Case report

Left paraduodenal hernia: rare cause of acute intestinal obstruction

Abstract:

Internal hernias are a rare cause of intestinal obstruction, representing less than 1% of cases. Preduodenal hernias, the most common type of internal hernias, are of a congenital origin. They may be asymptomatic, cause chronic abdominal pain, or present with an acute bowel obstruction with strangulation and ischemia. We report a case of a left preduodenal hernia found in a patient with acute intestinal obstruction.

Keywords:

Internal hernia; Preduodenal hernia; Bowel obstruction

Introduction :

Internal hernias represent less than 1% of the causes of acute intestinal obstruction of mechanical origin [1].

Para-duodenal hernias are classically by far the most frequent since they represent 50% to 55% of all internal hernias. [2]

They are associated with a high lifetime risk of causing obstruction and in these cases the mortality rate can be as high as 20%, possibly due to delayed diagnosis [3-6].

Therefore, the diagnosis should be suspected in any patient presenting with acute small bowel obstruction without a history of prior abdominal surgery. The CT scan is the examination of choice for diagnosing para-duodenal hernia with small loops.

The diagnosis of this congenital malformation is often made during intraoperative surgical exploration of the occluded bowel. [7]

In this case report, we present the case of a 70-year-old female admitted with acute bowel obstruction caused by a left para-duodenal hernia.

Observation :

A 70-year-old female, followed for ankylosing spondylitis (APS) with no history of previous surgical intervention, was admitted to the emergency room with an acute intestinal obstruction due to abdominal pain with cessation of matter and gas for 2 days associated with bilious vomiting. We

found a diffuse tenderness without signs of peritonitis in the abdominal examination. In digital rectal examination, we found an empty rectal ampulla.

The unprepared abdomen regains small air-fluid levels.

An abdominal computed tomography (CT) scan found a feces sign at the level of an ileal loop with distension of the adjacent small bowel concluding in a mechanical small bowel occlusion. (Figure 1)

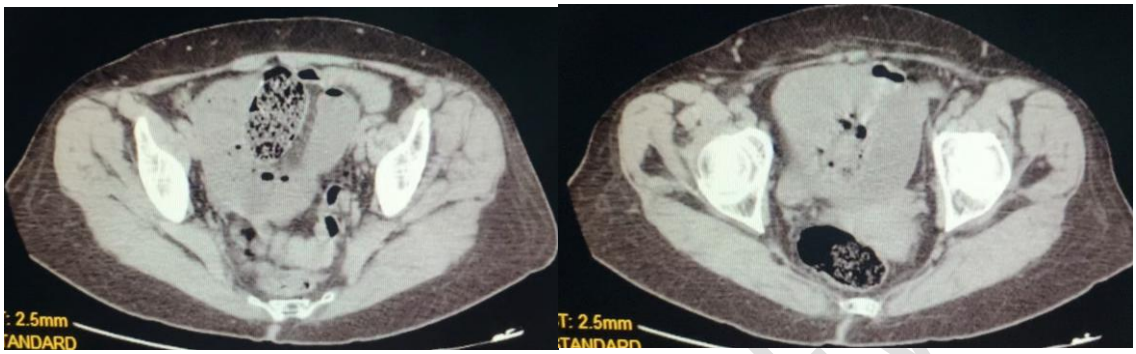

Figure 1: CT scan showing a loop incarcerated in an internal hernia

The patient was operated on urgently by midline laparotomy. Surgical exploration found distended small bowel loops with caliber disparity and area of stricture 2 meters from the angle of the jejunal denomination in an orifice of a left para-duodenal internal hernia measuring approximately 2 cm in diameter. After reduction of the intestinal loops, the orifice of the hernia is enlarged. (Figure 2)

