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Case Report

Distal Ileal Atresia with Whole Umbilical Fistula in Newborn, on the Basis of a Case Pediatrics Service - SAHUAPA

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Abstract

Atresia of the gastrointestinal tract is one of the most important causes of acute abdomen in the neonate. Distal ileal atresia occurs in 36% of cases. The etiology of ileal atresia is the result of an ischemic lesion, after which the midget has returned to the coelomic cavity. In the classification of vitelline duct anomalies noted for its importance the whole fistula - umbilical, with output of gases, liquids and feces, it corresponds to the persistence of a patent duct, which extends from the ileum to the umbilicus, externalized through a small hole or stoma. Newborn male term, small for gestational age 38 weeks. We performed exploratory laparotomy showed atresia segment of terminal ileum, 5 cm from the ileocecal valve remaining attached to the cord by fibrotic fistulous communication loop and intestinal navel.

Keywords: *Fistula Umbilical Congenital; Umbilical Ileo Fistula; Drainage Umbilical; Newborn*

Introduction

Atresias of the digestive tract are one of the most important causes of acute surgical abdomen in the neonate and constitute 95% of the bowel obstructions, of these malformations, distal ileum atresia occurs in a 36% of the cases. According to different series, the incidence varies since 1 in 330 live births up to 2.8 In 10,000 live births [1-5].

In the etiology of intestinal atresias several theories are considered. In 1900 Tandler emitted the theory that the lack of revacuolization of the intestine after its solid cord stage, was the cause of intestinal atresias. Further observations from Louw and Barnard, Santulli, Blanc, and Nixon supported suspicions that other factors existed, in 1955 the experiments of the first authors cited suggested that they were due to late mesenteric vascular catastrophes during the embryonic development, o as an acquired lesion resulting from an interruption of late mesenteric vascular input to the intestine during discreek of this in the fetal life [3-5].

The classification of intestinal atresias most commonly used today is that of Louw modified by Grosfeld: type I: Atresia in the form of an intraluminal septum, with intestine and mesentery intact. Type II: Two blind atresia ends, connected by a fibrous cord and without mesentery continuity solution. Type IIIA: Two blind atresia ends, separated by a V-shaped gap in the mesentery. Type IIIB: Jejunal Atresia (almost always close to the Treitz ligament) with a short intestine and a large mesenteric gap that separates the proximal blind baggins from the distal, which hangs in the form helical of a very short mesentery and has a precarious retrograde irrigation deformity in "christmas tree" or "apple shell". Type IV: Multiple intestinal atresias, appearance of "sausage string" [2,3,5].

The anomalies of the distal ileum may be accompanied by residual structures of the yolk duct, of those which the diverticulum of Meckel is the most common and the entire umbilical fistula the least frequent, including this one between the defects of the anterior wall of the abdomen, what they are located in the 4th place of congenital malformations, which include umbilical cord problems, whose alterations will give rise to malformations of mild to very serious and their forms of presentation are usually variable and go from the existence of a mass to the discharge of secretions [6-12].

The omphalomesenteric duct (COM), is a structure embryonic what communicates the cellomics cavity with the middle intestine and progressively becomes narrower and long until disappear between the fifth and ninth weeks of intrauterine life. The lack of involution, either partial or total this duct, can give rise to multiple anormogenesis whose presentation usually be disparate in the shape and severity of the clinical picture that produce [10-16].

In the classification of the anomalies of the yolk duct, four basic forms of presentation are established: A- completely permeable omphalomesenteric duct (umbilical whole fistula), partially permeable omphalomesenteric B- duct which may be: in the peripheral portion (umbilical sinus); Intermediate portion (yolk cyst); enteric portion (Meckel's diverticulum), according to the description of Trimingham [9,10].

In newborns and infants, the persistence of COM, often can cause obstruction of the small intestine due to a volvulus around the fibrous remantlement of the duct, usually severe and intestinal necrosis is common, being able to lead to mortality. Although bowel obstruction is common, persistent COM as one of the causes of this condition is an exceptional finding in newborn infants [11-14].

In the neonatal age the clinic usually arises as: an umbilical mucosal polyp, bright red cherry color, which is mucosa of the protruding ileus, an umbilical sinus or an entire umbilical fistula. The form of presentation, laboratory and radiological findings may be non-specific and although the diagnosis can be based on ultrasound and contrasted studies, possible complications, require early decision making [8-25].

