

CT Scan and Obturator Hernia

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Abstract

Bowel obstruction by obturator hernia is a rare surgery and imaging condition. Caused by incarcerated bowel segment in obturator foramen, it occurs generally among elderly women. There is no specific clinical finding and most often, the hernia is not detected in physical examination. We report the case of mechanical bowel obstruction due to incarcerated obturator hernia in elderly thin woman. Computed Tomography (CT scan) showed an incarcerated bowel with a fatty mass in the left obturator foramen.

Generally, CT scan showed incarcerated bowel with hydrometric level. Intravenous contrast and a neutral luminal contrast improved visibility of bowel wall enhancement and thickness. Bowel wall necrosis and perforation radiological signs are rarely seen, and must be carefully researched: pneumatosis intestinalis, pneumatosis portalis pneumoperitoneum, submucosal hemorrhage and variable amounts of free fluid.

CT scan, is recommended for early diagnosis, to avoid complications and for a surgical cure in better conditions.

Keywords: Hernia; Obturator foramina; CT scan

Introduction

Obturator hernia is a bowel, generally small bowel, passing in the obturator foramina, frequently observed in elderly women, with emaciation and chronic disease increasing pressure in abdominal cavity. Its uncommon occurring in 1% of population, and can lead to the usual complications of a strangulated hernia, such as acute bowel obstruction and necrosis.

Case Report

We describe a case of an 80-year-old lady, with no history of chronic disease or previous abdominal surgery. Her family reported a significant weight loss over the last year. She was admitted to the emergency department for abdominal distension, obstipation and bilious vomiting for 07 days. Clinical examination found a thin patient with diffuse abdominal pain, central distension of abdomen with generalized tenderness. Her full blood count, renal function, and liver function tests were normal. An abdominal X-ray showed dilated loops of small bowel. A Computer Tomography (CT scan) revealed an incarcerated left obturator hernia (**Figure 1**). After this unexpected CT finding, a meticulous neurological examination found inner thigh pain that may extend to the knee on internal rotation of the hip secondary to the irritation of the left obturator nerve, masked on admission by diffuse abdominal pain. The left obturator hernia defect was closed by suturing edges of obturator orifice, reinforced by polypropylene mesh. The postoperative period in the hospital was 02 days, and passed uneventfully.

Discussion

Reported incidence of obturator hernia ranges from 0.05% to 1.4% of all hernias and are responsible for 0.2% to 1.6% of intestinal obstructions [1]. There have only been 400 published cases, noted in a literature review from 1966 to 2000 [2].

Despite the Romberg-Howship sign described with great sensitivity, symptoms and clinical findings are usually non-specific, for that, obturator hernia is difficult to diagnose and rarely diagnosed before CT scan. Our patient presented with complaints of acute intestinal obstruction, with no past history of recurrent attacks of intestinal obstruction.

Computed Tomography scan, is recommended for early diagnosis. Some authors recommend laparotomy to diagnose and treat at the same time, whereas others prefer preoperative non-invasive diagnostic methods such as CT scan [3,4].

Generally, CT scan showed incarcerated bowel in the obturator foramen with hydrometric level (**Figure 2,3**). Intravenous contrast and a neutral luminal contrast improved visibility of bowel wall enhancement and thickness. Bowel wall necrosis and perforation radiological signs are rarely seen, and must be carefully researched: pneumatosis intestinalis, pneumatosis portalis pneumoperitoneum, submucosal hemorrhage and variable amounts of free fluid [5].

Our case was interesting, showing an obturator hernia in the left side, contrasting with literature data suggesting more right-side location. Other remarkable particularity of our case, was that the incarcerated bowel contained an outer edge lipoma



Figure 1

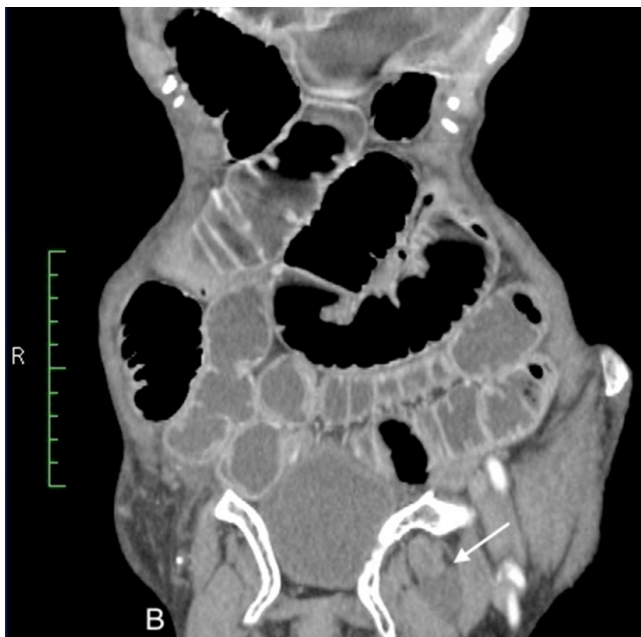


Figure 2



Figure 3

(Figure 4), showed as a fatty mass with low density, and authors suggest increased risk of obturator herniation in presence of bowel masses.

Patient was managed by laparotomy. After left femoral incision, we discover the incarcerated hernia between dilated and normal bowel (Figure 5). We try to externalize the incarcerated bowel by gentle traction. The small bowel was not necrotic,



Figure 4



Figure 5

and no bowel resection was performed. Obturator orifice was repaired by suturing of the orifice edges, respecting vasculonervous pedicle, with reinforcement with polypropylene mesh: by first exposing peritoneum, fixing the polypropylene mesh, then covering it with the peritoneum.

Conclusion

Obturator hernia is a rare diagnostic challenging cause of acute intestinal occlusion, particularly seen in elderly emaciated women. CT scan and laparotomy, or laparoscopy if the patient's condition allows it, can decrease risk of bowel necrosis and lower morbidity and mortality.

Conflicts of interest: The authors report no conflicts of interest.

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