CASE REPORT

Look Twice Before You Clamp the Cord: Iatrogenic Ileal Transection

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Introduction

Anterior abdominal wall defects at the time of birth can present either as gastroschisis or omphalocele. Omphalocele is a congenital anterior abdominal wall defect at the base of an umbilical cord with herniation of the abdominal contents covered by the parietal peritoneum, the amnion and Wharton's jelly. However, mild forms of omphalocele can present as congenital hernia of the umbilical cord with herniation of either the solitary intestinal loop or persistent omphaloenteric duct (POD). The risk factors in omphalocele as well as mild forms such as congenital hernia of the umbilical cord are still not completely known and their association with other birth defects has not always been established [1]. Traumatic injury to intestinal loops in congenital hernia of the umbilical cord has also been reported and emphasized in order to prevent this type of

injury at the time of birth [2]. The case is reported because of its great rarity, and as a reminder to all that such an accident may take place. In tying or clamping the cord, especially one that is unduly large, it should be tied well away from the abdomen.

Case Report

A 2 kg, 12-day-old baby presented to us with fecal discharge from umbilicus with provisional diagnosis of POD. The baby passed stool per rectally initially but for the last 9 days the patient was not passing stool. There was no history of vomiting, fever, melena, and hematemesis. The baby was delivered at home and it was a normal full-term vaginal delivery conducted by a midwife who tied the umbilical cord stump about 2 cm from the umbilicus. The baby started passing stool from the umbilicus just 10 h after birth due to injury to the bowel as a result of tying of thread at an improper site. On examination, the baby was pale, dehydrated, and fecal matter was coming out from one of the two visible openings in the umbilicus. Blood urea and serum creatinine were raised; serum electrolytes were normal. Sepsis profile was positive. Blood culture was positive for *Klebsiella* species. After resuscitation, exploratory laparotomy via an infra-circumumbilical incision was done and after checking the distal patency an ileoileal anastomosis was done. The abdomen was closed in single layer and 40 ml of blood was transfused during

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Fig. 1 The two catheterized bowel lumens can be seen separately due to bowel injury by cord clamp

surgery. Unfortunately, the patient succumbed to sepsis on second post-operative day.

Discussion

Careful inspection of the umbilical cord of every newborn at the time of delivery is essential. Any unusual thickening of the base of the cord or other anomalies should alert the obstetricians, pediatricians, and nurses, who customarily clamp, manipulate or shorten the cord as a routine procedure at the time of delivery. The existence of anomalies or associated structures within the umbilical cord has frequently been reported in the literature [3, 4]. Injury to such structures that may be trapped in the inconspicuous umbilical cord may occur during routine clamping if such herniations are not searched for (Fig. 1).

Delivery of uncomplicated pregnancies by midwives is common, and newborns with congenital hernia of the

umbilical cord pose a high-risk group for herniated structure injuries. These injuries may also go primarily unnoticed. It is only later, after careful evaluation, that their presence may be discovered [1]. If an unusual umbilical cord thickening is suspected, the patient should be carefully evaluated by a pediatric surgeon with experience in neonatal surgery. Further medical treatment or surgical intervention should be left to his discretion. However, timely surgical exploration and intervention in suspected cases help to avoid complications and reduce morbidity.

Conclusion

Herniation of the umbilical cord at the time of birth by intestinal loops is rare, but caution should be taken by midwives before clamping in order to avoid the type of injury seen in this case. The danger of traumatic injury to incarcerated structures may at first go unnoticed in rare cases of congenital hernia of the umbilical cord. In suspected cases, it is recommended to perform higher clamping, as well as follow-up with further investigations and surgical intervention if required.

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