Successful treatment of cervical esophageal obstruction using combined antegrade and retrograde dilation with an endoscopic ultrasound needle and fully covered stent

While complete esophageal obstruction is a technically challenging problem, the combined antegrade and retrograde dilation (CARD) procedure provides an endoscopic treatment option for these obstructions [1–3], and the addition of an endoscopic ultrasound (EUS) needle increases the speed and convenience of the procedure [4–5]. Here we describe use of this technique for the successful treatment of a long cervical esophageal occlusion by using flexible endoscopes and a fully covered removable stent.

A 61-year-old man presented to another institution with complete esophageal obstruction, 8 months after treatment for a T2N2B tonsillar squamous cell carcinoma. He required a gastrostomy tube for nutrition and was unable to swallow his own secretions. A conventional CARD procedure was attempted but unsuccessful due to the size of the obstruction.

Subsequently, the patient self-referred to our center for the CARD–EUS needle procedure. A 6-mm upper endoscope (GIF-XP160; Olympus, Hamburg, Germany) was introduced through the gastrostomy and advanced retrograde to the distal aspect of the occlusion, which was located in the cervical esophagus (Fig. 1a).

A 9-mm flexible upper endoscope (GIF-Q180; Olympus) was advanced perorally to the proximal aspect of the stricture where C-arm fluoroscopy in the anteroposterior and lateral positions was used to align the endoscopes (Fig. 1b). A 19-gauge EUS needle was advanced antegrade through the fibrotic obstruction under fluoroscopic guidance until it was visualized by the retrograde scope (Fig. 1c).

An 11-mm over-the-wire balloon dilating the distal section of the esophageal obstruction, advanced and illuminated by the antegrade endoscope, as visualized by the retrograde endoscope (Fig. 1d). Neo-esophageal lumen post dilation (Fig. 1e). A removable, fully covered stent is placed to maintain patency under fluoroscopic guidance. Landmarks: jaw (red arrow), clavicle (green arrow), ends of deployed stent (blue arrows), esophageal inlet (white arrow).

The duration of the procedure was 80 minutes. The stent was removed at 9 weeks, whereupon the patient was taught to perform periodic self-dilation with a Maloney rigid esophageal dilator, with good results.

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Competing interests: None

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