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.

References

Bibliography
Endoscopy 2011; 43: E308–E309
© Georg Thieme Verlag KG Stuttgart · New York · ISSN 0013-726X

Corresponding author
N. Courcoutsakis, MD (Med) Sci
Department of Radiology and Medical Imaging
University Hospital of Alexandroupolis
68100 Alexandroupolis
Greece
Fax: +30-255-1030312
ncourcou@med.duth.gr

Endoscopy_UCTN_Code_CPL_1AI_2AB

Competing interests: None

N. Courcoutsakis, M. Pitiakoudis, K. Mimidis, S. Vradelis, E. Astrinakis, P. Prassopoulos
1 Department of Radiology and Medical Imaging, Democritus University of Thrace, Alexandroupolis, Greece
2 2nd Department of Surgery, Democritus University of Thrace, Alexandroupolis, Greece
3 Endoscopic Unit, 1st Department of Internal Medicine, Democritus University of Thrace, Alexandroupolis, Greece