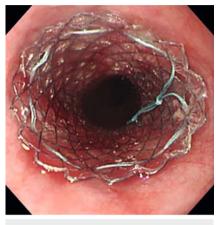
Direct compression hemostasis using a balloon dilator for bleeding after esophageal stent placement



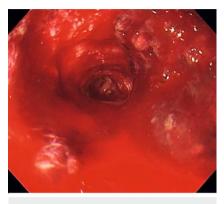
The European Society of Gastrointestinal Endoscopy guidelines recommend the placement of self-expandable metal stents (SEMSs) for palliation of malignant dysphagia over other treatments [1]. Although esophageal stenting enables maintenance of oral intake and improved quality of life, it carries the risk of lifethreatening adverse events such as bleeding [2,3]. Herein, we report a case in which hemostasis was achieved using an endoscopic balloon dilator for massive bleeding after esophageal SEMS placement.

An 80-year-old man presented with dysphagia caused by advanced esophageal cancer of the middle thoracic esophagus. He did not desire active treatment such as surgery or chemoradiotherapy; he instead underwent placement of a fully covered SEMS (Niti-S Stent 18×80 mm; Taewoong Medical, Seoul, Korea) (Fig. 1). Dysphagia was alleviated and oral dietary intake improved after SEMS placement.

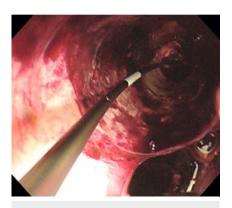
Massive hematemesis occurred 4 months after SEMS placement. Urgent endoscopy revealed massive bleeding with coagulum in the esophagus. We diagnosed bleeding from the SEMS placement site and removed the SEMS by pulling back the proximal lasso using grasping forceps. Following SEMS removal, securement of the visual field and identification of the bleeding point were difficult because of massive bleeding (▶ Fig. 2). Therefore, we attempted to perform hemostasis by direct compression using an endoscopic balloon dilator (EZDilate, 18-20 mm; Olympus Medical, Tokyo, [apan] (► Video 1). The balloon dilator was inflated to a pressure of 3 atm, and 3-5 minutes of direct compression hemostasis was repeated until hemostasis was confirmed (> Fig. 3). Complete hemostasis was achieved after three sessions of direct compression hemostasis (> Fig. 4).



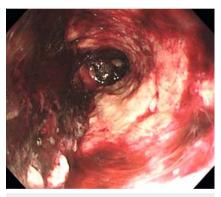
▶ Fig. 1 A fully covered self-expandable metal stent (Niti-S Stent 18×80 mm; Taewoong Medical, Seoul, Korea) was placed for malignant esophageal stenosis caused by advanced esophageal cancer.



▶ Fig. 2 Endoscopic images of esophageal bleeding after stent removal. Securement of the visual field and identification of the bleeding point were difficult due to the massive bleeding.



▶ Fig. 3 The balloon dilator was inflated to a pressure of 3 atm, and 3–5 minutes of direct compression hemostasis was repeated until confirmation of hemostasis.



► Fig. 4 Complete hemostasis was achieved after three session of direct compression hemostasis.

Endoscopy performed 2 days after hemostasis confirmed the absence of bleeding or perforation at the tumor site. No rebleeding occurred after hemostasis.

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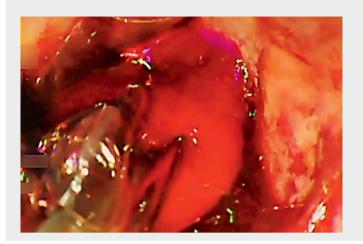
Competing interests

The authors declare that they have no conflict of interest.

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▶ Video 1 Direct compression hemostasis using an endoscopic balloon dilator for bleeding after esophageal stent placement.

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