Perforation of an inflamed Meckel’s diverticulum in a newborn: Report of a case

Yenidoğanda enflame Meckel divertikül perforasyonu

To the Editor,

A female baby weighing 2800 g was born at 38 weeks gestation by vaginal delivery to a 33-year-old multigravida mother. After a breast-feeding, the baby’s abdomen became progressively distended. On examination, the umbilicus was normal and the abdomen was diffusely distended, but tenderness was unremarkable. An upright abdominal X-ray at 17h of age showed pneumoperitoneum.

An emergency surgery was performed 23 h after birth with diagnosis of gastrointestinal perforation. At laparotomy, a narrow-based Meckel’s diverticulum measuring up to 4 cm with a blowout-like perforation in the distal end was found (Figure 1). The appearance of the surrounding bowel was healthy without any inflammatory reaction. A segmental resection of the intestine with end-to-end...

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anastomosis was performed. Pathological examination of the diverticulum showed inflammatory reaction without ectopic mucosa within the diverticulum. The postoperative course was uneventful and she was discharged at the age of 8 days.

Meckel’s diverticulum is the most common congenital gastrointestinal anomaly and is present in about 2% of the general population (1). Meckel’s diverticulum is suspected when failure of complete obliteration of the embryonic vitelline or omphalomesenteric duct occurs (2). Symptomatic Meckel’s diverticulum usually occurs in the first two years of life. A perforation of Meckel’s diverticulum is less common and this condition is rare especially in the neonatal period.

Perforation of Meckel’s diverticulum occurs in the neonatal period most frequently with an association of necrotizing enterocolitis (3) and is the cause of only 3% of cases of gastrointestinal perforation-related peritonitis, mimicking necrotizing enterocolitis (4,5). Oyachi et al. (6) reported a case of perforated Meckel’s diverticulum with aseptic peritonitis in a 17-day-old neonate. They speculated that the narrow lumen between the small intestine and the diverticulum, accompanied by poor self-emptying, had caused acute inflammation resulting in perforation of Meckel’s diverticulum. There was no ectopic gastric mucosa in the diverticulum. Similarly, there was also no ectopic mucosa or peritonitis in our case.

Diverticular length and base diameter are well-known predisposing factors to complications, and long, narrow-based diverticula are thought to be more prone to obstruction or inflammation. We agree that narrow lumen leading to obstruction and causing inflammation of the diverticulum as in appendicitis was the main reason for perforation of Meckel’s diverticulum in our case. In conclusion, perforated Meckel’s diverticulum in a newborn is very rare. Establishing a preoperative diagnosis of perforated Meckel’s diverticulum is difficult.

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