

Title:

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An unpredictable gastrointestinal bleed

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Author contribution: Li-sheng Wang and Zheng-lei Xu designed the study; De-feng Li collected the information of the patient; Yan-hui Tian, Rui-yue Shi and Zheng-lei Xu performed the treatment; and De-feng Li Jun Yao and Zheng-lei Xu wrote and revised the article.

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Dear Editor,

A 65-year-old male complained of persistent melena for six days, and displayed anemia symptoms without hematemesis, vomiting and abdominal distention. He was diagnosed with a ruptured aneurysm of aortic sinus Valsalva, and underwent coronary artery occlusion one month previously. After the surgery, he was

continually prescribed clopidogrel 75 mg once daily. The laboratory examination showed the blood hemoglobin concentration was 60 g/l, without other conspicuous abnormality. Unfortunately, neither esophagogastroduodenoscopy (EGD) nor colonoscopy found obvious bleeding lesions. Abdominal computed tomography angiography (CTA) and enhanced computed tomography (CT) showed no obvious abnormal findings. Moreover, capsule endoscopy revealed small intestine with mucosal erosion (Fig. 1A). After discontinued clopidogrel, blood transfusion and support therapy, his symptoms resolved with a negative fecal occult blood, continued clopidogrel 75 mg once daily, and was uneventfully discharged one week later.

Over the past two weeks, the patient was readmitted due to persistent melena for one day again. The laboratory examination disclosed severe anemia with a hemoglobin level of 55 g/l. Emergency EGD detected no evidence of active hemorrhage lesions. However, emergency colonoscopy revealed massive blood clots in the terminal ileum (Fig. 1B). Meanwhile, emergent capsule endoscopy displayed much bleeding in the distal ileum (Fig. 1C). Therefore, emergency double-balloon enteroscopy found extensive mucosal erosion at the distal ileum, regarded as the primary lesions of gastrointestinal bleeding with closed metal clips (Fig. 1D and E). Therefore, the patient was diagnosed with clopidogrel-related gastrointestinal mucosal damage. Thankfully, the patient recovered with stable hemodynamics, and was discharged five days later.

Unfortunately, the patient was re-hospitalized due to intermittently blood-stained stools for one week. Emergency EGD found no evidence of active hemorrhage lesions again. Nevertheless, emergency colonoscopy revealed massive bleeding stool passage in the terminal ileum and colon. Subsequently, double-balloon enteroscopy was performed, and revealed an arteriovenous malformation (AVM) with active spurting bleeding in the distal ileum (Fig. 1F). Then, an endoloop and ligation device (MAJ-339, Olympus) were assembled and the lesion ligated with the endoloop (Fig. 1G). The patient was uneventfully discharged four days later. Subsequently, there was no recurrence of blood-stained stool during the follow-up. After three months, double-balloon enteroscopy showed a scar in the distal ileum (Fig. 1H).

Discussion

AVMs are considered to be arterial lesions, and contribute to acute life-threatening hemorrhage (1). Several modalities are recommended to treat AVM, including mechanical hemostasis and plasma coagulation (APC) (1,2). Meanwhile, surgical resection was performed to administer the large and re-bleeding AVMs (1,2). To the best of our knowledge, AVMs are rare, and less than ten cases have been reported in previous literature (3). In addition, most of the patients underwent a surgical resection (3). In this case, ligation-assisted endoscopic resection successfully treated the AVM, which had some advantages of easy manipulation, short procedural duration and few adverse events.

References

1. Sakai E, Ohata K, Nakajima A, et al. Diagnosis and therapeutic strategies for small bowel vascular lesions. *World J Gastroenterol* 2019;25:2720-33. DOI: 10.3748/wjg.v25.i22.2720
2. Chetcuti Zammit S, Koulaouzidis A, Sanders DS, et al. Overview of small bowel angioectasias: clinical presentation and treatment options. *Expert Rev Gastroenterol Hepatol* 2018;12:125-39. DOI: 10.1080/17474124.2018.1390429
3. Mazahreh TS, Aleshawi AJ, Alorjani MS, et al. Arteriovenous malformations within jejunal diverticulosis: case report and literature review. *BMC Surg* 2019;19:70. DOI: 10.1186/s12893-019-0538-0

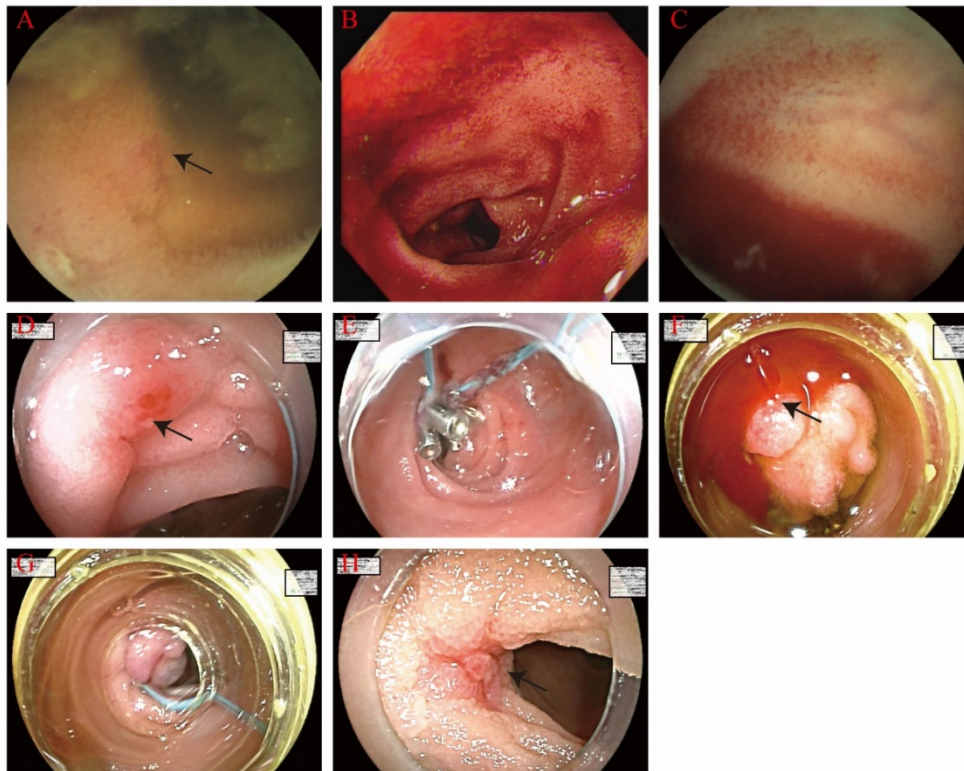


Fig. 1. A. Mucosal erosion in the small intestine. B. Massive blood clots in the terminal ileum. C. Bleeding in the terminal ileum. D. Mucosal erosion in the distal ileum. E. The mucosal erosion closed by metal clips. F. Arteriovenous malformation (AVM) with active spurting bleeding. G. AVM ligated with endoloop. H. Scar at the location of AVM.