

## Clinical Image

### Meckel's Extraordinary Complication

Osman Uzunlu<sup>1</sup>, Yeliz Arman Karakaya<sup>2</sup>

<sup>1</sup>Department of Pediatric Surgery, Pamukkale University School of Medicine, Denizli, Turkey

<sup>2</sup>Department of Pathology, Pamukkale University School of Medicine, Denizli, Turkey

**Address for Correspondence:** Osman Uzunlu, Department of Pediatric Surgery, Pamukkale University School of Medicine, Denizli, Turkey  
+90 532 494 4018  
osmanuzunlu@gmail.com

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A three year old, previously healthy, girl was admitted to emergency department with vomiting, colicky abdominal pain, abdominal discomfort and abdominal distention. When examined physically, she seemed lethargic, dehydrated and she had tachycardia. Abdominal examination exposed abdominal distention, hypoactive bowel sounds and tenderness in the periumbilical area. Rectal examination was unremarkable. Laboratory findings were normal, and C-reactive protein (CRP) was negative. Plain abdominal radiography displayed air-fluid levels and dilated loops of the small bowel. Ultrasonography (US) detected distended small bowel loops, as well as a 5x3 cm hyperechogenic solid lesion in the subumbilical region. The same findings were seen via computed tomography (CT) scan. Neither the US nor the CT scans showed intussusception. The child's previous medical records were unremarkable, and she had no history of surgery to explain the intestinal obstruction.

After being treated with intravenous fluid resuscitation, the patient underwent urgent operation. A complete intestinal obstruction, caused by a 10 cm intestinal segment with huge intramural hematoma, was observed approximately 50 cm away from the ileocaecal valve (Figure 1). The observed intramural hematoma clearly resulted from haemorrhage of the adjacent Meckel's diverticulum. The affected intestinal loops with Meckel's diverticulum was resected and end-to-end anastomosis was performed. The postoperative period was uneventful. Histopathological tests resulted that the Meckel's diverticulum contained ectopic gastric tissue and an extensive intramural hematoma secondary to bleeding from the Meckel's diverticulum. Upon pathological examination, the aetiology of the complete intestinal obstruction was found to be this intramural hematoma. The patient's family agreed with a written informed consent.

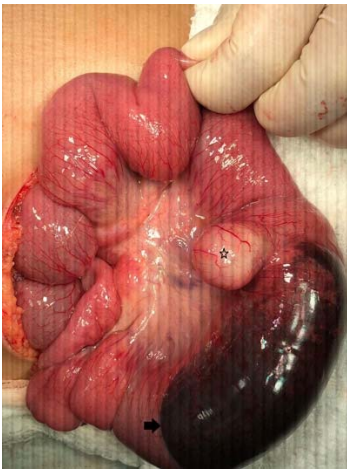
Meckel's diverticulum is a true diverticulum that is a remnant of the vitelline duct. It is seen in 2% of the population and is the most common anomaly of the gastrointestinal tract (1). Meckel's diverticulum is usually a clinically silent anomaly; however, complications related to it may develop in 4% to 16% of cases (2). Although gastrointestinal bleeding and diverticulitis are the most frequent clinical complications of Meckel's diverticulum in childhood; volvulus, intestinal obstruction and intussusception may also be seen less frequently. Intestinal obstruction due to Meckel's diverticulum may develop due to intussusception, volvulus, diverticulitis or internal hernias.

Pediatric surgeons generally predict that, if a child has an intestinal obstruction, he or she might also display a Meckel's diverticulum. Meckel's diverticulum may cause intestinal obstruction for unexpected reasons, such as inverted diverticulum, torsion of the diverticulum, etc.

Meckel's diverticulum accounts for approximately 50% of all lower gastrointestinal bleeding in children. Haemorrhage typically occurs intraluminally, although atypical haemorrhagic features have been documented, such as free intraperitoneal bleeding, which is quite rare (3). As mentioned above, to the best of the authors' knowledge, only one other case presenting complications of the Meckel's diverticulum, with a similar bleeding pattern into the layers of the intestinal wall, was reported in 1981 (4). According to the authors' basic knowledge, the Meckel's haemorrhage occurs intraluminally; in the present case, haemorrhage occurred between the layers of the intestinal wall; that caused the hematoma structure to expand to the intraluminal space, which is not a well-known feature of Meckel's diverticulum.

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**FIG.1.** Star; Meckel Diverticulum, arrow; intramural hematoma.