ISSN: 2755-0281

Journal of Pediatrics Research Reviews & Reports

SCIENTIFIC Research and Community

Case Report

Open Access

Ompalo-Mesenteric Fistula Complicated with Ileal Prolapse: A Case Report

Gueye D[1]*, Sabounji MS[1], Ndour DD[2], Ndoye NA, Sagna A, Ngom G

[1]Department of Pediatric Surgery, Centre Hospitalier National d'Enfants Albert, Royer (CHNEAR), Dakar, SENEGAL

[2]Department of Pediatric, Hopital Dalal Jamm, Dakar, SENEGAL

ABSTRACT

Introduction: Omphalo-mesenteric fistula is a rare form of the regression anomaly of the omphalo-mesenteric duct. The diagnosis is usually clinical, confirmed by simple fistulography in case of doubt. In rare cases, complications (occlusion, infection, ulcer, prolapse) may be revealing.

Observation: We report an omphalomesenteric fistula revealed by prolapse in a three-day-old newborn. The diagnosis was obvious by the outcome of stool through the prolapse orifice. Treatment consisted of bowel resection on either side of the omphalo-mesenteric canal followed by terminal anastomosis.

Conclusion: Omphalomesenteric fistula, often revealed as a complication, becomes an emergency and surgical treatment is quickly required.

***Corresponding author**

Gueye Doudou, Pediatric Surgeon, Department of Pediatric Surgery, Centre Hospitalier National d'Enfants Albert Royer (CHNEAR), Dakar, SENEGAL. Email: doudougueye92@yahoo.fr

Received: January 26, 2021; **Accepted:** February 02, 2021; **Published:** February 10, 2021

Keywords: Omphalo-Mesenteric Fistula, Prolapse, Emergency.

Introduction

The omphalo-mesenteric or yolk duct, the crossroads in the embryo of many routes, digestive, urinary, blood, yolk and placental, connecting the primitive intestine to the yolk sac, normally degenerates towards the end of the 5th week, and usually disappears without trace in most individuals. The total persistence of the omphalo-mesenteric canal leaves a fistulous path, a communication of the same caliber as the intestine between the top of the primitive umbilical loop and the umbilicus [1].

The omphalo-mesenteric fistula accounts for only 2% of the malformations of the omphalo-mesenteric canal, with the Meckel diverticulum being more frequent [2]. The presence of intestinal fluid or mucus discharge at the umbilicus is the mode of discovery for the classic form [3]. In rare situations, complications are indicative of the diagnosis. We report a case of omphalomesenteric fistula revealed by umbilical prolapse in a newborn baby at 3 days of life.

Observation

A 3-day old female neonate was referred for a flow of yellowish fecal fluid through the umbilicus, evolving since birth. She was born via caesarean section without any complication at 40 weeks of gestational age, with a birth weight of 3200g. Meconium was emitted on the day of birth. Local examination shows an inflammatory umbilical swelling in which there was a catheterizable opening allowing stool to be shed (Figures 1,2), the abdomen was supple and painless, the normoposed anus is permeable, the external genitalia are normal, of the female type. The remainder of the examination was normal. The fistulography is not done. The diagnosis of a complicated omphalo-mesenteric fistula with prolapse is retained. Surgical exploration using a sub umbilical arciform approach reveals an omphalo-mesenteric fistula with an ileal site about 30 cm from the ileo-caecal angle (Figure 3). A 2 cm bowel resection on either side of the fistula, followed by a terminal anastomosis, was performed. The postoperative follow-up was uneventfull, with resumption of transit and feeding at day-1 postoperatively. The histological study confirms the nature and ileal constitution of the fistula path, without heterotopy.

