

Omphalitis Leading to Peritonitis and Bowel Evisceration in a Neonate

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Dear Sir,

Omphalitis is still a worrisome entity with significant morbidity and mortality in developing countries. In Pakistan, its incidence is reported as 217.8/1000 live births [1]. This is a preventable disease especially found in neonatal life and attributed to poor sanitary conditions during labor, untrained birth attendants, and improper umbilical cord handling and care after birth. It is exceedingly rare in developed countries endowed with all the necessary equipment, trained staff and appreciable sanitary and sterilization practices [2]. We describe here a neonate presented to us with bowel evisceration as a complication of omphalitis.

A 25-day-old female neonate presented in nursery emergency with bowel evisceration through the umbilicus for the last 3 hours. The neonate was born in a nearby village at home by a traditional birth attendant. The neonate had no problems during normal vaginal delivery as told by the parents. The neonate was taking orally and passing stools regularly when on 20th day of life the umbilicus became reddened. The neonate developed fever and purulent discharge from the umbilicus. No care however sought for that. Two days later, the neonate developed abdominal distension followed by reluctance to feed and lethargy on the following days. The parent took treatment

from local dispensary. On the day of presentation, the umbilicus suddenly developed swelling followed by extrusion of small amount of pus and bowel evisceration. The neonate was now taken to our hospital.

On inspection, the abdomen was distended with few engorged and edematous small bowels loops eviscerated through the umbilicus [Figure 1]. The bowel loops were covered with warm saline soaked gauzes and initial rapid resuscitation was undertaken. Initial blood sampling was taken and within half-hour, the patient was in operation theatre for surgical intervention. The umbilical defect was slightly extended to facilitate reduction of eviscerated bowel loops. During the procedure frank pus was noted in the peritoneal cavity which was taken for culture [Figure 2]. The distended eviscerated loops were deflated by milking the contents to the colon and returned to the peritoneal cavity. The abdominal cavity was thoroughly washed with copious amount of warm saline and wound closed with umbilicoplasty. Postoperative recovery remained uneventful. The culture did not yield any growth. The patient was discharged on 10th postoperative day in a good clinical condition.

Omphalitis may be avoided by delivery in a clean surrounding with good postnatal care of the umbilical cord [4]. The application of various antiseptic solutions including spirit and gentian violet versus allowing the umbilicus to get dried with only cleanliness is debatable. Soofi et al, conducted a randomized controlled trial in a district of Sindh province of Pakistan and found significant reduction in incidence of omphalitis in group of neonates managed by tropical application

of 4% chlorhexidine to the umbilical cords [3]. In a metanalysis, the role of chlorhexidine is vindicated in prevention of neonatal omphalitis and they recommended chlorhexidine as a part of birth kit for the care of umbilical cord [5].

In case of Omphalitis, early antibiotic therapy with broad spectrum antibiotics, which has to be changed according to culture sensitivity of the swab culture taken from the umbilical discharge, is the mainstay of the treatment. In delayed presenting or inadequately managed cases, a great deal of fatal complications can arise including necrotizing fasciitis, portal pyemia and portal venous thrombosis, intra-abdominal abscess, evisceration of the bowel loops which may progress the intestinal necrosis etc [2]. In our case, the patient developed peritonitis leading to abdominal distension (ileus) and in wake of presumably increased intra-abdominal pressure; the inflamed and weakened umbilical scar gave way and led to bowel evisceration. The bowel was however not gangrene and no resection was required in the index case. The patient developed complications requiring surgical intervention on fifth day of omphalitis. Early medical therapy with broad spectrum antibiotics would have avoided surgical intervention in this case.

Figure 1: Distended and engorged gut loops eviscerated from umbilicus



Figure 2: Pus is also visible at the umbilical defect



References

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