Usefulness of gel immersion endoscopy to identify a colonic diverticulum with active bleeding

Management of colonic diverticular bleeding is clinically important because severe cases require transarterial embolization or surgical intervention; colonic diverticular bleeding can cause death in elderly patients with multiple comorbidities [1]. Colonoscopy enables the diagnosis and treatment of the bleeding site; however, identifying the diverticulum with active bleeding is challenging. Gel immersion endoscopy has been reported to be useful for securing the visual field during endoscopy for gastrointestinal bleeding [2, 3]. We report a case in which gel immersion endoscopy was effective in allowing the colonic diverticulum with active bleeding to be identified.

An 87-year-old man taking aspirin and apixaban for ischemic heart disease presented to our hospital with massive hematochezia from that morning. On admission, his hemoglobin level was 8.0 g/dL and he exhibited vital signs of shock.

Contrast-enhanced computed tomography revealed extravasation in the ascending colon (arrow).

Fig. 1

Fresh blood and clotting were observed in the ascending colon.

Fig. 2

Gel immersion endoscopy showed a diverticulum with pulsatile bleeding (arrow).

Fig. 3

A vessel was visualized on the ligated diverticulum.

Fig. 4

Video 1 Gel immersion endoscopy for colonic diverticular bleeding with active bleeding.

Video 1
raphy revealed extravasation in the ascending colon (▶ Fig.1). We performed emergency colonoscopy with blood transfusion. Fresh blood and clotting were observed in the ascending colon (▶ Fig.2). However, we were unable to identify the bleeding point because of active bleeding and poor visual field. After injecting Viscoclear gel (Otsuka Pharmaceutical Factory, Tokushima, Japan) [4], the visual field improved and a diverticulum with pulsatile bleeding was identified (▶ Fig.3, ▶ Video 1). An endoclip was placed as a marker close to this diverticulum, and endoscopic band ligation was then carried out (▶ Fig.4). Bleeding did not recur after the treatment.

In summary, we found gel immersion endoscopy to be useful for identifying a colonic diverticulum with active bleeding.

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Competing interests

The authors declare that they have no conflict of interest.

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