Complete endoscopic management of tubular esophageal duplication in a young woman

A 29-year-old woman was referred to our department for endoscopic dilation of upper esophageal stricture. Dilation was performed with Savary–Gilliard dilators allowing the passage with resistance of a standard flexible video gastroscope (EG-201FP; Fujinon, Willich, Germany). Esophagogastroduodenoscopy showed a double esophageal lumen at 18 cm from the incisors. A thick bridge of intact mucosa separated the two lumens (**Fig. 1**). The passage of the endoscope through the second lumen was not possible. At 32 cm, a distal defect was also found. A barium esophagogram and high-resolution computed tomography (CT) scan confirmed esophageal tubular duplication (**Fig. 2** and **Fig. 3**).

Under general anesthesia, the standard video gastroscope was pushed down to the proximal opening of the duplication. After an easy passage of a 0.035-inch guide wire (Boston Scientific, Natick, MA, USA) in the duplicated lumen, a lengthwise incision of the intraluminal bridge was performed by using a 5.5-Fr needle-knife (microKnife XL; Boston Scientific). The incision was performed step by step, from the upper to the distal end (**Fig. 4**, **Videos 1 – 3**). The procedure was completed with dilation of the upper esophageal stricture by using a wire-guided balloon (Boston Scientific) advanced through the endoscope and expanded up to 12 mm.

Biopsies performed along the incision showed the presence of malpighian epithelium. The patient's early post-procedural course was marked by an iatrogenic mediastinal emphysema and bilateral pneumothorax, more pronounced in the left. The placement of a left chest drain led to rapid improvement. Upper endoscopy on day 20 showed two longitudinal residual folds (**Fig. 5**).

Endoscopic management of esophageal duplication was reported twice previously for the cystic form [1,2]. To our knowledge, only one case of endoscopic management of a tubular esophageal duplication has previously been reported [3]. Nevertheless, the procedure was decided upon after surgical examination through a right thoracoscopy. Our case highlights the possibility of complete endoscopic management of tubular esophageal duplication. The post-procedure pneumothorax could have been avoided by carbon dioxide insufflation [4].

Endoscopy_UCTN_Code_TTT_1AO_2AN

Competing interests: None

Fig. 1 Upper gastrointestinal endoscopy showing two esophageal lumens separated by a septum at 18 cm from the incisors.

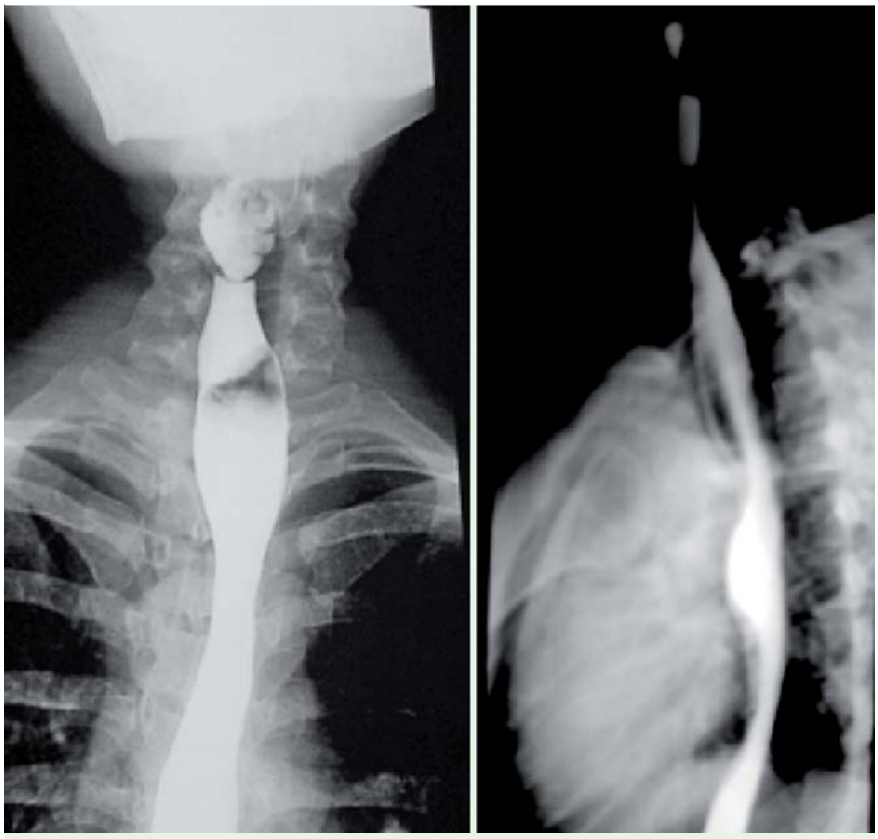

Fig. 2 Contrast study showing tubular duplication of the esophagus.

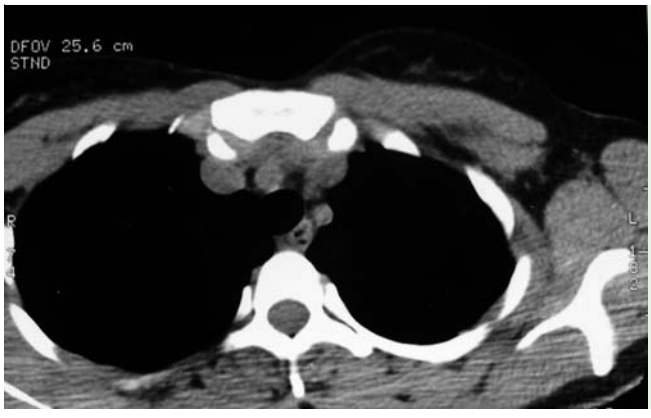

Fig. 3 Computed tomography (CT) scan showing evidence of tubular duplication of the esophagus.

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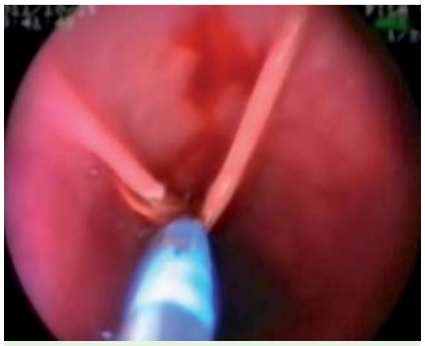

Fig. 4 Image of interventional endoscopy showing incision of the intraluminal bridge by using a needle knife.

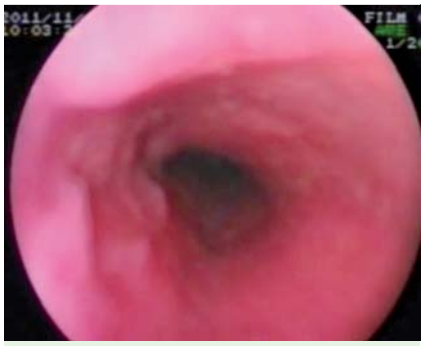

Fig. 5 Endoscopic image of two residual folds of the duplication.

Videos 1–3

Interventional endoscopy: a lengthwise incision was made of the intraluminal bridge by using a needle knife starting from the upper end and achieved step by step. The procedure was completed with dilation of the upper esophageal stricture.

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Bibliography

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