

Capsule retention in a giant Meckel's diverticulum containing multiple enteroliths

A 58-year-old man presented to hospital with diffuse abdominal pain, melena, and iron-deficiency anemia. Gastroscopy and colonoscopy were unremarkable. Wireless capsule endoscopy (WCE) (PillCam SB2; Given Imaging, Yoqneam, Israel) was then carried out. The video sequence showed the capsule passing through a narrow orifice of the distal ileum into a cavity containing multiple enteroliths swirling in a greenish fluid with debris (► **Figs. 1 and 2**). Small ulcers were also demonstrated near the orifice in the bowel lumen. The capsule remained within the cavity until the battery was exhausted.

Consequently, computed tomography (CT) demonstrated a dilated part of the bowel at the right abdomen, filled with enteral contrast and containing a hyperdense foreign body – corresponding to the capsule – and multiple ovoid structures, each with a thick rim of intermediate density and low-density center (► **Fig. 3**).

The patient was operated on, and a giant enteral diverticulum (► **Fig. 4**) containing the capsule and four enteroliths was found (► **Fig. 5**).

Histological examination proved this to be a Meckel's diverticulum with few small ulcers, without the presence of ectopic gastric mucosa.

Obscure gastrointestinal bleeding is the most common indication for WCE, yielding high detection and low retention rates [1]. Crohn's disease, neoplasia, abdominal radiation injury, prolonged nonsteroidal anti-inflammatory drug use, and previous major abdominal surgery or small-bowel resection are the most common reasons for capsule retention [1]. There are few reported cases of capsule retention in a small-bowel diverticulum, either a simple diverticulum or Meckel's diverticulum [2–4]. Meckel's diverticula that do not have gastric mucosa – like in our case – create a more alkaline environment, promoting precipitation of calcium and other minerals essential for enterolith formation [5]. It has been reported that only 10% of Meckel's diverticula contain enteroliths [5].

To our knowledge, this is the first report of WCE providing images of a Meckel's diverticulum containing enteroliths.



Fig. 1 Wireless capsule endoscopy (WCE) showing the narrow orifice in the distal ileum which leads to a cavity (the greenish structure behind) containing enteroliths.

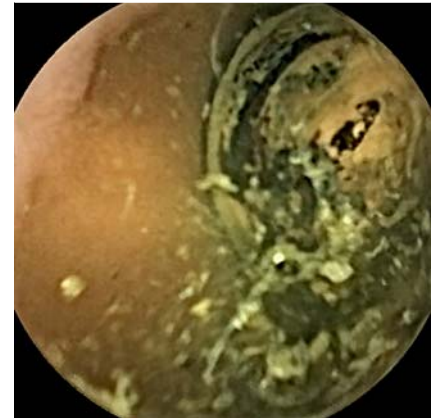


Fig. 2 Wireless capsule endoscopy (WCE) image of an enterolith inside the Meckel's diverticulum.



Fig. 3 Computed tomography (CT) image demonstrating a dilated part of the bowel, filled with the enteral contrast (given orally), and containing the capsule and multiple enteroliths, each with a thick rim of intermediate density and low-density center.

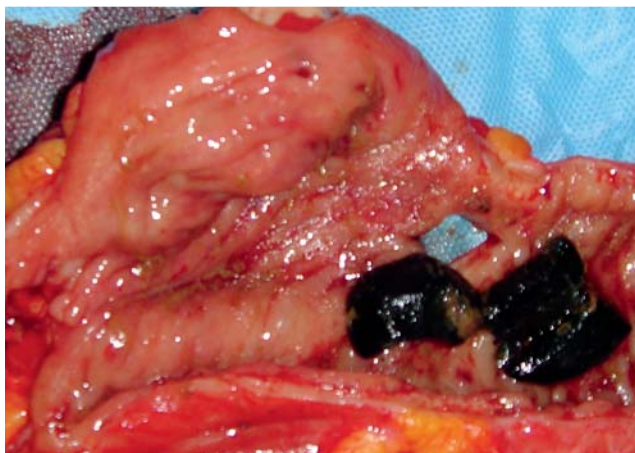


Fig. 4 Gross specimen of the Meckel's diverticulum. Some of the enteroliths are shown.



Fig. 5 Meckel's enteroliths and the capsule. Each enterolith is laminated, probably due to chronic and progressive formation.

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Competing interests: None

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