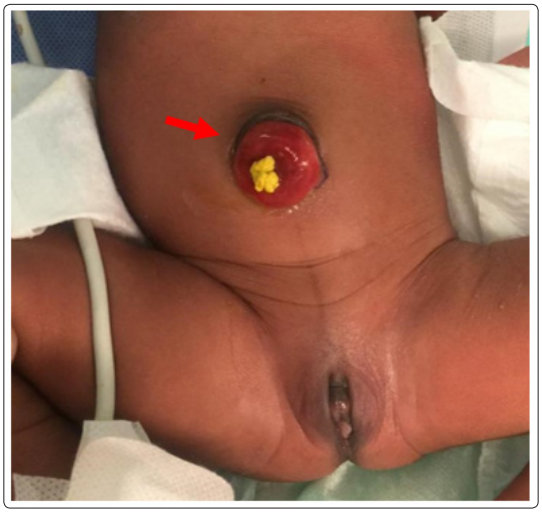

Figure 1: Prolapse on omphalo-mesenteric fistula

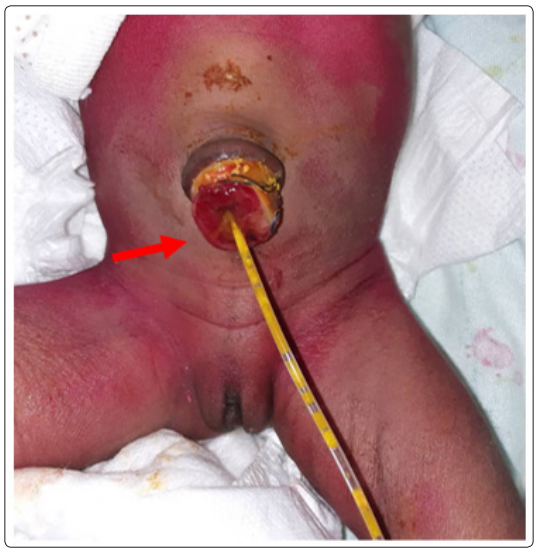

Figure 2: Catheterized omphalomesenteric fistula

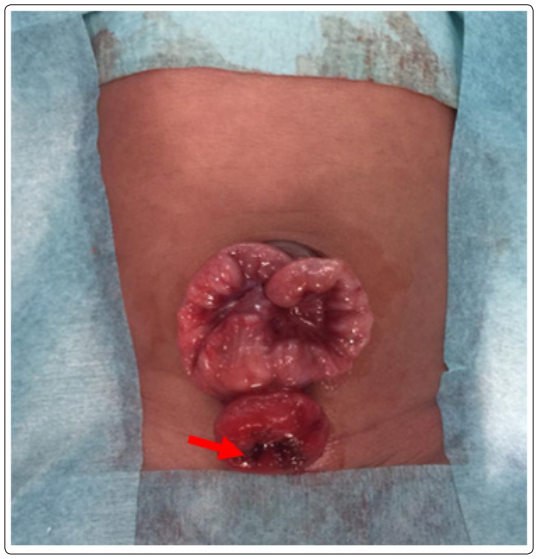

Figure 3: Surgical view of an omphalomesenteric fistula

Discussion

Omphalo-mesenteric fistula is a rare form of the regression anomaly of the omphalo-mesenteric duct [2,4]. These symptoms appear in the neonatal period in 73-85% of cases [5]. In principle, the clinical diagnosis is unproblematic. It is an obvious diagnosis at birth; it is usually made with the "naked eye".

Omphalomesenteric fistula typically manifests itself in the neonatal period with umbilical discharge of digestive fluid for wide fistulas and mucopurulent or mucous secretions for narrower fistulas. Physical examination reveals a budding umbilical mass, bleeding on contact, in the center of which is a small, easily catheterizable orifice. Sometimes the omphalo-mesenteric fistula is evoked only in front of the atypical picture of an oozing umbilical bud that persists despite local silver nitrate treatment. The fistula hole may not be visible or may be visualized only after the umbilicus has been unfolded. Opacification of the fistula with a water-soluble iodine product indicates communication with the intestinal handles [6]. This examination is not performed in our patient because the diagnosis is obvious to the naked eye.

Complications of omphalomesenteric fistula may be indicative of the malformation: intestinal prolapse through the fistula, occlusion related to a fibrous or vascular or volvulus flange, invagination or internal hernia, peptic ulcer on a heterotopy of the gastric mucosa of a narrow fistula, after several years of evolution [2,7]. Our patient was found to have a prolapse-like complication through the fistula.

Since the diagnosis is usually purely clinical, the value of these tests is limited. Only fistulography can safely visualize the path and detect any associated lesions. In view of the diagnosis which is obvious to the naked eye in our patient, we did not perform a fistulography.

Abdominal ultrasound may reveal a yolk cyst underlying the umbilicus. In our patient, the abdominal ultrasound did not reveal any other malformations. Surgical treatment consists of releasing the fistula through the umbilicus to the intestine. Resection of the intestinal segment where the fistula ends is then performed followed by a terminal anastomosis. Uncomplicated rhombic resection of the fistula-bearing ileum can be performed through a transombilical approach [8]. The procedure is then completed by umbilicoplasty. In our case, we performed a 2 cm intestinal resection on either side of the fistula, followed by a termino-terminal anastomosis. An anatomopathological examination of the fistula can be performed to look for ectopic gastric mucosa [1]. In our patient, we did not find any heterotopy.

Conclusion

Omphalo-mesenteric fistula is a very rare congenital anomaly. Diagnosis must be made as early as possible to avoid complications. It is most often revealed by a complication, the treatment becomes a surgical emergency.

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