

LEFT INGUINAL HERNIA WITH CECAL CONTENT AND TERMINAL ILEUM: CASE REPORT

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Abstract: Hernia is a pathology that occurs due to the protrusion of abdominal elements, and the main risk factors are smoking, male gender, chronic obstructive pulmonary disease, diabetes mellitus and family history. Suspicion occurs due to local bulging and, on physical examination, the reducibility of the content is verified, classifying it as reducible or incarcerated hernia. The definitive treatment is surgical by different techniques. This article presents a case report of a left inguinal hernia with contents of the cecum and terminal ileum, diagnosed during surgery. The case is presented by the rarity of its herniated content and location. It is difficult to clarify the mechanism and the associated epidemiology, with similar reports being referred to as Amyand's hernia. It is important because it is a differential diagnosis of inguinal hernias and because of its risk of complications such as ischemia of the cecum and terminal ileum.

Keywords: Left inguinal hernia, cecal hernia, male.

INTRODUCTION

The inguinal hernia is a pathology that occurs by the protrusion of abdominal elements through the abdominal wall, specifically in this case, it occurs between the structures of the Fruchaud space that is delimited medially by the rectus abdominis muscle, inferiorly by the pectineal ligament, laterally by the iliopsoas muscle and superiorly by the internal oblique and transverse muscles (Goulart et al, 2015). The main risk factors for this comorbidity are smoking, male sex, chronic obstructive pulmonary disease (COPD), diabetes mellitus and family history (Junior, 2022). Smoking and diabetes are related to hernia because they alter the homeostasis of the connective tissue, thus reducing the support provided by it (Módena et al., 2016).

The occurrence of this pathology is explained by the congenital theory, in which the patient would have a peritoneal diverticulum that would lead to the appearance of indirect inguinal hernias or a defect in the musculature, aponeurosis and fascia of the region leading to direct inguinal hernias. Also by the acquired theory in which the pressure exerted on the anterior wall would be the cause of inguinal hernias. Currently, there is the collagen theory, in which the alteration of its structure, leading to a lower density and organization, would be linked to the occurrence of hernias. (Goulart et al, 2015).

Clinical suspicion arises from the complaint of bulging in the region by the patient, and then the physical examination verifies the reducibility of the content to verify whether the hernia is incarcerated. When in doubt, the Valsalva maneuver can be performed (the patient blows against resistance, thus increasing intra-abdominal pressure), which leads to increased bulging of the hernia. Surgical treatment by different techniques being the method of choice. (Goulart et al, 2015).

CASE REPORT

A 77-year-old man was referred to the Maria Aparecida Pedrossian University Hospital in the emergency room with a history of herniation in the left inguinal region 4 years ago, evolving with severe pain 24 hours ago, denied fever and dysuria, reported last bowel movement more than 24 hours ago and no flatus since then. He reported a previous episode of hospitalization 2 years ago due to hernia incarceration, but he was not operated on due to other comorbidities. Previous morbid history of systemic arterial hypertension (SAH), COPD, type 2 diabetes mellitus (DM2), benign prostatic hyperplasia, former smoker and right inguinal hernioplasty.

She was using losartan, finasteride, doxazosin, metformin, salbutamol, beclomethasone, aerolin and atrovent to treat comorbidities. On general physical examination, he was in good general condition, flushed, hydrated, eupneic, afebrile, acyanotic, anicteric and oriented in time and space. On pulmonary auscultation, he presented bilateral vesicular murmur, without adventitious sounds and cardiac auscultation with normal phonetic rhythmic sounds, in two stages, without murmur; in the abdominal evaluation, he was normotensive, with bowel sounds present, without visceromegaly and painful on deep palpation in the lower abdomen. The presence of bulging in the irreducible, voluminous left inguinal region of approximately 20 centimeters was verified, without signs of phlogosis and painful on palpation, the result of the evaluation was compatible with an incarcerated left inguinal hernia, and a computed tomography (CT) of the abdomen was requested, which was visualized distended loops in herniated content.

The decision for inguinoscopy with local exploration was made because the patient had not had a bowel movement for more than 24 hours and because of the absence of flatus, with a diagnostic hypothesis of irreducible left inguinal hernia with a probable clinical picture of associated obstructive acute abdomen.

Surgical findings: Hernial sac with presence of free ascitic fluid, distended and suffering cecum, presence of small bowel loops. We opted for performing a partial colectomy of the ascending segment and terminal ileum with laterolateral anastomosis of the remainder of the ascending colon with the ileum.

After surgical approach, the patient was monitored in the intensive care unit using broad-spectrum antibiotics, requiring orotracheal intubation due to disorientation, agitation, tachypnea and signs of respiratory effort with failure of non-invasive ventilation.

