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Acute Small Bowel Obstruction on Flage Taking Meckel's Diverticulum: A Case Report

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case Report

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ABSTRACT

Meckel's diverticulum is a congenital anomaly of the digestive tract resulting from the persistence of the omphalomesenteric duct, and is often asymptomatic and discovered by chance. However, it can sometimes lead to complications. We report the case of a 30-year-old oncology patient with sigmoidal adenocarcinoma and liver metastasis who presented with intestinal obstruction due to a greloepiploic bridle taking Meckel's diverticulum.

Keywords: Meckel's diverticulum; intestinal obstruction.

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1. INTRODUCTION

Meckel's diverticulum (MD) is a persistent defect of the omphalomesenteric duct, first described in 1598 [1]. It is the most common congenital malformation of the digestive tract. Its incidence is between 1% and 4% of the general population [2]. Generally benign and asymptomatic, DM is a pathology of childhood, but can manifest itself in adulthood. Complicated forms, such as digestive haemorrhage, intestinal obstruction and intestinal intussusception, account for 4 to 16% of DM cases, and often constitute the circumstances of their discovery [1-3]. The aim of this article was to describe the clinical case and management of an intestinal obstruction secondary to a Meckel diverticulum.

2. CASE PRESENTATION

This is a 30-year-old oncology patient with a sigmoidal adenocarcinoma for which he had undergone a sigmoidal colostomy and three sessions of chemotherapy. His current history dates back to 24 hours before admission, with the onset of an occlusive syndrome involving cessation of bowel movements and gas, bilious vomiting and no other associated signs. All this evolved in a context of apyrexia and altered general condition. Clinically, the patient was conscious (Glasgow score 15/15), hemodynamically stable (BP=12/08cmhg) and respiratory (FR=18cycles/min). Abdomen was distended, tympanic, stoma non-functional Stomal and rectal examination were without abnormalities. An abdominal CT scan (Fig. 1) showed distension of some of the bowel loops, measuring 38 mm in maximum diameter, with local hydroaerosal levels, contrasting with a collapsed appearance of the colonic frame and ileal loops upstream of a transitional level opposite L5.

The patient underwent surgery for section of a greloepiploic flange taking up Meckel's diverticulum, with wedge-shaped bowel resection of Meckel's diverticulum and exploration= Presence of epiplo-parietal, grelo-epiploic and

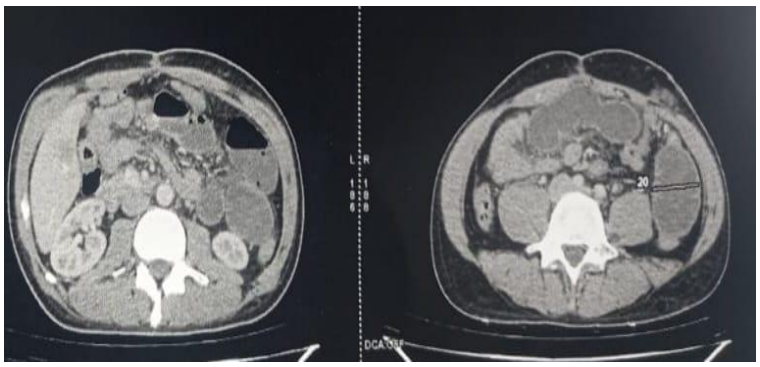

Fig. 1. Abdominopelvic CT scan, showing distension and hydroaeric level

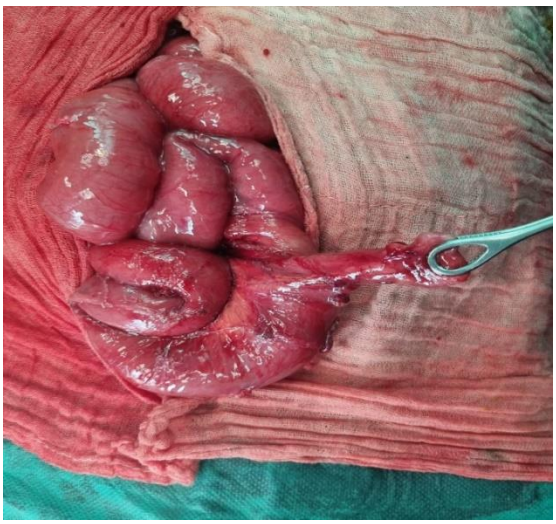

Fig. 2. Meckel's diverticulum (intraoperative photo)

grelo-grelic adhesions (adhesiolysis performed). Presence of a grelo-epiploic flange 50cm from the ICJ responsible for 4cm of distension upstream, taking up Meckel's diverticulum located 50cm from the ICJ, which is in pain

3. DISCUSSION

Meckel's diverticulum is the partial persistence of the omphalomesenteric duct. It is the most common congenital anomaly of the gastrointestinal tract, with a slight male predominance [4,5]. It is rare, occurring in between 2% and 4% of the population [6,4]. Meckel's diverticulum is usually asymptomatic, and is only diagnosed incidentally or when complications arise. The diagnosis of intestinal obstruction due to Meckel's diverticulum can be evoked preoperatively, either on abdominal ultrasound, technetium-99m scintigraphy, abdominal computed tomography or magnetic resonance imaging (MRI) [7]. Distinguishing between an intestinal loop and Meckel's diverticulum on CT remains difficult [8]. Mechanical obstruction is the most frequent complication in adults, accounting for 24 to 53%. Most often, this is an occlusion with a variable mechanism [9,10,11]: volvulus, invagination, fixation of the diverticulum at the umbilicus or at any other point in the abdomen. The frequency of complications is slightly higher in men [4,5]. In this case, the Meckel diverticulum was located 50cm from Bauhin's valve, with a diameter of 2cm and a length of 6cm, and a flange was involved in the occlusion. The location of Meckel's diverticulum varies between 10 and 100 cm from Bauhin's valve in 50% of cases, and its dimensions average 2cm in diameter and 5cm in length [5]. When a Meckel's diverticulum is discovered, surgical treatment is often required. Two methods are commonly reported in the literature: wedge-shaped resection (diverticulectomy) and segmental bowel resection involving Meckel's diverticulum and terminal-graft anastomosis [12], although the latter is preferred to the former. In our case, we opted for a wedge-shaped bowel resection of the meckel diverticulum, with section of an epiploic bridle taking up the diverticulum. However, in the event of a complication, segmental resection of the diverticulum is the rule. This is preferred to wedge-shaped resection, which risks leaving ectopic tissue in place [13]. Laparoscopy is playing an increasingly important role in these procedures. Regardless of the approach used, digestive sutures must be performed on a perfectly healthy, non-inflammatory and well-vascularized area [14].

4. CONCLUSION

Meckel's diverticulum is the partial persistence of the omphalomesenteric duct. It is usually asymptomatic. Complicated Meckel's diverticulitis is mainly diagnosed intraoperatively. It is a surgical emergency requiring early and appropriate management. The outcome depends on how early the diagnosis is made.

CONSENT

As per international standards or university standards, patient(s) written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

I declare on my honor that the ethical approval has been exempted by my establishment

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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