Esophageal recanalization by combined antegrade/retrograde esophagoscopy for radiotherapy-induced complete esophageal occlusion

Fig. 1 Antegrade view of the upper esophagus showing complete occlusion of the esophageal lumen.

Fig. 2 Radiographic view of the occlusion during combined antegrade/retrograde esophagoscopy showing that the length of the occlusion was about 40 mm.

One side effect of radiochemotherapy of head and neck malignancies is the development of esophageal stenosis [1,2]. Subsequent therapeutic options include endoscopic balloon dilation or bouginage, with the option to perform combined ante-

Fig. 3 Endoscopic views showing recanalization of the esophageal lumen. **a** A wire is passed into the occluded esophagus by antegrade puncture; **b** under direct visualization via the retrograde endoscope; **c** wire-guided bouginage is then performed; and finally **d** an endoscope is passed through the fully recanalized lumen.

Fig. 4 Standard endoscopic balloon dilation of the reopened lumen showing a good final result.

grade/retrograde esophagoscopy in cases of complete esophageal occlusion [3–8], or major surgery, such as esophageal resection, with its high risk of surgical complications [9]. The limitations of endoscopic therapy for complete esophageal closure have been defined and include long-segmental occlusions over 30 mm in length, in which case it is recommended to achieve patency of the neo-esophagus using stents, although there is a risk of stent-associated complications [5–8].

This report describes an endoscopic recanalization using a rendezvous maneuver in a 54-year-old patient with complete occlusion of the upper esophagus after primary radiochemotherapy for a hypopharyngeal squamous cell carcinoma.

Enteral feeding had been provided via a percutaneous endoscopic gastrostomy (PEG). The patient reported grade IV dysphagia 6 weeks after the radiochemotherapy, which did not resolve with logopedic training. He was seen in our endoscopy unit 12 months later for endoscopic therapy of his suspected upper esophageal stenosis.

Endoscopic examination showed complete occlusion of the upper esophagus (Fig. 1). Simultaneous transoral and retrograde esophagoscopy (via the PEG channel) with fluoroscopy revealed a long-segmental occlusion of about 40 mm in length (Fig. 2). Recanalization was performed by perforating the occlusion with an Eder-Puestow wire passed from

the oral direction under direct visualization with the retrograde trans-PEG endoscope. Following this, wire-guided bougienage with Savary-Miller bougies up to a size of 12 mm was possible (● Fig. 3). Patency of the neo-esophagus was ensured by simply placing a nasogastric tube. The complete procedure lasted 43 minutes and the patient was discharged from hospital after 3 days without the nasogastric tube, having had no post-intervention complications.

In the following weeks, the patient underwent recurrent balloon dilations, up to a size of 18 mm (● Fig. 4), which was combined with logopedic training. Eventually, 2 years after radiochemotherapy, the patient is now free of cancer, able to swallow almost normally, and it has finally been possible to remove his PEG.

In conclusion, recanalization of a complete esophageal occlusion by rendezvous esophagoscopy is possible even in long-segmental esophageal occlusions and without the use of esophageal stents to achieve patency.

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