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Case Report Open Access

Iatrogenic Intestinal Laceration Secondary to Clamping of Unrecognized Umbilical Cord Hernia: A Case Report

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Abstract

This report describes the case of an intestinal laceration secondary to clamping of an unrecognized umbilical cord hernia in a newborn female. This accidental complication is extremely rare, but it should be borne in mind when clamping at the time of delivery of every newborn, especially in the presence of anomalies or associated structures within the umbilical cord.

Keywords: Umbilical cord hernia; Gastroschisis; Newborn; Trauma to intestinal loop

Introduction

Umbilical cord hernia is a small defect in the abdominal wall; the diagnosis is often made at birth [1,2]. This anomaly is due to a defect in the closure of the umbilical ring. Unlike omphalocele, which is a serious defect in the umbilical region involving muscles and skin, and in 50% of cases is associated with other congenital anomalies, the umbilical cord hernia is an apparently isolated defect [3]. An intestinal ileal loop or omphalomesenteric duct remnants can be found within the umbilical cord hernia. We report the clinical case of a newborn with iatrogenic damage in the bowel after clamping of an unnoticed umbilical cord hernia.

Case Report

A female infant was born at 37 gestational weeks by vaginal delivery with an APGAR score of 9.9. Her birth weight was 2.762 kg. The post-natal inspection of the newborn showed a 1 cm long navel skin, inside which bluish vessels were evident. On delivery, suspecting malformed vascular vessels the clamp was put on the base of umbilical cord. After cutting the umbilical cord some yellowish material leaked. A careful inspection showed that ileal loops had been cut and clamped (Figure 1). The infant was urgently transferred to our Centre. At the first clinical examination we noticed the ileal loop resected with partial release of the cecum and appendix from the ring cord still covered by amniotic membrane (Figure 2). In fear of intestinal ischemia, the clamp was removed and the ileal loops were covered with sterile gauze soaked in warm saline. The infant was quickly transferred to the operating room. Under general anaesthesia, an enlargement of the supraumbilical longitudinal incision was performed and the amniotic membrane was removed. After careful inspection of the intestinal loops, an end-to-end primary anastomosis was performed after having resected the partial ileal loops involved in clamping. The surgery was concluded with an aesthetic reconstruction of the umbilicus (Figure 3). The postoperative course was uneventful with gradual resumption of enteral nutrition after 6 days. The infant was discharged after 12 days.

Discussion

An omphalocele is characterized by a central defect at the site of the umbilical ring. The eviscerated contents are covered by a sac that consists of a translucent membrane composed of peritoneum, interposed Wharton's jelly and amnion. The umbilical cord is inserted onto the sac. The sac usually contains stomach, as well as loops of small and large intestine. Giant omphaloceles have a big sac that can contain most of the abdominal viscera, including liver, spleen as well as the entire intestinal tract. Depending on the amplitude of the abdominal wall defect, there are different sizes of omphalocele with variable content [1]. A distinction must be made between the forms with extracorporeal

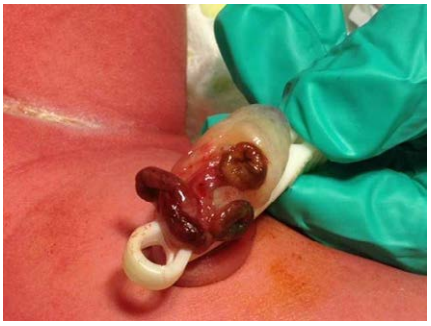

Figure 1: A careful inspection showed that ileal loops had been cut and clamped.

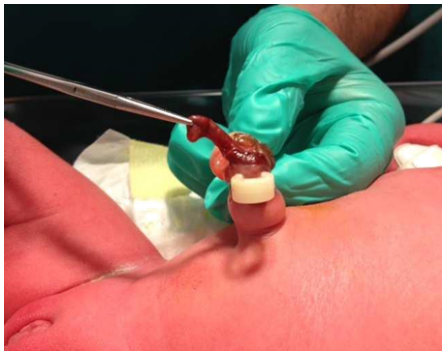

Figure 2: The ileal loop resected with partial release of the cecum and appendix from the ring cord still covered by amniotic membrane.

