

## Jejunal diverticular bleeding treated using cap-assisted enteroscopy: pulling the plug

A 66-year-old man was admitted because of massive hemochezia and hemorrhagic shock. Esophagogastroduodenoscopy (EGD) showed no stigmata of recent hemorrhage. Colonoscopy after a rapid purge revealed a fixed diverticular sigmoid colon and old blood clots throughout the colon and ileum. The following day, the patient developed a new episode of hemochezia and shock. Computed tomographic angiography (CTA) could not detect any bleeding sites. However, a suspicious lesion was observed in the sigmoid colon (▶ Fig. 1). Because of the diagnostic uncertainty and inadequate endoscopic visualization, surgical resection was recommended, and a Hartmann's procedure was performed. Analysis of the pathological specimen revealed chronic diverticulitis without any signs of malignancy.

A new episode of shock occurred 3 days postoperatively, with blood loss through the ileostomy and hematemesis. An urgent CTA showed an accumulation of hyperdense fluid (without active contrast extravasation) in the proximal jejunum, and an upper gastrointestinal endoscopy showed fresh blood in the distal duode-

num. Cap-assisted (Olympus, Tokyo, Japan) push-enteroscopy (CF-H180AI colonoscope; Olympus) revealed a small blood clot between two jejunal mucosal folds, located approximately 30 cm distal to the ligament of Treitz (▶ Fig. 2). After removal of the clot, slight oozing began from what was presumed to be a Dieulafoy-like erosion (▶ Video 1). Hemostasis was achieved after deployment of two endoclips (Resolution; Boston Scientific, Natick, Massachusetts, USA).

Follow-up enteroscopy 2 days later showed a blood clot next to the previously placed clips (▶ Fig. 3 a). After extraction of this pipe-shaped clot with a biopsy forceps (▶ Fig. 3 b), a small diverticulum was discovered. Oozing began at the diverticular border, which was successfully managed with placement of an additional clip (▶ Video 2). After this procedure, there were no new bleeding episodes, and 2 months later, intestinal continuity was restored.

Massive jejunal diverticular bleeding is rare and often difficult to detect on CTA [1,2]. Cap assistance can help to improve endoscopic detection of obscured small bleeding sites that are located between mucosal folds [3,4]. As this case demonstrates, jejunal diverticular bleeding can be successfully managed with hemostatic clip placement.

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**Christophe Snauwaert, Martine De Vos, Danny De Looze**

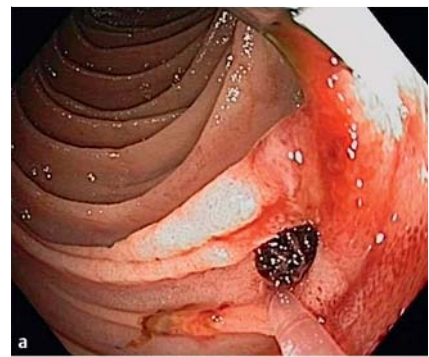
Department of Gastroenterology and Hepatology, Ghent University Hospital, Ghent, Belgium



**Fig. 1** Abdominal computed tomography (CT) scan showing a suspicious lesion in the sigmoid colon (circle).



**Fig. 2** Cap-assisted push-enteroscopy revealing a small blood clot between two jejunal mucosal folds.



**Fig. 3** Follow-up enteroscopy showing: **a** a blood clot next to the previously placed clips; **b** a pipe-shaped clot being extracted from a small diverticulum.

### Video 1

After removal of the clot, slight oozing begins from what was presumed to be a Dieulafoy-like erosion. Hemostasis is achieved after deployment of two endoclips.

### Video 2

After extraction of a pipe-shaped clot, oozing begins at the diverticular border, which is successfully managed with placement of an additional clip.

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## Corresponding author

### **Christophe Snauwaert, MD**

Department of Gastroenterology and Hepatology  
Ghent University Hospital  
De Pintelaan 185  
9000 Gent  
Belgium  
Fax: +32-9-3323816  
[christophe.snauwaert@hotmail.com](mailto:christophe.snauwaert@hotmail.com)