# **Images in Gastroenterology and Hepatology**



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# **Uncommon Cause of Jejunal Bleeding**

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#### **Keywords**

Jejunal bleeding · Jejunal diverticula · Capsule endoscopy · Balloon enteroscopy

## Uma causa atípica de hemorragia jejunal

#### **Palavras Chave**

Hemorragia jejunal · Divertículo jejunal · Cápsula endoscópica · Enteroscopia assistida por balão

#### **Case Report**

A 72-year-old male with a past history of arterial hypertension and diabetes presented with melaena and haematochezia. On examination, he presented tachycardia (120 ppm) and hypotension (80/40 mm Hg). His blood tests showed normocytic anaemia (haemoglobin 7.4 g/dL). After receiving 2 units of red blood cells and haemodynamic stabilization, the patient underwent upper endoscopy, which was unremarkable except for antral gastropathy and a colonoscopy with ileoscopy that showed blood and recent clots in all segments, with no potentially bleeding lesions. Angio-CT had no signs of active bleeding.

The patient underwent capsule endoscopy (CE) 5 days after the initial bleeding episode. Active bleeding was detected in the midjejunum (Fig. 1), but no source was identified.

Antegrade double-balloon enteroscopy was performed under deep sedation 2 days after CE. In the proximal jejunum, a large diverticulum with a visible vessel at its base was detected (Fig. 2). A TTS clip was inadvertently misplaced 2 mm from the vessel causing spurting bleeding on its release (Fig. 3). Attempt to put a new clip or adrenaline injection, as well as marking with a carbon tattoo, was impaired by the massive bleeding that prevented diverticulum identification after thorough washing and aspiration.

The patient was immediately referred to surgery. Intraoperatively, a large jejunal diverticulum (JD) was detected (Fig. 4). A segmental enterectomy with side-to-side jejunal anastomosis was performed. The patient recovered completely and uneventfully.

### **Discussion**

Small bowel diverticula are rare (1-4.6%) [1]. They are pseudodiverticula, corresponding to a herniation of the intestinal mucosa and submucosa, with no muscle layer [1].

Bleeding from the small bowel represents 5–10% of gastrointestinal bleeding. From these, 0.06% to 5% of cas-

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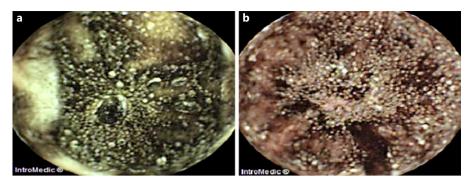
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**Fig. 1.** Capsule endoscopy (Given®-Pillcam® SB3) showing digested blood in the middle jejunum (**a**) and fresh blood downstream (**b**).



**Fig. 2.** Double-balloon enteroscopy (Fujinon®) revealing a visible vessel within a large diverticulum.



Fig. 3. Double-balloon enteroscopy (Fujinon®) showing TTS clip closed (a), released (b), and causing spurting bleeding (c).

es are caused by diverticula of the small intestine, corresponding to approximately 50 documented cases in the literature [2]. The CE diagnostic accuracy is higher when performed within 2 weeks after the bleeding episode (91% vs. 34%), which has also been shown for double-balloon enteroscopy [3]. In our case, the two exams were performed in the first 7 days, which may have facilitated the diagnosis.

Delay in establishing a diagnosis is common. Consequently, JD bleeding is associated with significant morbidity and mortality [2].

Treatment is usually surgical resection of the involved segment [4]. Chung et al. [5] reported in 2011 the first successful management of bleeding due to JD using balloon enteroscopy. Since then, double-balloon enteroscopy has been used not only to evaluate and mark (with a tattoo) but also to treat bleeding from JD.

Therapeutic modalities include clipping, argon plasma coagulation, or band ligation [2]. As there are only a few



**Fig. 4.** During surgery, a large jejunal diverticulum filled with blood was identified.

case reports in the literature, the short- and long-term efficacy of endoscopic therapy is unknown.

This case illustrates the unusual diagnosis in the aetiology of the middle gastrointestinal bleeding as well as the importance of CE and balloon enteroscopy for the diagnosis.

#### **Disclosure Statement**

The authors have no conflicts of interest to declare.

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