

Case Report: Strangulated Hernia on a Flange between Meckel's Diverticulum and the Appendix

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Abstract

Case Report

Introduction: Meckel's diverticulum is a very common abnormality of the digestive tract, most often asymptomatic but revealed by a complication; Among these complications, occlusion, which has multiple mechanisms, one of the mechanisms is internal hernia. Case report we present the case of a young woman of 28 years old admitted to the emergency department for occlusion on an internal hernia strangulated through an abnormal orifice made of a flange between the appendix and a Meckel's diverticulum. the patient she was admitted urgently to the operating room. Treatment consisted of resection of the necrotic ileum including the meckel's diverticulum with an ileostomy, and an appendectomy. Peritoneal cavity lavage and drainage. the postoperative period was uneventful. The patient was discharged from the hospital on the fifth day after the operation. readmitted two months later for the restoration of intestinal continuity. **Discussion:** Internal hernias are rare, most of them remaining asymptomatic. Are responsible for bowel obstruction in 0.5 to 4.1% of cases. Meckel's diverticulum is the most common birth defect of the gastrointestinal tract. It most often remains asymptomatic, although, it can be revealed by a complication. complications can be haemorrhagic, obstructive, infectious, or tumorous. Mechanical occlusion is the most common complication in adults; it represents 24 to 53%. CT scan is the reference examination. **Conclusion:** Any abrupt-onset occlusive syndrome with dilated small loops in a central location in the abdominal cavity should, in a subject with no surgical history, raise the hypothesis of a strangulated internal hernia in principle.

Keywords: Bowel obstruction, internal hernia, Meckel's diverticulum, appendix, case report.

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INTRODUCTION

Internal hernias are protrusions of the abdominal hollow viscera in an intraperitoneal orifice but which remain inside the abdominal cavity (post-surgical iatrogenic forms are excluded) (Gullino D, 1993) they are rare, and are responsible for intestinal obstruction in 0.5 to 4.1% of cases (Quénu J, 1967.). Two groups of internal hernias can be distinguished, depending on whether they develop either in a natural intra-abdominal orifice (hernias of the foramen of Winslow; left and right anterior paraduodenal hernias; retro- and paracecal hernias; intersigmoid hernias.) or in an abnormal intra-abdominal orifice (CE., 1958).

Within the broad group of acute or subacute intestinal obstructions, Meckel's diverticulum should be considered and discussed, especially in young subjects

with no surgical history. (Matsagas MI, 1995) (Fa-Si-Oeu PR, 1999) because it is a fairly common malformation. although Meckel's diverticulum is most often asymptomatic, it can be revealed by a complication, notably an occlusion.

We report the case of a patient admitted to the emergency department with abdominal pain with subocclusion who was operated on in the emergency department and found to have an internal hernia strangled through an abnormal orifice made of a flange between the appendix and a Meckel's diverticulum.

CASE PRESENTATION

Patient information: this is a young woman of 28 years old, with no significant medical history, never operated on. For the past 6 days, he has been presenting

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with diffuse abdominal pain with vomiting and a sub-occlusive syndrome, all evolving in a context of unquantified fever.

Clinical findings: At admission the patient was conscious but hemodynamically unstable heart rate HR: 120 bpm; blood pressure BP: 90/60 mm/Hg and respiratory rate RR: 25 cpm with a fever of 39.7°C. abdomen slightly distended, generalized abdominal tenderness; hernial orifices were free; rectal examination revealed an empty rectal ampulla.

Hemoglobin at its intake was 12 g/dl white blood cells count was at 23000 with a predominance of neutrophils, and there was impaired kidney function with blood urea at 1.19 g/l Blood creatinine at 20 mg/l

An urgent abdominopelvic CT scan was performed which revealed a strangulated internal hernia with abundant intraperitoneal effusion and pneumoperitoneum.

Therapeutic intervention: The patient was admitted to the operating room, through a median incision, the exploration objectified generalized peritonitis with a purulent effusion of great abundance (Figure 2) and a strangulated intestinal loop in an orifice formed by an attachment between the appendix and the diverticulum of Meckel (Figure 1) (Figure 3). This loop, measuring 30 cm and located 2.5 meters from the angle of Treitz, was necrotic with perforations in some places (Figure 4). Treatment consisted of resection of the necrotic ileum including the Meckel's diverticulum with an ileostomy, and an appendectomy. Peritoneal cavity lavage and drainage.

Follow up and outcomes: After a 24-hour stay in intensive care unit. The post-operative period was simple: Progressive diet allowed from the second day. the drains are removed on the third day after they bring nothing back. Progressive improvement in the biological assessment and normalization of renal function.

Discharge from hospital was cleared on the fifth postoperative day. The patient was followed up in consultation for 2 months, then she was readmitted for the restoration of intestinal continuity.