Today prenatal diagnosis includes maternal ultrasound because it is the most practical and accessible; it is also done before the suspicion of fetoprotein and karyotype [1-3].

Complications that may occur through a permeable omphalomesenteric duct include: navel infection, periumbilical dermatitis, bleeding from the intestinal mucosa, ileal strangulation, malignization potential, prolapse, and infarction of the intestine and intestinal obstruction (secondary to invaginality, volvulus, torsion, strangulation).

Is Makes communication of the following case of a newborn that presented meconium output through small hole in the cord umbilical a few hours of birth, in which was diagnosed with atresia of the terminal ileum and Ileum-Umbilical fistula.

Clinical Case

New born male to term, small for gestational age, 38 weeks by Capurro, product of mother of 31 years, I pregnancy, tipiaje O Rh negative, with VDRL not reactive and HIV negative, pregnancy controlled (9 C), complicated with ITU in the second and third trimester, treated, who was obtained by segmental caesarean section for acute fetal distress, breathed and wept at birth, Apgar 8 and 9 PTOs, PAN 2280 g, TAN 46 cm, CC 28 cm, which entered the neonatal unit of the University Hospital "Antonio Patricio de Alcalá" SAHUAPA, Cumaná Sucre state, Venezuela immediately at birth by presenting a central orifice a cm from the edge of the skin on the anterior side of the umbilical cord, appreciate meconium outlet and gas through same in the first four hours of birth. Diagnosis of umbilical whole fistula is proposed (Figure 1 and 2).

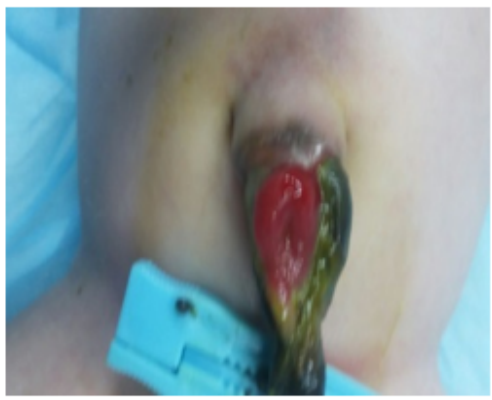

Figure 1

Figure 2

Preclinical of income reported neutrophilia with deviation to the left, PCR negative and radiography thoracoabdominal with scarce hydroaerial levels. Because there is no possibility of doing another complementary study due to the inconveniences inherent in the institution, see requested the representatives to sign the informed consent to perform an operative act.

It was performed under general inhalation anesthesia general, approaching the abdominal cavity through right transverse laparotomy/ supraumbilical ample, it was evident thin loop, ileum, attached on its antimesenteric edge to the base of the inner face of the umbilical cord and segment atresia de ileum terminal, joined by fibrotic cord remnants approximately 10 cms long between two closed segments, without separation the mesentery, the distal cape blind 5 cm from the valve Ileum-cecal attached to this. Was made resection y ligature from the intestinal loop to internal face level at the base of the umbilical cord, was resected the fibrotic segment attached to the ileocecal valve, the appendix and small part of the colon ascend (Figure 3), anastomosis was performed ileocolic in a only plain seromuscular, with polyglycolic acid suture 4-0 to separate points, it was performed verification of permeability of the anastomosis, reintroduction of handles, wall closure by planes. The umbilical stump was resected and sent for pathological study. Establishing the diagnosis of segment distal atrial of ileum and umbilical ileus fistula.

Figure 3

The pathological study of the umbilical cord sample in the description macroscopic revealed, the presence of fetal vascular structures (one vein and two arteries), and a fourth light coated by a cylindrical mucosa, of type enteroide, rich in goblet cells, and periductal accessory vessels, was identified as a remnant of the duct fetal omphalomesenteric.

At 72h postoperatively presented febrile hook and hematological decompensation with anemia and thrombocytopenia and if cultivation and were made the relevant clinics. (Blood urocultivo, stool, liquid are reported negative). He received intravenous antibiotics: vancomycin/Tazopril for 15 days, Amphotericin B, amikacin 10 days and Ampicillin Sulbactam 5 days. He received 5 globular concentrates and 2 platelet concentrates. Later with satisfactory evolution it graduated. Later with satisfactory evolution he graduated. In keeping good general condition, three months after surgery and monitoring ambulatory.

