



Strangulated Littré Hernia; A Diagnostic Challenge for the Surgeon: Case Report

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Abstract

Meckel's Diverticulum (MD) is a sacular formation present in the lower part of the intestine, and is considered one of the most common congenital anomalies of the gastrointestinal tract. The bulge of muscular dystrophy in a hernia sac is called a Littre's hernia. The name originates from Alexis Littre, who first described this disease in the eighteenth century. This type of presentation is rare; only a few cases have been reported in the literature.

Introduction

Alexis Littre analyzed the post-mortem findings of two cases in which "an appendix of the ileum" had been imprisoned in a hernia. He defined this "new hernia" and made the following Relevant clinical observations on preoperative diagnosis "The patient defecates throughout the course of the disease, as the intestinal canal is uninterrupted; there is no vomiting, it is less frequent than with other hernias, it is never feculent; the belly is never fat, stretched or full of wind, as in ordinary hernias; the tumor (in the groin) forms more slowly, and never becomes so large; inflammation, fever, pain or other symptoms that may accompany this peculiar type of hernia, are less severe and take longer to manifest than in other hernias" [1,2].

MD is the most frequent congenital malformation of the gastrointestinal tract (2% to 3% of the population), caused by lack of involution of the omphalomesenteric duct that leaves a blind, persistent tubular protrusion, 5-6 cm long, containing all the layers of the normal intestinal wall. It can be located between 10-15 cm from the ileocecal valve. It is more common in men; 95% of cases are located in the antimesenteric border of the intestine and are usually asymptomatic [3,4].

Case Presentation

A 30-year-old male, with no history of importance for the case, who began suffering with pain in the epigastrium that radiated to both hypochondria, accompanied by nausea and vomiting of 12 hours of evolution, for which he went to the emergency room. Upon arrival, normal reported laboratories and abdominal ultrasound were performed, in which they found abdominal free fluid in the right side, as well as in the right iliac fossa, intestinal loops are increased in echogenicity and without peristalsis, no image is identified in closed loops. Appendicular process is suspected because the patient is restless, with pain facies and, in an analgesic position. Depressible abdomen, tender on palpation in mesogastrium and plastron in FID, McBurney (+), with data peritoneal irritation. Acute abdomen was diagnosed and the operating room was sent for Exploratory Laparotomy.

During the trans operative period, hemoperitoneum of 200 cc was observed, strangulated internal hernia was identified, a celotomy was performed and it was opened, peritoneal reaction fluid and Meckel's diverticulum of 5 cm x 3 cm with areas of ischemia and necrosis towards its base. Ischemic ileum (Figure 1), starting at two meters from the angle of Treitz until adjacent to the ileocecal valve; resection of the right colon and small intestine and end-to-end ileo-transverse anastomosis were performed in two planes, adequate permeability was confirmed, without leakage; drainage and wound closure were placed, then he went to the general surgery room for recovery.

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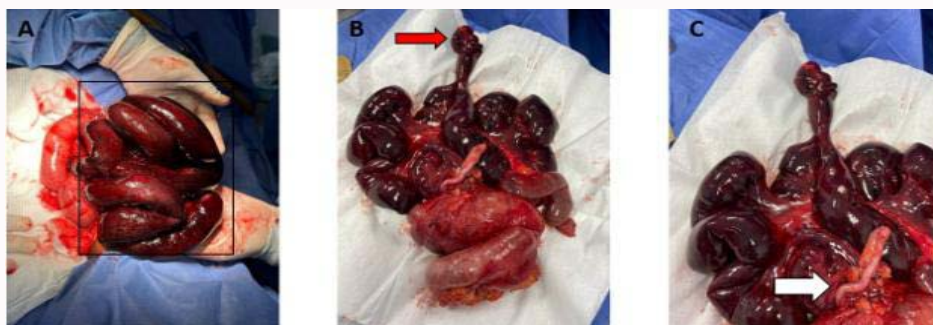


Figure 1. A. The inset shows the necrotic ileum. B. Posterior to the right hemicolectomy, the red arrow points to Meckel's diverticulum. C. The white arrow indicates the normal cecal appendage.

