A novel method for esophageal stent placement: retroflexed endoscopic guidance from the stomach

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The incidence of esophageal adenocarcinoma has been increasing over the past 2 decades, with associated high mortality rates.[1,2] Curative treatment options are limited, and therefore palliative treatments are a mainstay to improve quality of life and nutritional intake.[3] Endoscopically placed self-expandable metal stents (SEMSs) are used increasingly as a nonsurgical alternative for the palliation of malignant esophageal strictures. There are a wide variety of SEMSs available, but almost all are placed under endoscopic guidance with or without the use of fluoroscopy.[4-7] Precise stent placement to bridge the tumor is required to provide palliation of dysphagia and prevent adverse events (eg, airway obstruction, gastric ulceration, and early stent occlusion). Historically, fluoroscopic guidance has permitted the accurate positioning of stents by the use of several radiopaque methods to mark the tumor's margins (eg, ethiodized oil injection, mucosal clip placement, and externally taped paperclips on the patient's chest). Previous studies have shown that SEMSs can be placed under direct proximal antegrade endoscopic visualization without the use of fluoroscopy while accurate placement is achievable.[8-11] In patients with distal esophageal cancer, we describe successful guidance of stent deployment from a retroflexed endoscope positioned in the stomach in the absence of fluoroscopy.

PATIENTS

A total of 5 patients in a tertiary-care referral Veterans Affairs medical center were found to be good candidates for retroflexed esophageal stent placement from November 2013 through March 2014. All patients were diagnosed with distal esophageal adenocarcinoma involving the gastroesophageal (GE) junction after they presented with gradual-onset dysphagia initially to solids and then liquids. One patient had metastatic disease to the bone, and the other 4 patients were either stage IIIA or IIIB at the time of initial endoscopy. In 3 of the 5 cases, the tumor could be seen clearly on retroflexion of the endoscope in the stomach. All patients had 1-month follow-up radiographs to confirm stent position after stent placement.

METHODS AND/OR ENDOSCOPIC TECHNIQUE

With patients under moderate sedation, an ultrathin pediatric endoscope (GIF-XP 160, 5.9 mm diameter, Olympus Medical, Center Valley, Pa, USA) was used to intubate the esophagus. A distal esophageal mass was encountered in all 5 patients. The endoscope was advanced into the stomach and into the second portion of the duodenum. A stiff,

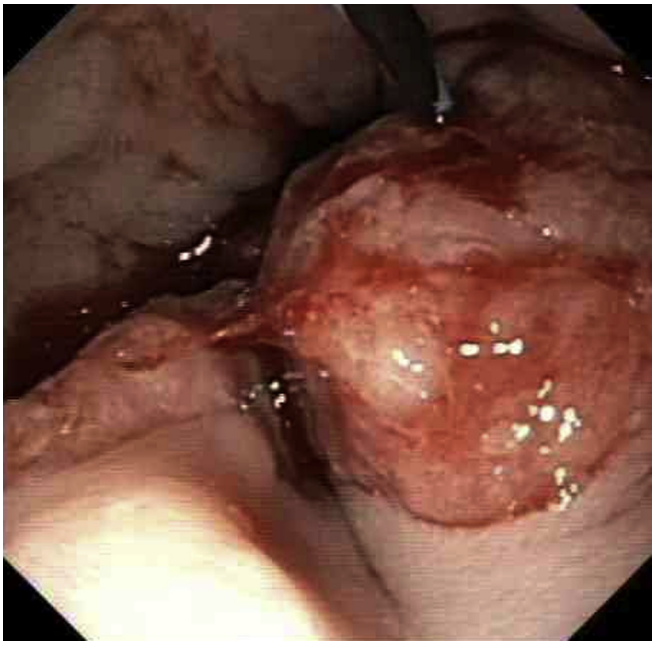

Figure 1. Retroflexed view of gastroesophageal junction mass.

Abbreviations: GE, gastroesophageal; SEMS, self-expandable metal stent.

