

Gerhard H. Mostbeck¹ (✉) ·
Jasmin Liskutin¹ · Roland Dorffner¹ ·
Barbara Bittmann² · Mathias Resinger³
Department of¹ Radiology and Nuclear
Medicine, ²Paediatrics and ³Surgery,
Hospital of the Brothers of St. John,
Esterhazystr. 26, 7000 Eisenstadt, Austria

A previously healthy 12-year-old boy presented with a 1-day history of colicky periumbilical pain followed by severe rectal bleeding. High-resolution US demonstrated a 2-cm cystic lesion in the mid lower abdomen, having the appearance of a blind-ending thick-walled loop of bowel with a clear connection to a peristaltic, normal small-bowel loop (Fig. 1). The echo-free contents could not be compressed or expressed into the connecting bowel loop. Convergent colour Doppler did not reveal hyperperfusion of the thickened wall (Fig. 2). It was painless on compression. A diagnosis of Meckel's diverticulum (MD) was made.

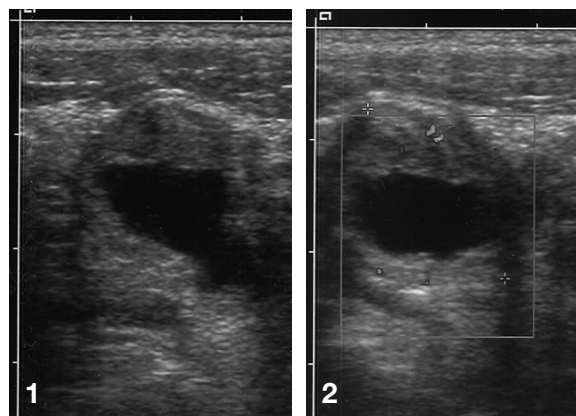
At surgery, a thick-walled MD containing blood was found and resected. It contained ectopic gastric mucosa and a bleeding peptic ulcer. The postoperative course was uneventful.

In children, symptomatic MD usually presents with bowel obstruction, bleeding and inflammation. Diagnosis before surgery is considered difficult, and imaging is based on scintigraphic (Meckel scan) and barium techniques (enteroclysis), with angiography being an alternative in adults. There are only a few reported cases of the US findings of various complications of

Ultrasonographic diagnosis of a bleeding Meckel's diverticulum

Fig. 1 High-resolution US showing a cystic structure in the lower abdomen. A thickened wall is connected to normal, peristaltic bowel loop (in the 4 o'clock position)

Fig. 2 Colour Doppler US showing only a few dots of colour-encoded blood flow within the thickened bowel wall



MD, such as bleeding, inversion and inflammation [1–3]. As in this case, a thick-walled, blind-ending painless bowel loop with connection to normal bowel might be diagnostic of MD with ectopic tissue. Colour Doppler techniques do not seem to add additional information. High-resolution US should be considered as a non-invasive tool for diagnosing symptomatic MD.

References

1. Daneman A, Myers M, Shuckett B, et al (1997) Sonographic appearance of inverted Meckel diverticulum with intussusception. *Pediatr Radiol* 27: 295–298
2. Itagaki A, Uchida M, Ueki K, et al (1991) Double targets sign in ultrasonic diagnosis of intussuscepted Meckel diverticulum. *Pediatr Radiol* 21: 148–149
3. Poelman JO, Hupscher DN, Ritsema GH (1991) Sonographic manifestation of an inflamed Meckel's diverticulum: a case report. *Eur J Radiol* 12: 45–46