Esophageal stricture caused by a mediastinal hamartoma invading the esophageal wall

A 60-year-old man presented with dysphagia, which had persisted for 2 months. A barium meal test revealed a stricture in the upper esophagus, and smooth mucosa at the narrow segment of the esophagus (Fig. 1). He subsequently underwent endoscopy. Endoscopic examination revealed a mucosal bulge in the esophagus at a distance of 18–24 cm from the incisors, extending to about half of the esophageal wall, and with smooth mucosa at the ridge surface. Narrow-band imaging did not show any abnormality of the mucosal surface (Fig. 2). Although the esophagus was narrow, it allowed insertion of the endoscope. Gross endoscopic appearance indicated that the lesion would be firm when touched with biopsy forceps. Biopsy revealed inflammatory granulation tissue, and chest computed tomography showed thickening of the mucosa at the upper esophagus (Fig. 3).

After 4 weeks, the patient underwent a follow-up endoscopic ultrasound examination. On this occasion, an esophageal stricture was observed, which interfered with the insertion of the endoscope. In addition, the mucosa appeared normal at the narrow segment of the esophagus (Fig. 4). Ultrasound examination revealed an obvious thickening of the mucosal layer of the lesion, which appeared asymmetrically annular. There was an unclear boundary between the local and surrounding tissues (Fig. 5).

Open surgery was performed because the patient experienced a gradual worsening of dysphagia symptoms. During surgery, a tumor was observed between the esophagus and the trachea, which invaded the esophageal wall and had unclear boundaries with the trachea. Because the possibility of a malignant tumor could not be ruled out, esophagus detachment and subtotal resection were performed. Post-operative histopathological examination of the upper esophagus tissues showed the presence of chronic inflammation in the mucosa, squamous epithelial hyperplasia, and chronic suppurative inflammation of the subepithelial focal lesion. Examination of the paraesophageal tumor showed proliferation of tissues including fibers, blood vessels, lymphatic and striated muscles, and nerves with hamartoma-like changes, associated with local inflammatory cell infiltration, degeneration, and necrosis (Fig. 6).

Hamartomas rarely occur in the esophagus. In this case, the tumor was externally located but had invaded the esophageal wall, which manifested as an esophageal stricture, thereby precluding a diagnosis before surgical operation.
Competing interests: None

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Bibliography
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Fig. 5 Endoscopic ultrasound revealed an obvious thickening of the mucosal layer of the lesion.

Fig. 6 Proliferation of tissues including fibers, blood vessels, lymphatic and striated muscles, and nerves with hamartoma-like changes.

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