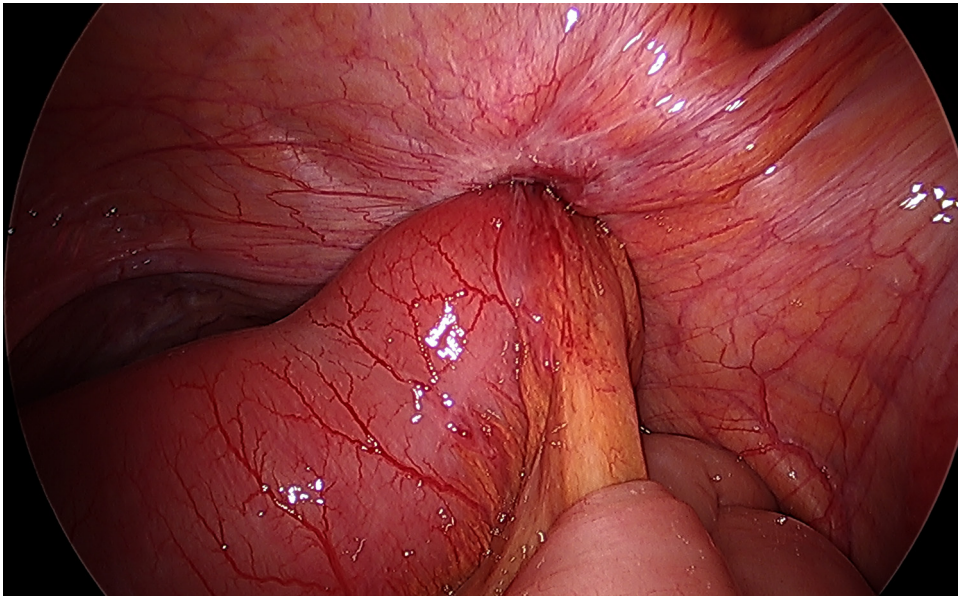


Fig. 3. Small intestine embedded in right obturator foramen.

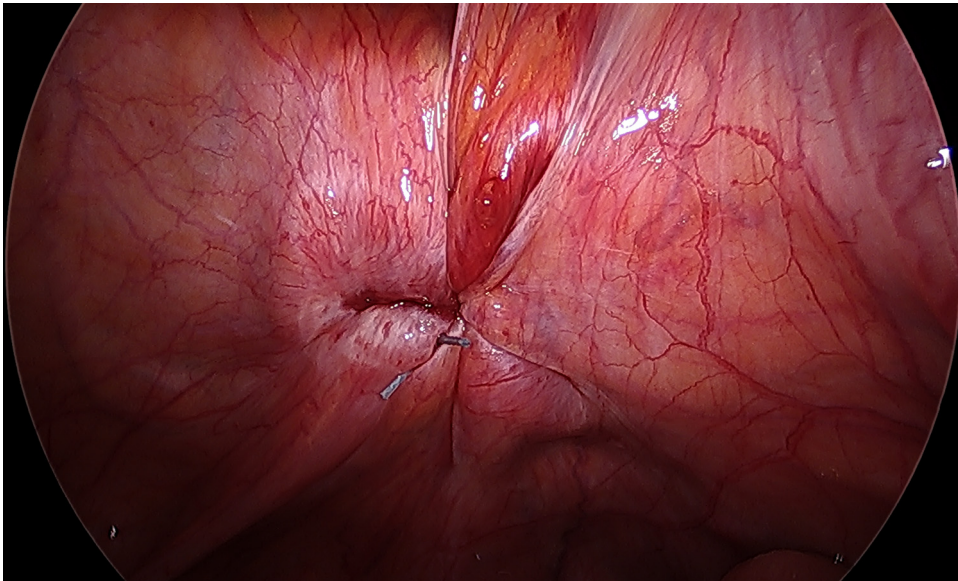


Fig. 4. Primary suture of the parietal defect.

The patient was referred to our surgical day hospital for a follow up: she didn't experienced abdominal tenderness and bloating anymore, her blood values were normalized and so her renal function, she passed stool each two or three days at least, surgical scars were consolidated with no signs of infection.

3. Discussion

Due to the peculiarities of this type of hernia, different problems have arisen while conducting the diagnosis of the pathology. Symptoms such as the pain radiating from the inner parts of the thigh, the knee or the hip could be confused with the dorso-lumbar intervertebral disc pathology. Signs such as Howship-Romberg and Hannington-Kiff are aspecific and they should be associated with a CT scan which is clearly the best performable radiological exam [1,2].

Different surgical approaches are proposed: laparoscopic surgery, both TAPP –transabdominal- or TEP –total extraperitoneal [7], is feasible in expert settings, but in an emergency set-up usually a midline incision by laparotomy is required to allow a wider exposure of the obturator ring, the pelvic floor and the lower abdomen, especially in the case of gangrenous bowel resection. Other possible approaches can be performed via transinguinal, retropubic or femoral [8].

The obturator stump could be repaired using a primary suture which has an acceptable recurrence rate lower than 3% [9], a reabsorbable mesh, a plug or a peritoneal and omentum patch [6].

4. Conclusion

Obturator hernia is a rare entity so its diagnosis is often unclear; a prompt suspect based on aspecific symptoms is crucial for the diagnosis. CT scan has a major sensitivity than other radiological

exams. Surgical management depends on early diagnosis and it is the only possible treatment for this pathology [5].

Conflicts of interest

All authors have no conflicts of interest.

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Ethical approval

I declare that ethical approval has been exempted by my Institution for this case Report.

Consent

Authors obtained the written and signed consent to publish the case report.

Author contributions

All authors contributed to literature review and interpretation for this case report; first author wrote the case report.

Registration of research studies

No unique identifying number requested for this case report.

Guarantor

LUIGI CONTI, MD.

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