Computed tomography angiography was requested, in which contrast filling failures were not visualized, but bilateral pleural effusion, more important on the left, probable complications due to their previous comorbidities.

Due to the continuation of the infectious condition for five days, a contrast-enhanced CT of the abdomen was requested, which showed a small peripheral liquid collection in the loops with gas presence, maintaining a conservative approach. On the ninth postoperative day, another abdominal CT was performed for control, in which an increase in the collection was observed, suggesting fistulization of the surgical anastomosis, evolving with worsening of renal function and increase in inflammatory evidence, opting for surgical reapproach, in which, the output of a large amount of purulent liquid and the rest of dietary fibers was seen and the presence of fistula in the ileocolic anastomosis of previous surgery, without signs of ischemia of the small and colon loops, then performing enlargement of the segmental colectomy and terminal ileum, anastomosing transverse colon with terminal ileum and performing loop ileostomy with proximal ileum, approximately 40cm of new anastomosis, anchoring it in the left flank.



Figure 1. Lateral view of left inguinal bulge.
Source: the author.



Figure 2. Abdominal CT showing herniated content. Source: the author.



Figure 3. Anatomical part of the herniated structure, cecum and right colon. Source: the author.

DISCUSSION

Hernia is defined by a protrusion of viscera or part of viscera through the walls, being more common in the abdominal wall (Burcharth, J., 2014). When the hernial contents become non-reducible to its cavity, it is called an incarcerated hernia, which can cause strangulation of the hernia, causing decreased blood and lymphatic supply (Ivashchuk et al, 2014).

The content of the hernial sac may also vary. The most common cases are those with the content formed by the omentum or the small intestine (Cardenas et al, 2015). Some rarer situations are those with the presence of certain structures in the hernial sac, such as

the bladder, a Merkel's diverticulum (Littre's hernia) or the antimesenteric portion of the intestine (Richter's hernia). One of the least reported cases in the literature is Amyand's hernia (Hori, T.; Yasukawa, D.; 2021).

Amyand's hernia is characterized by the presence of a hernial sac with a vermiform appendix (Hori, T.; Yasukawa, D.; 2021). In the exposed case, the hernial content goes further, including part of the right colon, part of the cecum and distal ileum. The incidence of Amyand's hernia among all hernia cases ranges from 0.19% to 1.7%. Even more unusual in left-sided Amyand's hernia with herniation of the cecum and terminal ileum (Bekele K, Markos D, 2017). Furthermore, this type of hernia generally occurs more in men, around 90% of the cases, being compatible with the case, and the occurrence on the right side is more frequent, probably due to the anatomical position, with the left side being 9.5% of the cases. Amyand hernias (Manatakis, K. D. et al; 2021).

However, an even less common case is the presence of the vermiform appendix in the hernial sac in a left inguinal hernia, being extremely rare in the literature and due to the presence of other parts of that region it becomes an even less frequent phenomenon (Ivashchuk et al, 2014). The main causes of this type of hernia are situs inversus, intestinal malrotation, a mobile cecum in the cavity or a very wide appendix (Cardenas et al, 2015).

The initial picture of Amyand's hernia is usually asymptomatic, starting with symptoms of inguinal tenderness and bulging, colic-like pain, signs of intestinal obstruction that are compatible with an incarcerated or strangulated hernia (Nowrouzi, R; Gupta, R; Kuy, S; 2021).

The diagnosis of Amyand's hernia is most often still made accidentally during surgery and there is still no consensus in the literature on the most effective way of operating in

this case. (Ivashchuk et al, 2014). Although the diagnosis is mainly made during the operation, imaging techniques such as USG and CT can be useful in the preoperative diagnosis, but they are not always sufficient (Pun; Khatri; 2013). In some cases, the use of these imaging studies can guide the operative plan and even identify the organ present in the hernial sac (Cardenas et al, 2015). Even more so when there is knowledge of the forms of presentation and familiarity on the part of the radiologist (Caserta et al, 2021).

In the above case, a CT scan of the abdomen was performed preoperatively, in which distended loops were visualized, with no specific identification of which part of the intestine was present.

CONCLUSION

In the case in question due to the rarity of the herniated content and location, there was a difficulty in clarifying the mechanism associated with the pathology, with some similar cases being found in the literature called Amyand's hernia, so this theoretical reference was used for discussion. The case in question is included as a differential diagnosis for other left inguinal hernias, but is important due to the risk of complications such as cecal ischemia and terminal ileus. Thus, the surgeon must be prepared for similar situations that may be found intraoperatively or visualized in preoperative imaging tests that can help in the patient's surgical planning due to the possible need to perform a colectomy as in the case presented.

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