Case Report

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Neonatal Omphalo-Mesenteric Fistula: About 1 Case

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ABSTRACT

Introduction: *The omphalo-mesenteric (FOM) or entero-umbilical fistula is a congenital anomaly related to the complete persistence of the omphalo-mesenteric canal (COM). Its diagnosis is often easy and is based on clinical examination and fistulography. We report a case of neonatal omphalo-mesenteric fistula.*

Observation: *This is a newborn at 10 days of life, male, from a full-term pregnancy, who presented from the first days of life an umbilical discharge made up of intestinal fluid and meconium. Examination of the umbilicus showed a raspberry umbilical bud, centered by an easily catheterizable orifice. The injection of water-soluble contrast product through this orifice objectified a communication of the fistula with the ileal loops. The data from the clinical examination and the fistulography made it possible to make the diagnosis of omphalo-mesenteric fistula. At the surgical intervention, the exploration finds an omphalo-mesenteric fistula. We performed an intestinal resection on either side of the fistula with end-to-end anastomosis.*

Conclusion: *The omphalo-mesenteric fistula is a rare condition. The clinical picture is sometimes atypical and consists of a simple oozing umbilical bud which does not respond to the application of nitrate. Its diagnosis must be made from the neonatal period to avoid serious complications.*

Keywords

Fistula, Omphalo-mesenteric, New born.

Introduction

The omphalo-mesenteric (FOM) or entero-umbilical fistula is a congenital anomaly related to the complete persistence of the omphalo-mesenteric canal (COM) [1]. Its diagnosis is often easy and is based on clinical examination and fistulography [1]. Sometimes the clinical picture is atypical, made of a simple oozing umbilical bud. The positive diagnosis must be made from the neonatal period to avoid sometimes dreadful complications. We report a case of neonatal omphalo-mesenteric fistula.

Observation

This is a newborn at 10 days of life, male, from a full-term pregnancy, who presented from the first days of life an umbilical discharge made up of intestinal fluid and meconium. Examination of the umbilicus showed a raspberry umbilical bud, centered by an easily catheterizable orifice (Figure 1). The injection of water-soluble contrast product through this orifice objectified a communication of the fistula with the ileal loops. Data from the clinical examination and fistulography (Figure 2) led to the diagnosis of omphalo-mesenteric fistula. A The surgical intervention the exploration finds an omphalo-mesenteric fistula (Figure 3). We performed an intestinal resection on either side of the fistula with end-to-end anastomosis.

Discussion

The omphalo-mesenteric fistula (OMF) is a very rare anomaly which accounts for only 2% of malformations of the omphalo-mesenteric canal (COM) [2]. In the first weeks of embryonic life, the umbilical cord is crossed by the COM which communicates the intestine with the yolk sac, by the umbilical vessels and by the allantoic diverticulum. Between the fifth and seventh week

of embryonic life, an involution occurs leading to the total disappearance of the yolk sac and the COM [3]. COM regression abnormalities are the cause of either excessive involution leading to atresia, stenosis or ileal diaphragm; or an involution defect which can have several aspects [4,5]: complete persistence of the omphalo-mesenteric canal, creating an omphalo-mesenteric fistula that connects the intestine to the umbilicus, this is the case of our patient;

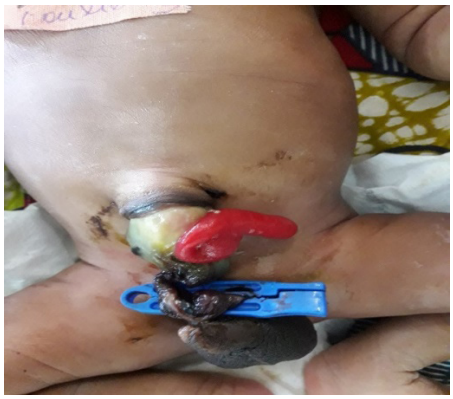

Figure 1 : Raspberry Umbilical Bud.

