

Utilization of diabolo-shaped covered biliary stents in a refractory esophagus-colonic anastomotic stricture



Fig. 1 Radiologic view showing a biodegradable esophageal stent placed to treat a refractory esophagus-colonic stricture.



Fig. 2 Radiologic view of a diabolo-shaped, covered, biliary, self-expandable metallic stent placed at the stricture site.

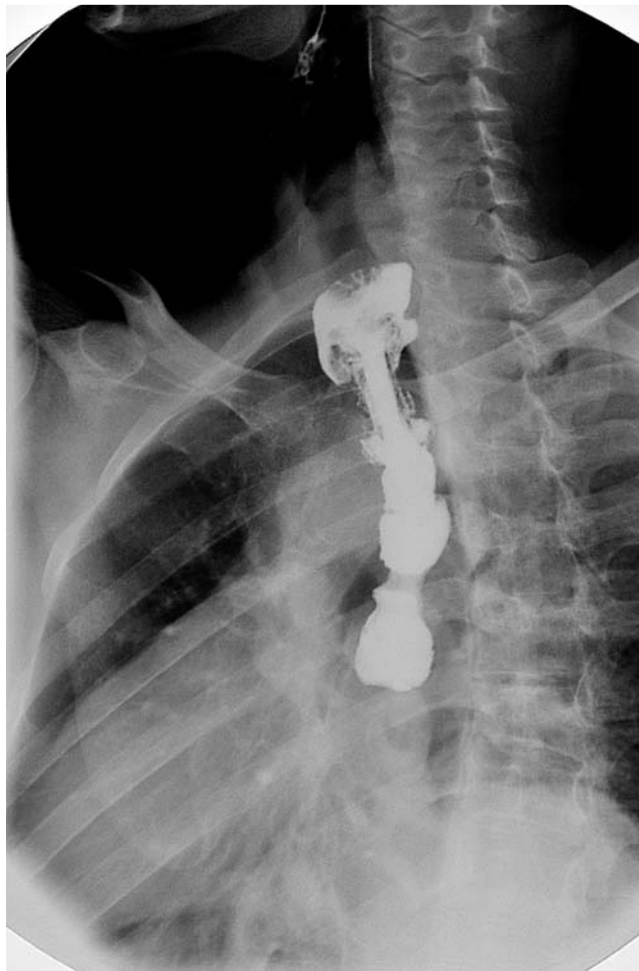


Fig. 3 Radiologic view following injection of contrast through the diabolo-shaped stent, showing adequate expansion and permeability.

A 54-year-old man underwent a proximal gastrectomy with partial esophagectomy to treat a carcinoma of the cardia 5 years ago. A persistent postoperative fistula of the esophago-gastric anastomosis occurred, which required a second surgery 4 years ago during which a colon interposition was performed. After surgery, stricture of the esophagus-colonic anastomosis developed 2 cm distal from the upper esophageal sphincter, causing grade 3 dysphagia for which the patient underwent multiple dilations with Savary–Gillard bougies. As the stenosis was deemed refractory to serial dilations, a biodegradable esophageal stent (BD stent 019-10A-23/18/23-060; SX-ELLA, Hradec Kralove, Czech Republic) was placed 1 year ago (Fig. 1).

Although transient improvement was noticed, the patient experienced recurrent dysphagia 1 month later and required further dilations 4 months later. Hence, a 4 cm diabolo-shaped, covered, biliary, self-expandable metallic stent (SEMS; Hanarostent BCF-10-040-180; M.I. Tech Co., Seoul, Korea), 10 mm in diameter and with flares 5 mm long and 24 mm in diameter, was placed under direct and fluoroscopic view (Fig. 2, Fig. 3, Fig. 4) using a therapeutic channel endoscope (GIF 2T130; Olympus, Tokyo, Japan). The stent was well tolerated and the patient noticed an immediate substantial improvement from grade 3 to grade 1 dysphagia. The stent was exchanged three more times at 8-week intervals using the proxi-



Fig. 4 Contrast was also seen passing through to the interposed colon.

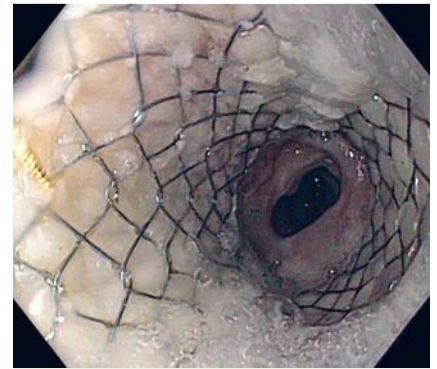


Fig. 5 Endoscopic view showing easy passage of the endoscope inside the stent.

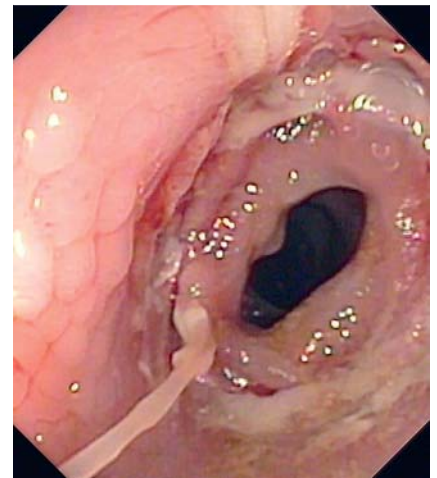


Fig. 6 Endoscopic view showing the dilated stricture after removal of the stent.

Video 1



Endoscopic video showing the removal of a diabolo-shaped self-expandable metallic stent (SEMS) placed to treat a refractory esophagus-colonic stricture near the upper esophageal sphincter. The SEMS was removed by pulling the lasso with a snare.

Video 2



A new self-expandable metallic stent was placed in the stenotic stricture under exclusive endoscopic view.

mal lasso for stent removal; increasing improvement in the diameter of the stenosis was observed. The final two procedures were performed under direct view only (▶ **Fig. 5**, ▶ **Fig. 6**, ▶ **Video 1**, ▶ **Video 2**). The patient remained asymptomatic after removal of the final stent.

Diabolo-shaped stents have important technical advantages for stenoses near the upper esophageal sphincter, as they have shorter and larger flares that limit patient intolerance and prevent migration, respectively. Furthermore, the diameter of the delivery device permits its

placement under direct endoscopic view using a therapeutic endoscope, resulting in accurate positioning [1–4].

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