

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. 1 a).

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. 1 b). A 19-gauge EUS needle was advanced through the antegrade endoscope and used to traverse the 3.2-cm obstruction under fluoroscopic guidance until visualized by the retrograde endoscope (● Fig. 1 c). A hydrophilic 0.035-inch guide wire was then used to pass a 6-Fr biliary dilation catheter. Wire-guided balloon dilators were used to dilate the stricture to 11 mm at three stations with good effect (● Fig. 1 d, e). A 7-cm × 18-mm fully covered removable stent was placed, taking care to

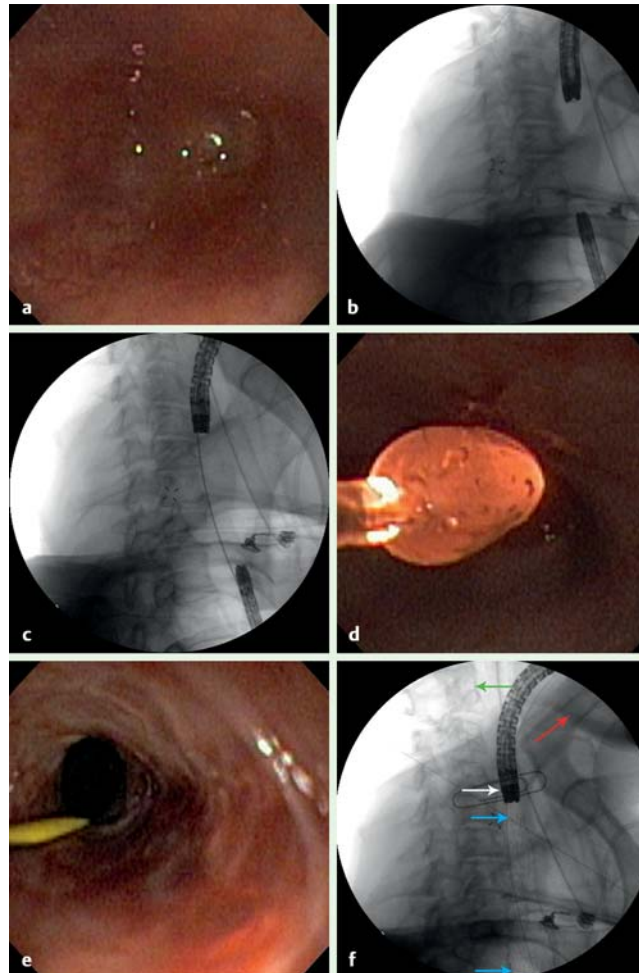


Fig. 1 a Original retrograde endoscopic view of the completely obstructed esophageal lumen. b Fluoroscopic images taken in anteroposterior and lateral views to assure correct scope alignment. c A 19-gauge endoscopic ultrasound (EUS) needle is advanced antegrade through the fibrotic obstruction under fluoroscopic guidance until it is visualized by the retrograde scope. d 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. e Neo-esophageal lumen post dilation. f 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).

open the proximal aspect of the occlusion without introducing the stent into the oropharynx, which proved difficult (● Fig. 1 f). 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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