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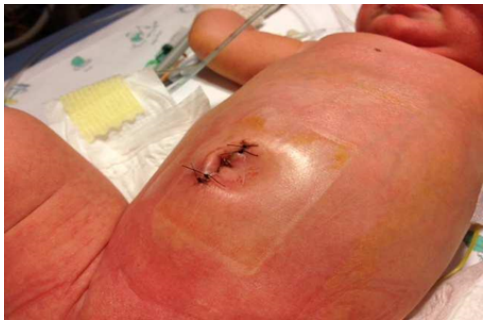

Figure 3: The surgery was concluded with an aesthetic reconstruction of the umbilicus.

and those with intracorporeal liver; the prognosis is different for each type. The omphalocele can be diagnosed by ultrasound from 16 weeks gestational age (range 16-18). In half of its occurrences, it is associated with other congenital anomalies such as intestinal malformations, cardiac and urinary disorders.

The umbilical cord hernia is a defect with a diameter less than 4 cm. Due to its small size, it is easily confused with a normal umbilical cord, and thus the diagnosis is often made at birth [1,2]. More rarely, the diagnosis is made in case of complications such as intestinal damage secondary to clamping (as in our case). For these reasons, the literature recommends a thorough inspection of the umbilical cord before clamping and cutting [3]. Any suspected abnormal thickening of the cord or any other malformations found should alert the midwife who after evaluating, has to refer the baby to the neonatologist or pediatric surgeon. Although rare, some reports similar to what we have described can be found in the literature [4,5]. After manual squeezing, the cord should be clamped at a distance of at least 5 cm from the abdominal base [6)]. In case of uncomplicated umbilical cord hernia, the surgical treatment usually involves the removal of the sac, the ligation of the umbilical vessels and closure of the peritoneum and fascia in a single layer with aesthetic reconstruction of the umbilicus.

Should omphalomesenteric duct remnants persist in the sac, the literature recommends to remove them as they may contain gastric ectopic mucosa. If iatrogenic bowel injury is present, extending longitudinal incision is mandatory, turning the umbilical cord hernia into a small gastroschisis. The intestinal laceration has to be sutured and an end-to-end intestinal anastomosis performed. The abdominal defect is then closed layer by layer. As to our case, the surgery was crucial and the prognosis excellent.

Conclusion

In the case of an abnormal thickening of the umbilical cord or in the presence of malformed babies, cord clamping must be done with utmost care and distance from the abdominal base. This is important in order to prevent, even in rare cases, iatrogenic damage of the intestine.

References

1. Haas J, Achiron R, Barzilay E, Yinon Y, Bilik R, et al. (2011) Umbilical cord hernias: prenatal diagnosis and natural history. J Ultrasound Med 30: 1629-1632.
2. Cizmeci MN, Kanburoglu MK, Akelma AZ, Tatli MM (2013) Do not overlook an umbilical cord hernia before clamping. Eur J Pediatr 172:1139
3. van Tuil C, Saxena AK, Willital GH (2006) Look twice before you clamp: decapitation of an omphaloenteric duct. A case report. Med Princ Pract 15: 156-158.
4. Tejani A, Dobias B, Varma P (1978) Intestinal laceration secondary to clamping of an occult omphalocele. Obstet Gynecol 52: 483-485.
5. Asabe K, Oka Y, Kai H, Shirakusa T (2008) Iatrogenic ileal perforation: an accidental clamping of a hernia into the umbilical cord and a review of the published work. J Obstet Gynaecol Res 34: 619-622.
6. Kirkegaard A, Bjerring OS, Rasmussen L (2011) [The umbilical cord of newborn babies should be clamped at least five centimetres from the abdominal wall]. Ugeskr Laeger 173: 2270-2271.