Placement of an esophageal self-expandable metal stent through a percutaneous endoscopic gastrostomy tract, for endoscopic therapy of upper gastrointestinal bleeding

Slim endoscopes can be passed through gastrostomy tracts, but dilation is required for the passage of standard endoscopes, which may result in tract disruption. Large-diameter covered self-expandable metal stents (CSEMS) have been placed through percutaneous tracts to enable endotherapy.

A 20-year-old man underwent complex thoraco-abdominal surgery following traumatic injury, resulting in a cervical esophagus that was disconnected from the remaining gut. Intermittent bleeding from a gastrojejunal anastomotic ulcer was diagnosed using slim (5.9-mm) endoscopes passed through a 20-Fr mature percutaneous endoscopic gastrostomy (PEG) tract, but the small working channel precluded passage of hemostatic accessories. Attempts at angiographic embolization were unsuccessful.

An innovative endoscopic approach was undertaken to manage recurrent massive bleeding (Figs. 1–6, Videos 1–3). With the patient under general anesthesia, the gastrostomy tube was removed and an ultrathin endoscope (Olympus GIF-XP160; Olympus, Tokyo, Japan) was advanced through the gastrostomy tract toward a 2-cm marginal ulcer with a visible vessel. After guide wire placement into the jejunum, and endoscope withdrawal, a 7-cm long, 18-mm diameter CSEMS (Alimaxx; Merit Endotek, Jordan, Utah, USA) was deployed across the PEG tract, with one end exiting the skin and the other intragastrically. Balloon dilation (18-mm ATLAS PTA Dilatation Catheter; BARD Peripheral Vascular Inc., Tempe, USA) was performed to achieve a stable seal.
Arizona, USA) of the CSEMS allowed trans-SEMS passage of a 9.8-mm endoscope (Olympus GIF-H180) to enable successful ulcer hemostasis (using epinephrine injection and bipolar coagulation). A 26-Fr gastrostomy tube with balloon bumper was then inserted through the CSEMS, followed by longitudinal sectioning and removal of the stent. The patient was without recurrent bleeding at 1-month follow-up.

Temporary placement of a large-diameter CSEMS through percutaneous access tracts enables passage of large-diameter endoscopes for performance of endotherapy. Although the PEG tract could have been dilated, this can result in tract disruption. We foresee increasing use of the percutaneous CSEMS-assisted endoscopic approach for several indications and locations.

**Endoscopy_UCTN_Code_TTT_1AO_2AZ**

**Competing interests:** None

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**Bibliography**

DOI http://dx.doi.org/10.1055/s-0032-1309850
Endoscopy 2012; 44: E319–E320
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

**Video 1**

Esophageal self-expandable metal stent (SEMS) placement across percutaneous endoscopic gastrostomy (PEG) site.

**Video 2**

Passage of an adult (9.8-mm diameter) upper endoscope through the transgastric self-expandable metal stent (SEMS) for ulcer hemostasis.

**Video 3**

Removal of transgastric self-expandable metal stent (SEMS) and replacement of percutaneous endoscopic gastrostomy (PEG) tube with larger bore (26-Fr) gastrostomy tube.