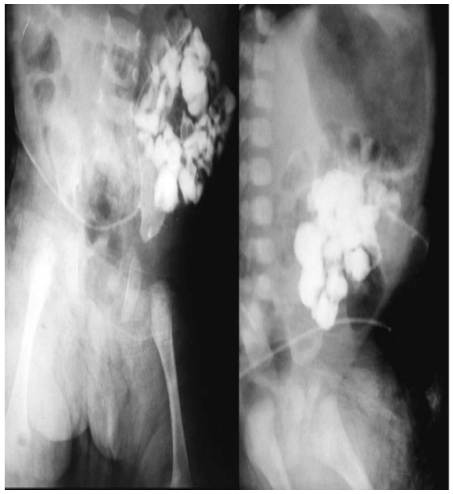

Figure 2: Fistulography: Communication of the Fistula With The Ileal Loops.

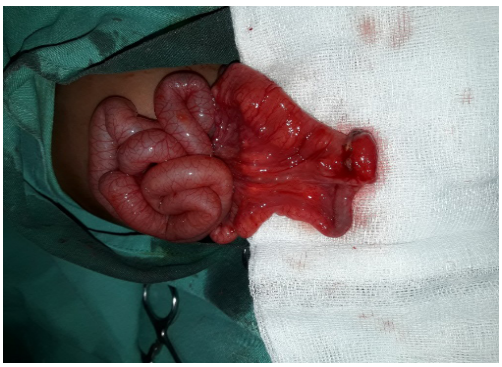

Figure 3: Intraoperative Image of the Omphalo-Mesenteric Fistula.

Partial persistence with several possibilities:
- persistence of the juxta-umbilical portion, this is the umbilical sinus ;
- persistence of the juxta-intestinal segment : this is Meckel's diverticulum;
- persistence of the intermediate part : this is the vitelline cyst;

The other involution faults are exceptional.
Clinically, the typical picture of FOM is umbilical discharge, from the neonatal period, corresponding to digestive fluid if the fistula is large, or muco-purulent or mucous secretions when the fistula is narrower [6]. Examination of the umbilicus shows a raspberry umbilical bud, bleeding on contact, within which one can locate a small easily catheterizable orifice. Opacification with a water-soluble iodine product demonstrates the communication of this orifice with the intestinal loops [2] : this was the case in our patient.

This diagnostic difficulty is all the more delicate as the differential diagnosis arises:
• with a weeping umbilical bud in the context of a fistula of the urachus, but in this case there is a flow of urine from the umbilicus and the fistulography confirms communication with the bladder;
• with a small omphalocele which may also look like a large cord, but a careful clinical examination makes it possible to retain the diagnosis of omphalocele in view of the absence of an umbilical orifice, an appearance of loops covered with an amniotic sac and the association with other malformations.

The complications of FOM are numerous and can reveal the disease:
bowel prolapse through the fistula creating a T or “bull's horn” appearance. This prolapse quickly becomes irreducible and then requires emergency surgery [2]; occlusive complications by fibrous or vascular band, sometimes late, occurring even in adulthood; peptic ulcer on a heterotopia of gastric mucosa, which occurs especially in the event of a narrow fistula that is well tolerated for several years (approximately one COM in three presents with gastric heterotopias). This ulcer can itself be complicated by hemorrhage, perforation, and even cancer [4,5]. Heterotopia is explained by the fact that the epithelial lining of the digestive tract has the same entoblastic origin.

Surgical intervention is essential whenever the diagnosis of an involution defect of the omphalo-mesenteric canal is made. It consists of releasing the bud through the umbilical route, following the fistula to the level of the intestine which will be exteriorized. An intestinal resection on either side of the implantation of the fistula is then performed with an end-to-end anastomosis [3].

Conclusion

The omphalo-mesenteric fistula is a rare condition. The clinical picture is sometimes atypical and consists of a simple oozing umbilical bud which does not respond to the application of nitrate. Its diagnosis must be made from the neonatal period to avoid serious complications.

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