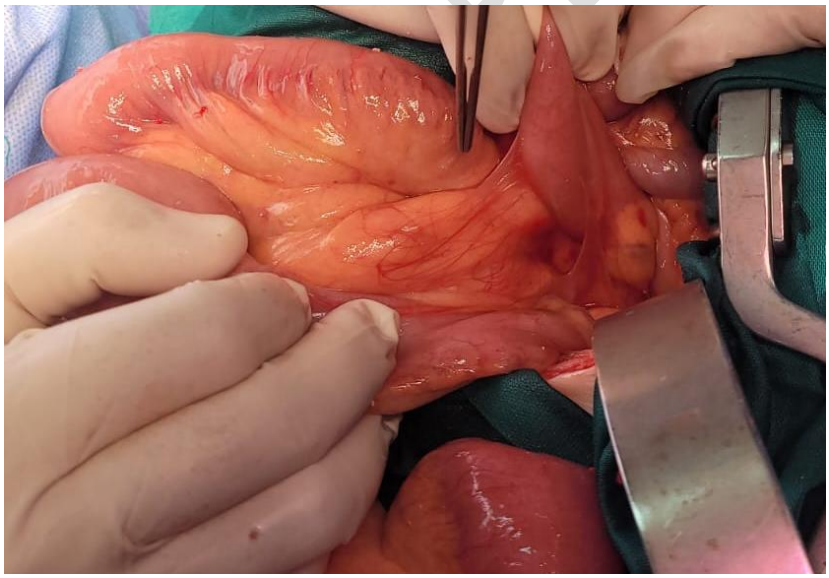

Figure 2: Per-operative image showing the internal orifice

To note, exploration does not find necrosis or peritonitis. The post-operative follow-up is simple and the patient was discharged

on the 3rd day after the operation.

Discussion :

Internal hernias are protrusions of the hollow abdominal viscera in an intraperitoneal orifice, but which remain inside the abdominal cavity (post-surgical iatrogenic forms are excluded) [2]

Depending on the nature of the orifice, several types and mechanisms can be described:

a. Orifice para normal, creating a peritoneal dimple, due to a lack of joining of the peritoneal layers (Toldt or Treitz): retrocecal, paraduodenal; or exaggeration of a peritoneal fold: ileocaecal, retroduodenal, paravascular. Other locations have been described: paracolic, intersigmoid, supravesical or in the folds of the broad ligament.

b. Through an abnormal pathological orifice, the mechanism of which remains controversial: small or large omentum, falciform ligament of the liver, trans mesenteric or mesocolic.

c. Finally through a normal orifice: the omental foramen (Hiatus of Winslow). [8]

Although PH is congenital, most cases are discovered between the 4th and 6th decades of life with an average age of about 38.5 years, they occur exceptionally in patients over 75 years old. Men are generally 3 times more affected than women. [10]

The clinical picture is not specific and the circumstances of discoveries are variable. Some internal hernias may remain asymptomatic throughout life.

About 10% to 15% of cases are discovered preoperatively. [11].

Often the clinical signs are dominated by periumbilical or postprandial cramps, epigastric pain, nausea, vomiting and rarely the presence of an abdominal mass on the left side.

But the most common presentation of left paraduodenal hernia is acute bowel obstruction. [9]. At least 50% of patients with left paraduodenal internal hernias eventually develop occlusions [12].

Mortality is high at 20 to 50%, hence the recommendations all cases of internal hernias, including asymptomatic people, should be surgically corrected. [13].

Computed tomography has now become the examination of choice to provide the correct diagnosis during symptomatic periods. The preoperative diagnosis of these internal hernias could often be unknown even after a good scannographic examination, its discovery is per operative.

The treatment is surgical. The hernia must be reduced manually. If it is difficult to reduce due to its bulky size or adhesions inside the sac, an incision in the avascular part of the hernial sac on the right side of the lower mesenteric vessels. During this procedure, it is important to consider the relationship to the inferior mesenteric vessels to avoid injury to these structures.

The defect is treated in two ways, either by simple closure or by wide opening of the sac by making it continuous with the peritoneal cavity.

In case of intestinal necrosis, the gesture will be associated with a resection. [14]

Studies have revealed that a laparoscopic approach is possible which will be useful as a means of diagnosis if in doubt and at the same time therapeutic. [15-17]

Conclusion :

Any occlusive syndrome with a sudden onset with dilated small bowel loops, in a patient with no prior surgical history, even elderly, should in principle raise the possibility of a strangulated internal hernia; the frequency of “primary peritoneal bands” being at most around 10%.[2]. Careful analysis of axial slice images and multiplanar reformations should, in most cases, lead to the diagnosis.

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