Discussion

It is postulated that in the etiology of atresia or stenosis of jejunum and ileum are the result of an intravascular accident located during intrauterine life. Subsequent ischemic necrosis and resorption of the affected segment or segments result in an intestinal wall contracted by a scar leading to stenosis at one end and a complete intestinal and mesenteric defect in the other. The absence of other congenital abnormalities found in association with jejunoileal stenosis and atresia supports this theory.

The morphological classification of these lesions allows the different surgeons to compare results, it is also of therapeutic value and prognosis; the most commonly accepted system is the one proposed by Louw and modified by Grosfeld, the anatomical defect found in the present case corresponds to type II of the aforementioned classification [2-7].

A failure in complete or partial regression of the omphalomesenteric duct can give rise to several structures residual. These pictures observe approximately in 2% of the newborn. The malformations that correspond to persistent COM represent 6%; most of the cases 73%, show symptoms within the first 28 days of life [8-17,20-25]. Of the anomalies of the vitelline duct, the present case corresponds to that of the fully permeable omphalomesenteric duct that manifested with an entire umbilical fistula, according to the Trimingham classification [9,10].

The distal ileum atresia and presence of intestinal content manifested through a whole-umbilical fistula, It rare and few cases are documented in the bibliography, The present case it characterized due to the emission of fecal matter through the navel, which is usually immediately after birth, its manifestation is early in the neonatal age. This case reflects the complete persistence of the duct, which

presented symptoms within a few hours of birth, It is pointed out by its importance the whole-umbilical fistula, with leakage of gases, liquids and fecal matter, the same corresponds to the persistence of a permeable ductus, which extends from the ileum to the navel, externalized by a small orifice or stoma [8-13,17].

More frequent in male sex, in a male relationship: female of 3:1, this case is a male which agrees with what is reported in the literature [8-11].

Laboratory tests were not consistent with what was reported, perhaps because of the infrequency with which the diagnosis of these cases in newborn infants is described. Not so with regard to radiological findings, which are nonspecific and often predominates the emergence of hydroaerial levels when there is intestinal obstruction, which is the most frequent, which was not recorded in the present case.

The diagnosis of persistence of the omphalomesenteric duct is confirmed by abdominal ultrasound, which may show the presence of a tubular structure with air that connects with the intestine, or by means of fistulography (insertion of a catheter inside the fistula hole and injection of iodinated contrast medium [1,2,5,6,15,17,20-23]. Although these studies guide the diagnosis, the cost, acquisition capacity, risk-benefit and limitation of our center led to the omission of the same.

The treatment of these malformations is surgical, because this duct does not involutes after birth and the potentially serious consequences that can cause, it is also described that both the definitive diagnosis and the correction of fistula ion is surgical [8-11,13-15,17,20,21]. So the handling of this condition requires a careful evaluation and awareness, while the appropriate treatment should be adapted to the individual situation, as was done in the case reported.

The most serious complications can lead to up to 18% mortality, especially in the neonatal period. The patient courses according to the findings Intraoperative with intestinal atresia, thus demonstrating the accompanying pathology with complications.

Conclusions

It is important that the neonatologist and the pediatrician know the alterations that are observed at the level of the navel because, in the daily practice, they can be found with embryonic remainders of the omphalomesenteric duct and this entity must be suspected in every neonate that Present umbilical secretion as in the case presented. The take of decisions should be timely to ensure early resolution of the pathology and reduce complications.

The whole-umbilical fistula is extraordinarily rare and few cases appear documented in the bibliography, in the present case is described in a newborn who presented clinic within a few hours of life, however, the ability to have the paraclinical studies necessary to confirm the diagnosis.

The anomalies of the omphalomesenteric duct can lead to intra-abdominal complications, up to 20% of the cases, standing out among these the intestinal obstruction, being the latter a positive finding in the surgical exploration of the patient.

Alterations to newborn navel level should be evaluated with utmost care by the neonatologist, pediatrician and a child surgeon to diagnose early bad formations and avoid complications that can become very serious.

The definitive diagnosis is carried out with the intraoperative findings, but the clinic, epidemiological orientation and possible imaging studies should be taken into account.

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