BRIEF COMMUNICATION

Meckel's diverticulum complicating neonatal umbilical cord clamping

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A male neonate weighing 3838 g was born at 39 weeks of gestation by elective cesarean delivery due to breech presentation. The umbilical cord was clamped by the surgeon approximately 20 cm from the umbilical base and the neonate was transferred to the midwife for final clamping. The cord was clamped again at approximately 3 cm from the umbilical base. The residual umbilical cord was approximately 4 cm in diameter. Immediately after final clamping, meconium appeared in the umbilical stump. This clinical finding led to the presumptive diagnosis of omphalocele. Ultrasound examinations during pregnancy had not demonstrated any sign of abnormality around the umbilicus. The neonate was transferred in a stable condition to the pediatric surgical unit for immediate operative exploration of the umbilical cord. After sedation, a circular incision around the umbilical stump was performed. The bowel was separated and the abnormality was found to be a Meckel's diverticulum. The diverticulum was removed and the ileum closed horizontally. The specimen was sent for pathological evaluation, which confirmed the diagnosis.

Meckel's diverticulum, also known as an "ileal appendix," occurs because of incomplete obliteration of the omphalocele duct. In the vast majority of cases it is asymptomatic but it can be prone to complications, especially in children, because of ectopic epithelial lining and various bands reminiscent of its embryological development. Although the lifetime risk of complications from Meckel's diverticulum varies from 4% to 34%, over 50%–60% of patients who develop symptoms are younger than 2 years of age. Bleeding, intestinal obstruction, volvulus, intussusception, and Meckel's diverticulitis with or without perforation are some of the common complications seen in children [1]. Meckel's diverticulum has no associations with other major congenital malformations and localization of it in the umbilical cord is rare.

Complications arising from the incorrect placement of clamps incorporating small omphalocele have been described [2–4]. The present report emphasizes the rare potential hazard of clamping the bowel at the time of handling the umbilicus. Any unusual thickening of the base of the cord along with even the most minute fistula opening to its side should alert to the existence of potential anomaly. In such cases the cord should be clamped at a safe distance and early pediatric surgical consultation contemplated. Obstetricians, pediatricians, nurses, and midwives who customarily clamp, manipulate, or shorten the cord in the delivery room or upon arrival in the nursery should be aware of these potential anomalies of the cord and gastrointestinal tract.

References


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