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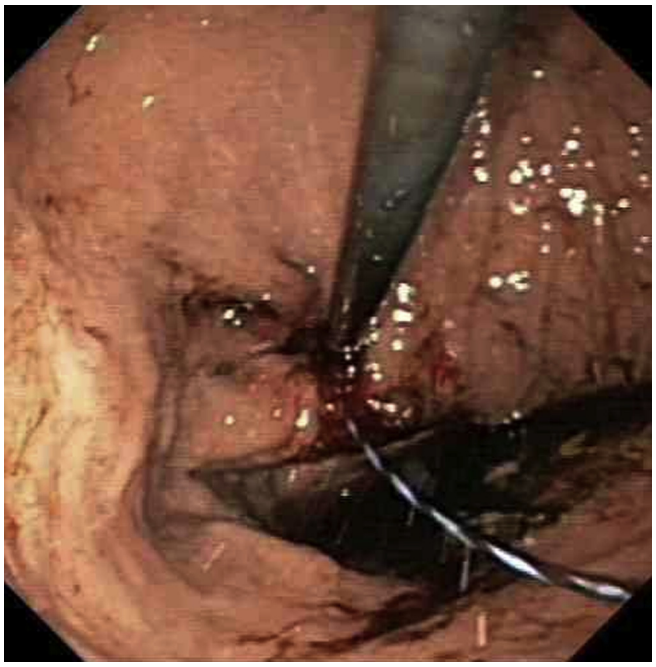

Figure 2. Retroflexed view of guidewire traversing the gastroesophageal junction mass.

Figure 4. Retroflexed view of the stent deployment in perfect position.

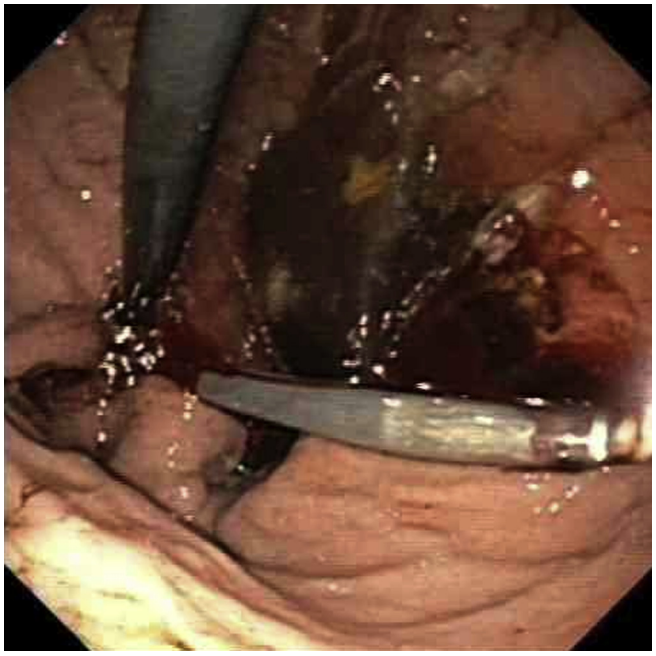

Figure 3. Retroflexed view of the esophageal stent with the distal tip in the stomach.

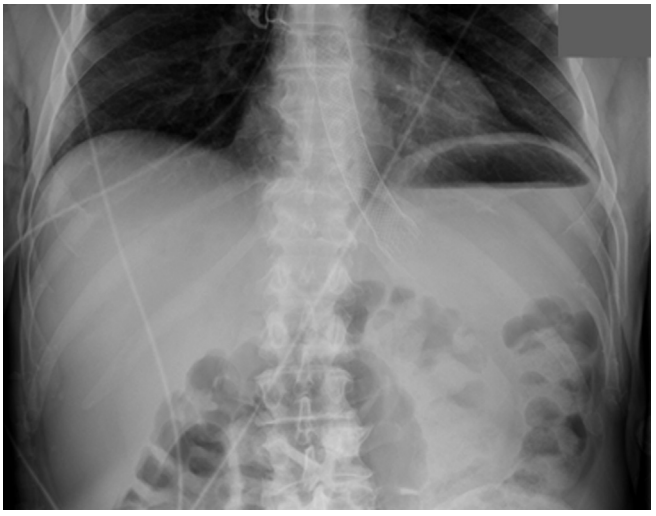

Figure 5. Radiograph confirming correct position of the esophageal stent.

0.035-inch diameter guidewire (Dreamwire Stiff Shaft 0.035 inch × 260 cm; Boston Scientific, Natick, Mass) was advanced through the endoscope channel into the second portion of the duodenum and the endoscope was then withdrawn. Next, the endoscope was reintroduced and advanced, alongside the guidewire, into the stomach and was retroflexed in the stomach to expose the GE junction (Figs. 1-4). An esophageal stent (Wallflex fully or partially covered stent; Boston Scientific, Natick, Mass, USA) was advanced over the guidewire and deployed under direct retrograde endoscopic visualization from within the stomach (Figs. 1-4). Once deployed, the stent was noted to be in excellent position, with the distal aspect about 2 cm past the GE junction or tumor. The endoscope was withdrawn to the proximal aspect of the stent without inducing stent migration in all cases. This was confirmed with