

A Rare Cause of Recurrent Melena was Identified by Capsule Endoscopy: Arteriovenous Malformation



N Lubomierski and JG Albert, Johann Wolfgang Goethe-University Hospital, Frankfurt/Main, Germany

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Abstract

Small bowel endoscopy is indicated for patients with an unidentified bleeding site in esophagogastroduodenoscopy and ileocolonoscopy and symptoms of intestinal blood loss or unexplained anemia. In approximately two-thirds of these cases, capsule endoscopy (CE) detects a lesion within the small bowel that explains the patient's symptoms.

The case of an 80-year-old female patient with recurrent melena and anemia is presented here by the authors. Endoscopy of the upper gastrointestinal tract as well as ileocolonoscopy did not show any pathological findings. CE revealed an area with abnormal mucosa in the middle third of the small bowel, which was strongly suspected of having malignant origin. Surgical exploration led to resection of a small jejunal segment with a palpable mass and increased blood flow. Surprisingly, the final diagnosis determined by the pathologist was arteriovenous malformation (AVM). This article is part of an expert video encyclopedia.

Keywords

Arteriovenous malformation; Balloon enteroscopy; Capsule endoscopy; Double-balloon enteroscopy; Endoscopy; Mid-intestinal bleeding; Small bowel; Video.

Video Related to this Article

Video available to view or download at doi:10.1016/S2212-0971(13)70087-6

Technique

- Capsule endoscopy.
- Colonoscopy.

Materials

- Capsule endoscope: PillCam™ SB2, Given Imaging EMEA, Hamburg, Germany.

Endoscopic Procedure

Esophagogastroduodenoscopy (EGD) and ileocolonoscopy detects the bleeding site in approximately 80–90% of patients with signs of intestinal blood loss or unexplained anemia. Either capsule endoscopy (CE) or balloon enteroscopy is performed in cases of normal upper and lower flexible endoscopy in these patients.

The authors present the case of an 80-year-old female patient who presented to their outpatient clinic for recurrent melena and anemia with hemoglobin of 8.0 g/dl. Despite the clinical sign of intestinal blood loss, there were no abnormal findings in EGD and ileocolonoscopy. CE revealed a bluish, polypoid lesion in the lower third of the small bowel, which was suspected of having neoplastic origin. Transanal double-balloon

enteroscopy was performed, but could not visualize the capsule finding. The surgical exploration then led to resection of a small bowel segment in which a palpable mass with an increased blood flow was detected. The final diagnosis as determined by the pathologist was arteriovenous malformation (AVM).

Vascular lesions of the small bowel are the most frequent finding in patients with bleeding from the small bowel (approximately 50–70% of findings). There seems to be a morphological heterogeneity of probably overlapping entities, such as AVM, venous or vascular ectasia, angiodysplasia, angiectasia, or even Dieulafoy's lesion. Thereby, terminology of these benign flat lesions depends somewhat on the person who describes it, being either an endoscopist or a histopathologist. Therefore, hemangiolymphangiomas might be differentiated by featuring lymphatic clusters. There might be some rare congenital syndromes separated from sporadic lesions, that is, hereditary hemorrhagic telangiectasia, also known as Osler–Weber–Rendu disease, that may harbor multiple telangiectasias all over the intestinal tract; and Klippel–Trenaunay syndrome, which is characterized by venous varicosity, cutaneous capillary malformation, and hypertrophy of bone and soft tissue, and might be accompanied by intestinal bleeding from gastrointestinal vascular malformations.

Key Learning Points/Tips and Tricks

- CE is qualified to detect small-bowel bleeding sites, but localization of the lesion might be less accurate.
- CE findings may not predict the neoplastic character of the detected lesion.
- Abnormal findings of the small bowel may be out of reach of double-balloon enteroscopy when located in the middle third of the small bowel.

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Scripted Voiceover

Capsule endoscopy was performed for recurrent melena in an 80 year old female patient. Preceding esophago-gastro-duodenoscopy and ileo-colonoscopy did not detect any significant finding. After passing the normal duodenum, there are three very small angiectasia visualized in the upper third of the small bowel harboring no signs of bleeding. In the lower third of the small bowel, an area with thickened and polypoid-appearing mucosa was seen without signs of active or former bleeding.

At surgical exploration, a palpable mass of the small bowel with an increased blood flow was detected. The small bowel segment was resected and the final diagnosis as determined by the pathologist was arteriovenous malformation (AVM).

Follow-up was uneventful, anemia did not recur.

Further Reading

- Albert, J. G.; Schulbe, R.; Hahn, L.; *et al.* Impact of Capsule Endoscopy on Outcome in Mid-Intestinal Bleeding: A Multicentre Cohort Study in 285 Patients. *Eur. J. Gastroenterol. Hepatol.* **2008**, *20*, 971–977.
- Handra-Luca, A.; Montgomery, E. Vascular Malformations and Hemangiolympangiomas of the Gastrointestinal Tract: Morphological Features and Clinical Impact. *Int. J. Clin. Exp. Pathol.* **2011**, *4*, 430–443.
- Liao, Z.; Gao, R.; Xu, C.; Li, Z. Indications and Detection, Completion, and Retention Rates of Small-Bowel Capsule Endoscopy: A Systematic Review. *Gastrointest. Endosc.* **2010**, *71*, 280–286h.
- Yano, T.; Yamamoto, H.; Sunada, K.; *et al.* Endoscopic Classification of Vascular Lesions of the Small Intestine (with videos). *Gastrointest. Endosc.* **2008**, *67*, 169–172.