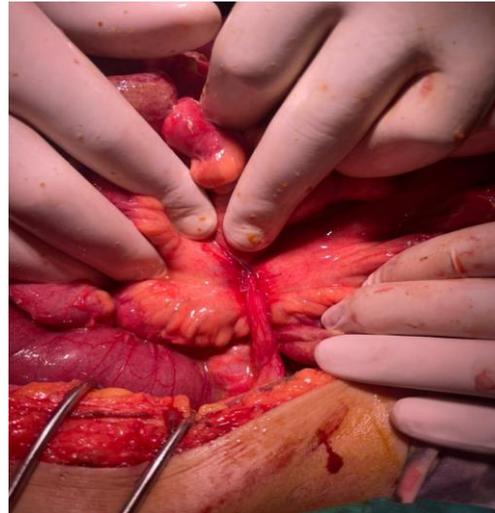


Figure 1: Intestinal loop incarcerated within an opening formed by an adhesion between Meckel's diverticulum and the appendix

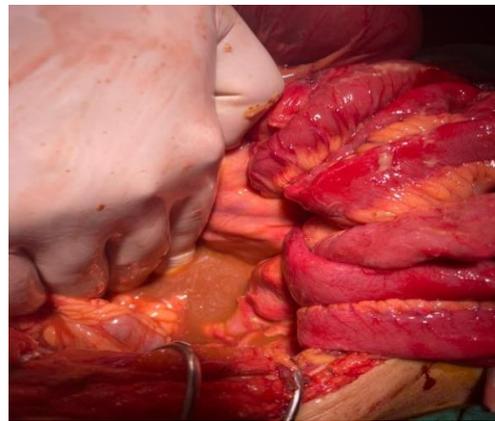


Figure 2: Purulent effusion with generalized peritonitis

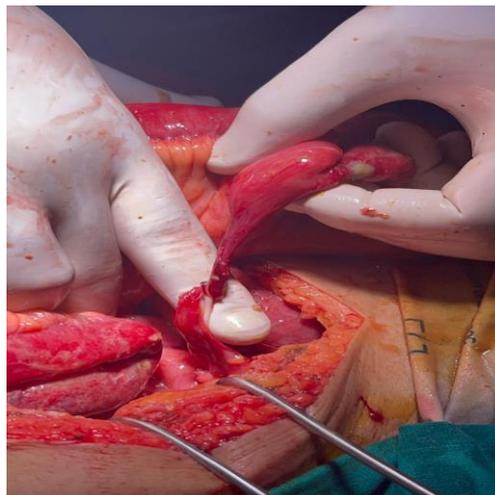


Figure 3: Flange between Meckel's diverticulum and appendix

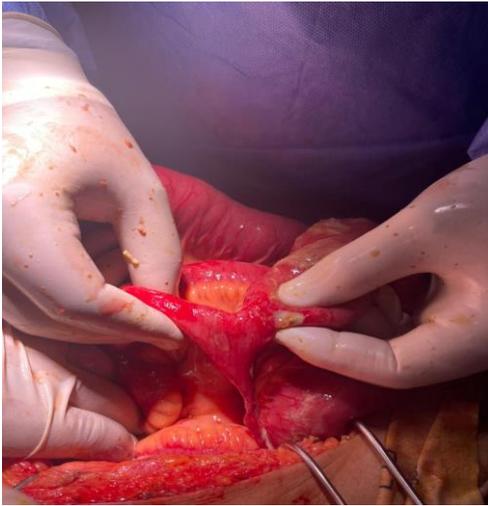


Figure 4: Perforated intestinal loop

DISCUSSION

Internal hernias are rare, autopsy statistics show a frequency of 0.2 to 2% of internal hernias, most of them remaining asymptomatic (Phi IN, 2010). Are responsible for bowel obstruction in 0.5 to 4.1% of cases (Quénu J, 1967). Two main categories of internal hernias can be distinguished: - internal hernias developed in a normal or parnormal orifice of the peritoneum. - internal hernias developed in an abnormal opening in the peritoneum.

Meckel's diverticulum is the partial persistence of the omphalomesenteric duct. It is the most common congenital anomaly of the gastrointestinal tract (Barbary C, 2004). It most often remains asymptomatic (Dumper J, 2006). The probability of the onset of complications is estimated at 4%, maximum before the age of two, approximately 1% near the age of 40, and gradually decreasing to almost zero after the age of 70 (Leijonmarck CE, 1986), complications can be haemorrhagic, obstructive, infectious, or tumorous. Mechanical occlusion is the most common complication in adults; it represents 24 to 53% (Ouangré E, 2015). Most often it is an occlusion with variable mechanism volvulus, intussusception, attachment of diverticulum to the umbilicus or any other point of the abdomen.

The peritoneal origin of intestinal obstruction can be caused by different mechanisms: congenital fibrous tract, flanges acquired by chronic inflammatory phenomena, migration of the diverticulum into an area of weakness. Whatever the cause, an acute occlusion can set in and eventually supplemented by a volvulus, which quickly leads to ischemic suffering by rotation of the vascular axis (mackey WC, 1978)

Computed tomography (CT) scan has a high sensitivity for diagnosing the obstruction and its origin (Kawamoto S, 2015), Careful analysis of images in axial

sections and multiplanar reformations should, in most cases, lead to diagnosis. and emergency surgical treatment is required.

CONCLUSION

Any acute onset occlusive syndrome with dilated small loops in a central location in the abdominal cavity should, in a subject with no surgical history, even in the elderly, should raise suspicion of an incarcerated internal hernia. It is essential to consider the possibility of an occlusive complication of Meckel's diverticulum, which requires urgent surgical treatment.

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