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Acute Intestinal Obstruction by Internal Hernia: Two Cases

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Summary: Case Report

Transmesenteric internal hernias in adults correspond to an intestinal outlet through a defect in the mesentery. They are usually the result of surgery. Other aetiologies are rare, including traumatic, inflammatory and congenital causes. Despite their rarity, they have varied anatomical and clinical features. We report a case of acute intestinal obstruction due to transmesenteric hernia in an adult.

Keywords: Internal hernia, transmesenteric hernia, intestinal obstruction.

INTRODUCTION

Acute intestinal obstruction by internal hernia is rare [1]. They are usually diagnosed intraoperatively [2]. There are many anatomical forms of internal hernia, some of which are very rarely reported. Transmesenteric hernias, a rare form of internal hernia, are exceptional. In the literature, there are few data on this type of hernia, making it difficult to determine their incidence. Complications have often been described at a paediatric age, supporting a congenital origin of the defect. However, cases of transmesenteric hernias have also been described in adults. We report a case of acute intestinal obstruction by internal hernia.

OBSERVATION: CASE 1

A 66-year-old man with a history of type 2 diabetes was admitted to the emergency department of the Mohammed VI University Hospital, Marrakech, with diffuse abdominal pain, vomiting and cessation of bowel movements and gas. These symptoms had been present for 48 hours. The history revealed similar paroxysmal episodes, which usually subsided after a few hours. No history of abdominal surgery or trauma was found. Clinical examination revealed an occlusive syndrome with abdominal distension and tympany. The parietal hernial orifices were free and the rest of the examination was unremarkable. An unprepared abdominal X-ray showed hydroaerobic levels of the gallbladder type. Abdominal computed tomography (CT) showed hydroaerobic levels of the greaves with a radial arrangement of the coves in contact with the deep surface of the anterior abdominal wall and convergence of the oedematous mesenteric folds and their vessels towards a vortex image in relation to a mechanical gallbladder occlusion with a small amount of peritoneal effusion (Figure 1). The patient underwent emergency surgerý under general anaesthesia, by median laparotomy and surgical exploration found an ileal loop

incarcerated in the mesentery (Figure 2). The incarcerated loop was distressed but viable after rewarming with saline. The procedure involved removal of the incarcerated loop, verification of its viability and closure of the mesenteric breach. Post-operative management was straightforward, and the patient was discharged from hospital on the third day.

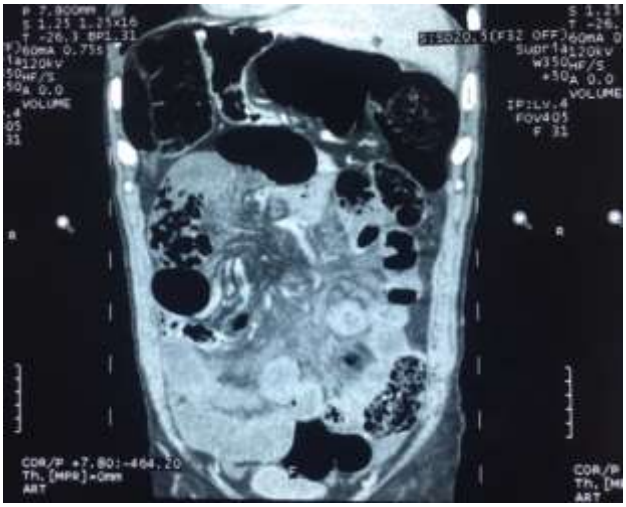

Figure 1: CT scan of the abdomen showing hydroaeric levels in the small intestine

Figure 2: Intraoperative view showing the incarcerated loop through a mesenteric defect

OBSERVATION: CASE 2

Patient aged 23 years, with a history of horseshoe kidney, admitted to the emergency department of CHU MOHAMMED VI for diffuse abdominal pain with vomiting first bilious then early post prandial, aggravated by the appearance of a cessation of matter and gas, all evolving for about two days in a context of altered general condition. On clinical examination, the patient was haemodynamically and respiratorily stable, with a distended, tympanic abdomen with diffuse tenderness, and an unremarkable rectal examination. An abdomino-pelvic CT scan showed distension of the bowel with hydroaerobic levels measuring 4.2 cm in maximum diameter, circumferential and irregular thickening of some of the jejunal bowels with a jejunal loop that seemed to invaginate at D3, creating a mass at D2 measuring 3x4 cm, responsible for duodenal and gastric stasis upstream; and an abundant peritoneal effusion visible in all compartments and the presence of a horseshoe kidney. The patient underwent emergency laparotomy. Surgical exploration revealed a serohematic effusion made up of distressed fluid, and a retrocaecal internal hernia with necrotic grecic content measuring approximately 2 metres, 50 cm from Treitz's angle and 40 cm from the ileo-caecal junction. The procedure consisted of reduction of the herniated contents, followed by resection of the cecum with mechanical latero-lateral greco-celiac anastomosis. Pathological examination of the operative specimen revealed ischaemic necrosis with no sign of malignancy. There were no complications following the operation, but nutritional management was indicated in order to prevent and manage a possible short small bowel syndrome. Six-month follow-up was unremarkable apart from a few episodes of sporadic diarrhoea.

DISCUSSION

Transmesenteric hernias, a rare form of internal hernia, are exceptional. Their incidence has not been formally established. Mesenteric breaches are usually secondary to abdominal surgery. Other aetiologies are rare: traumatic, inflammatory or congenital.

They almost always involve the avascular area of Trier, situated between the superior mesenteric axis medially and the ileo-caeco-appendicular axis laterally. The defect

usually takes the form of a slit, sometimes extending over the entire height of the mesentery. The orifice is generally single and the hernia never contains a sac. It appears to result from a failure to resorb the primitive dorsal mesentery or from mesenteric ischaemia during organogenesis.

The clinical picture is one of acute small bowel obstruction. The PSA showed non-specific hydroaerosic levels of the greclic type. Abdominal CT scan with injection of contrast medium seems to be the best examination for confirming the mechanism of the occlusion, when it shows the presence of fixed and thickened small intestines behind the mesentery, which itself appears to be projected forward. In reality, however, preoperative diagnosis is exceptional. Treatment is surgical. It depends on the viability of the intestine, and the median approach is still indicated for any small bowel occlusive syndrome of undetermined aetiology. However, the laparoscopic approach seems particularly interesting in this indication, both for diagnostic and therapeutic purposes, in the absence of any major distension of the small intestine, which would contraindicate this approach.

The manoeuvre consists of gradually reducing the herniated small intestine by gentle traction but also by pushing it back through the mesenteric defect. When the hernial neck is narrow, intestinal ischaemia is almost inevitable due to the usually long diagnostic delay in this condition. Finally, in the case of intestinal sphaceles, treatment must follow the classic rules of intestinal resection.

CONCLUSION

Transmesenteric hernias are an exceptional cause of acute intestinal obstruction in adults. It should nevertheless be considered in the presence of an obstruction occurring in the absence of any history of abdominal or pelvic surgery. However, a definitive diagnosis is often made by the surgeon following intraoperative findings.

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