The patient presented postoperatively paralytic ileus, which resolved after 72 hours and later due to clinical improvement he was discharged after 14 days.

The diagnosis of preoperative LH is complicated. The USG does not usually identify the diverticulum present in the hernial sac; In this case, the presence of an acute abdomen could not be associated with a cause, so exploratory laparotomy was decided. The patient underwent intestinal resection of the segment where the diverticulum and intestinal anastomosis is located termino-terminal due to a broad-based diverticulum with signs of ischemia and necrosis, establishing LH as the final diagnosis.

Discussion

Symptoms are secondary to complications of MD, such as ulceration and hemorrhage, diverticulitis, intestinal obstruction due to diverticular inversion, intussusception, volvulus, torsion or inclusion of the diverticulum in a Littre hernia, formation of enteroliths, and development of neoplasia. These complications are more frequent in children and adolescents, but rare in adults [5-7].

Littre Hernia (HL) is the protrusion of the DM through an anatomical defect of the abdominal wall, and may appear in the inguinal (50%), femoral (20%), umbilical (20%) and other abdominal locations (10%) regions, such as the Winslow hiatus. HL is an extremely rare condition that occurs in 1% of all cases of DM. Preoperative diagnosis of HL is a rarity, due to the absence of specific clinical and radiological elements. Although respective surgery represents the correct treatment, there is debate regarding appropriate management; in uncomplicated and incidentally discovered cases. The aim is to describe the clinical case of an adult with strangulated Littre hernia [8,9].

LH is due to the presence of a DM in a hernial sac. LH usually results in an inguinal or femoral hernia and, rarely, an umbilical hernia. It is an extremely rare condition with an unknown incidence. A recent systematic review identified only 53 such hernias published in the literature, most frequently in the groin (73%). It is often asymptomatic and diagnosed incidentally during routine surgery for hernia repair. When complications arise, LH may present as small bowel obstruction, hernial strangulation, or acute abdomen. Preoperative diagnosis is difficult and there are no specific radiological signs. Surgery is the main treatment. Although the treatment of uncomplicated muscular dystrophy remains controversial, the treatment of intestinal dystrophy or Littre hernia is performed according to clinical principles combined with the availability of experience. In this work, a case of umbilical LH discovered during the

emergency management of obstructive syndrome in an 11-year-old boy was found [10].

Littre hernia has been classified into two subtypes. A "true" Littre hernia, which is more common, contains only the Meckel diverticulum and can easily be confused with a Richter hernia. A "mixed" Littre hernia contains a segment of small bowel in addition to a Meckel diverticulum and is less frequently reported. This case describes that of a mixed Littre hernia, presenting with acute bowel obstruction and necrosis. As in the present case, Littre hernia is most often diagnosed incidentally during surgical repair of an inguinal hernia. Previously, a relative resistance to ischemia in the Meckel diverticulum compared with strangulated small bowel hernias was proposed. In contrast, the current case reports irreversible bowel ischemia that has progressed rapidly within 8 hours of symptom onset [11].

On the other hand, Meckel's diverticulum herniation through the diaphragm occurs more frequently in the pediatric population. Acquired transthoracic Littre hernia is rare and may arise after thoraco-abdominal trauma caused by surgery, motor vehicle accidents, and falls from height. Tears of the left diaphragm are characteristically more clinically obvious and symptomatic than those of the right diaphragm, as the liver often has a protective effect on the right side of the diaphragm. Herniation of abdominal contents into the thoracic cavity causes respiratory distress and requires urgent surgical correction. Diagnosis is often delayed, as diaphragmatic hernia tends to present very late after the initial trauma, subjecting the patient to potential life-threatening complications. While it is easy to reduce the herniated contents and repair the diaphragm through a thoracic approach, laparotomy is often preferred in cases of acute trauma associated with intra-abdominal injuries. Littre hernia repair then consists of resection [12].

Conclusion

Strangulated HL is a very rare complication of DM in an adult. In the presence of acute abdomen, exploratory laparotomy is the indicated management, which, in this case, allowed the correction of the defect and intestinal lesions, allowing the patient to recover health.

Conflicts of Interests

There was no conflict of interest during the study, and no organization did not fund it.

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