

Needle in a haystack: an unusual case of video capsule endoscope retention

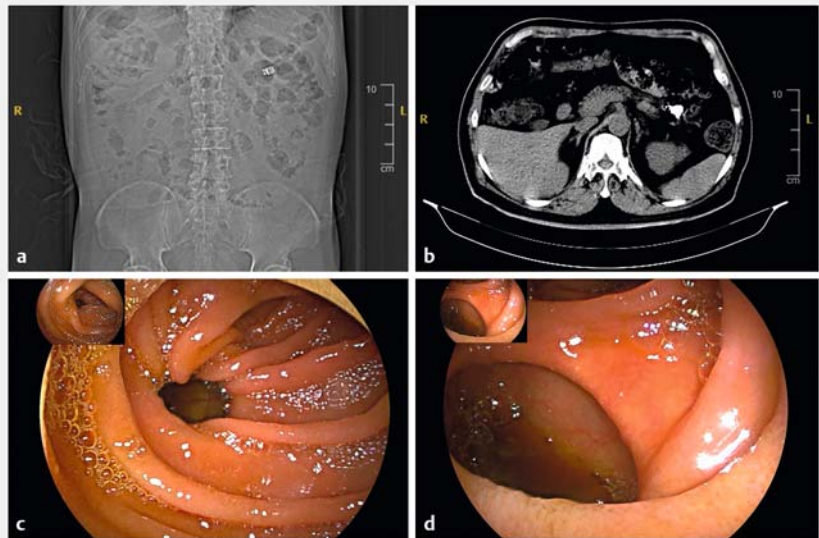
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A patient was admitted with a 1-month history of intermittent abdominal pain, often associated with pre-prandial exacerbation. Then, 2 days prior to admission, the patient experienced hematochezia, with a rapid decline in hemoglobin level from 131 g/L to 80 g/L to 61 g/L. The patient underwent gastroscopy and colonoscopy, but no obvious cause of gastrointestinal bleeding was found.

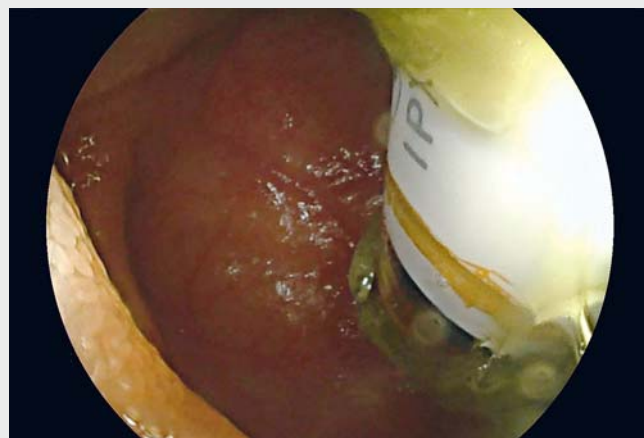
Considering the relative short course of disease, with no symptomatic evidence of obstruction, video capsule endoscopy (VCE) was ordered to determine the cause of obscure gastrointestinal bleeding. The VCE was completed in 11:14 hours but did not complete the entire small-bowel examination and failed to pass after 72 hours. A computed tomography scan revealed that the VCE device was retained in the small bowel, located in the left upper quadrant of the abdomen (► **Fig. 1 a, b**).

A double-balloon enteroscopy (DBE) was performed to retrieve the VCE device. An antegrade approach revealed multiple diverticula in the jejunum (► **Fig. 1 c, d**). Initially, the location of the VCE device was difficult to identify, but it was later found within a large diverticulum located in the upper segment of the jejunum. Unlike extraction of video capsules in stricturing or obstructive diseases, extraction of a foreign object from a diverticulum is technically difficult due to sharp angulation of the scope and accurate snare positioning. After multiple attempts and repeated adjustment, the VCE device was finally retrieved (► **Video 1**).

As VCE is noninvasive and convenient, it has become a common diagnostic tool for the investigation of obscure gastrointestinal bleeding and other small-bowel disorders [1]. However, VCE device retention is a known adverse event, with a reported incidence of approximately 2%–10%. Although rare, device retention may cause severe life-threatening complications. The majority of cases of video



► **Fig. 1** Investigations to locate the video capsule endoscope. **a, b** Radiology studies showed retention of the device in the small bowel. **c, d** Antegrade double-balloon enteroscopy revealed multiple diverticula in the jejunum.



► **Video 1** Retention of a video capsule endoscope in a jejunal diverticulum, retrieved with a polypectomy snare.



capsule retention are due to stricturing diseases, such as Crohn's disease, or obstructing disease, such as small-bowel tumors [2]. VCE device retention in diverticular disease is thus an even rarer com-

plication. Device retention may not require immediate intervention, but prolonged retention may require surgical extraction. This report described a case of VCE device retention in a jejunal diver-

ticulum, which was successfully retrieved with DBE.

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Competing interests

The authors declare that they have no conflict of interest.

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