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Case Report

Revelation of a Meckel's Diverticula by Chronic Care of an Umbilical Hernia (Litter's Hernia) in the Pediatric Surgery Department: Hospital Fousseyni Daou De Kayes (Mali) on a Case

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Abstract: Meckel's diverticulum is the partial persistence of the mesenteric omphalos canal. It is the most common congenital anomaly of the gastrointestinal tract with a slight male predominance [1, 8, 9]. It is a fairly rare pathology in our region. Its discovery is most often fortuitous, but it can be the basis of several digestive complications: peritonitis by perforation or occlusion, digestive hemorrhage, diverticulum. We report a case of Meckel's diverticulum discovered following chronic umbilical care in a two-year-old child. The objective is to describe this rare clinical case and discuss the therapeutic and evolutionary aspects.

Keywords: Meckel's diverticulum, umbilical hernia, child, Kayes.

INTRODUCTION

At the start of fetal life, the vitelline or omphalomesenteric canal that connects the midgut to the yolk sac is normally obliterated before the 6th week. If the portion connecting it to the ileum does not atrophy, a Meckel's diverticulum appears. This congenital diverticulum arises from the anti-mesenteric margin of the intestine and contains all the layers of the normal intestine and is therefore a true diverticulum [5]. In less than a quarter of patients, a Meckel's diverticulum also contains gastric heterotopic tissue and therefore hydrochloric acid-secreting parietal cells and/or pancreatic cells. The male sex is more affected than the female sex and it is a rare pathology and is encountered between 2% to 4% of the population [4]. Only about 2% of patients with Meckel's diverticulum develop complications. It can be bleeding, obstruction, diverticulum, perforation, or tumor [3, 9]. Diagnosis is based on clinical signs, imaging especially scintigraphy, ultrasound and CT [2] Treatment is surgical.

PATIENT AND COMPLIANCE

It was a 24-month-old child referred to our pediatric surgery department for chronic care of the umbilicus. In the antecedents the child was born at term with a weight of 3kg 500, without other particularities. He still had an umbilical hernia which was treated regularly and had undergone several treatments: application of silver nitrate, antibiotic therapy and multiple dressings, but without success. This is how it was sent to us for support. Two abdominal-pelvic ultrasounds performed showed only an umbilical hernia. Given the persistence of the care, we decided on a surgical intervention (herniorrhaphy). We proceeded to an above umbilical arcuate incision and the opening of the hernial sac, we discovered a diverticulum of about 5 cm which was fixed in the bag and which communicated with the small intestine 40 cm from the valve of Bauhin. Figure 1, so it was a vermicular shaped hernia. We performed a resection of Meckel's diverticulum figure 2 and performed an end-to-end anastomosis of the small intestine. Feeding began 24 hours later, and the postoperative course was simple without complications. The child was released after 5 days of hospitalization.

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Imaging

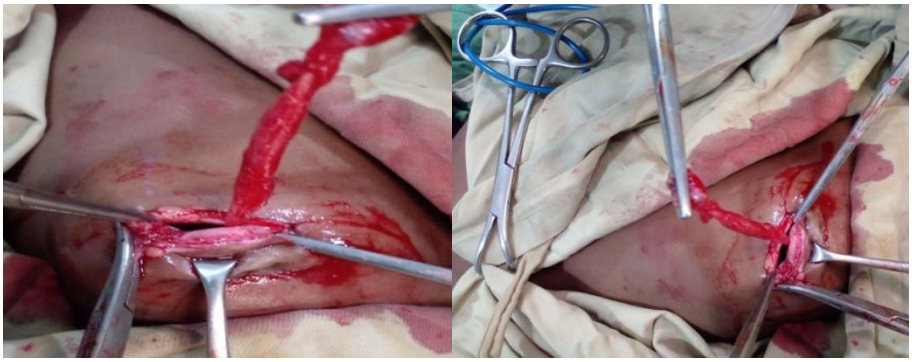

Figure 1: attachment of Meckel's diverticulum in the umbilical hernial sac

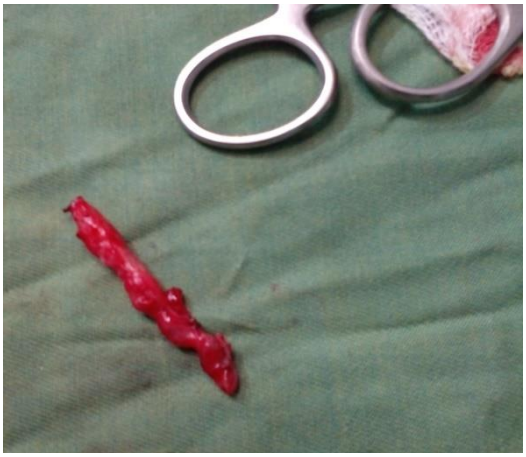

Figure 2: Resected vermicular Meckel's diverticulum

DISCUSSION

Meckel's diverticulum results from incomplete obliteration of the omphalomesenteric canal. It is the most frequent congenital anomaly of the digestive tract which classically exists in two anatomy-clinical forms. A vermicular shape noted in more than 90% of cases and a sometimes giant ovoid shape in 5% of cases [4, 5]. About 2% of the population is a carrier with various anatomical characteristics. The incarceration of Meckel's diverticulum in a hernial sac (Litre hernia) is a very rare pathology. In our case, the diverticulum was discovered intraoperatively about 40cm from the Bauhin valve, during the correction of an umbilical hernia which had been treated since birth. Variable locations up to 60 to 150 cm from the ileocecal angle have been reported [7, 8, 14]. The shape and dimensions of Meckel's diverticula are variable and two types are described in the literature. Type I has a tubular shape with a diameter similar to that of the most common ileum, as in our case, and type II has an ovoid or sacculiform shape and takes on the appearance of a balloon [5]. The average length of the diverticula is 3 cm and 90% of the diverticula have a length between 1 and 10 cm. In our patient the diverticulum was tubular about 5 cm. Heterotopic tissue is found in 75% of complicated diverticula [6]. It is gastric in 33% of cases, pancreatic in 5% of cases, colic in 1% of cases [11]. Meckel's diverticulum is usually asymptomatic. It is most often revealed intraoperatively, or during complications such as rectal bleeding, occlusion, diverticulum [3, 14]. Hemorrhage is the most common complication in children and adolescents, while adults present with obstruction or divertulitis. The presence of a diverticulum in a hernial sac is known as a liter hernia. It is found in 50% of inguinal hernias, in 20% of crural hernias, 20% of umbilical hernias and in 10% of cases in other hernia openings [13]. The specificity in our patient is the umbilical care since birth and the ultrasound performed twice could not detect Meckel's diverticulum. No symptom is specific to the presence of Meckel's diverticulum in a hernial sac. Sinha reported a liter hernia diagnosed preoperatively by CT scan with ingestion of contrast product [6]. Management includes resection of the diverticulum by passing it wide, removing all of the possibly heterotopic tissue with end-to-end anastomosis. This was achieved in our patient with favorable postoperative outcomes.

CONCLUSION

The presence of a diverticulum in a hernial sac is a rare clinical form. Diagnosis is mostly intraoperative, but may be revealed by unusual signs and complications.

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