Hemorrhage from small-bowel diverticula is rare and requires a high degree of clinical suspicion and an adequate endoscopic view for the diagnosis [1,2]. Effective endoscopic therapy in this setting, as with most types of upper gastrointestinal bleeding, requires first that the lesion be adequately identified. Unfortunately, blood clot and particulate matter frequently obscure the field of view and prevent identification and treatment of the bleeding source. Conventional upper endoscopes with 2.8- and 3.7-mm working channels are often underpowered to effectively suction and clear blood clots and retained food material. Although repositioning of the patient, use of large-bore lavage tubes, and second look endoscopy after erythromycin infusion are useful adjunctive measures, endoscopically directed clearing of the field with simultaneous viewing would be ideal [3,4]. Recently, a “jumbo-channel” gastroscope (GIF-XTQ160, Olympus Corporation, Tokyo, Japan) has become widely available and boasts a 6-mm working channel for increased effectiveness in evacuating blood clots and debris (Fig. 1).

Here we present a patient with an overt duodenal diverticular hemorrhage that was effectively identified and treated with the jumbo-channel gastroscope after a conventional therapeutic scope failed to clear the field.

An 88-year-old woman presented to our institution with acute hematemesis and weakness. She underwent upper endoscopy using a double-channel therapeutic gastroscope (GIF 2T160, Olympus). Fresh and old blood were found throughout the upper gastrointestinal tract, with the medial segment of D2 markedly abnormal with adherent food debris (Fig. 2 a).

The initial impression was that of an ampullary malignancy; however, the blood clots and debris could not be cleared despite multiple attempts of flushing, suctioning, and the use of a polypectomy snare (Sensation, US Endoscopy, Mentor, Ohio, USA). The jumbo-channel gastroscope was then introduced and used to apply high-volume lavage followed by suction. This procedure quickly revealed an enormous duodenal diverticulum (Fig. 2 b), with an adherent clot at the 6 o’clock position (Fig. 2c). The clot was suctioned out, revealing a prominent visible vessel (Fig. 2d), which was injected with dilute epinephrine and treated with two hemoclips (Resolution, Boston Scientific, Natick, Massachusetts, USA) (Fig. 2e). The patient recovered well without further bleeding episodes and was discharged 5 days later.

Although hemorrhaging from duodenal diverticula is rare and has historically been treated with surgery, it can be effec-
tively treated endoscopically, as demon-
strated in this case, provided that the
 lesion can first be seen [4]. Given the fre-
 quency that effective endoscopic treat-
 ment of acute upper gastrointestinal
 bleeding is complicated by blood clots
 and/or debris obscuring the source of
 bleeding and inhibiting treatment, the
 jumbo-channel therapeutic endoscope
 may represent an important step forward
 in the management of acute upper gas-
 trointestinal bleeding. It is important not
 to overinterpret the results of this single
 case demonstration; however, it should
 be noted that the prototype of this scope
 was compared with conventional thera-
pic endoscopes in a clinical trial by
 Kodali et al. and found to be superior in
 terms of aspirating blood, clots, and solid
 debris. It was also shown to be successful
 in clearing the stomach in 78% of patients
 in whom a conventional therapeutic end-
 oscope was ineffective [5].

References
1 Yin WY, Chen HT, Huang SM et al. Clinical a-
 nalysis and literature review of massive duodenal diverticular bleeding. World J
 Surg 2001; 25: 848–855
2 Leivonen MK, Halttunen JA, Kivilaakso EO.
 Duodenal diverticulum at endoscopic retro-
 grade cholangiopancreatography: analysis
 of 123 patients. Hepatogastroenterology
 1996; 43: 961
3 Kwan V, Norton I. Endoscopic management
 of non-variceal upper gastrointestinal hae-
4 De astro LM, Hermo JA, Pineda JR et al. Acute
 bleeding and anemia associated with intra-
 luminal duodenal diverticulum: case report
 and review. Gastrointest Endosc 2003; 57:
 976–979
5 Kodali VP, Peterson BT, Miller CA et al. A new
 jumbo-channel therapeutic gastroscope for
 acute upper gastrointestinal bleeding. Gas-
 trointest Endosc 1997; 45: 409–415