Epiphrenic diverticulum of the esophagus after peroral endoscopic myotomy

A 34-year-old man was referred to our hospital because of chest pain and dysphagia that had lasted for 5 years. Endoscopy showed a tight esophagogastric junction (Fig. 1). On high resolution manometry (Star Medical, Tokyo, Japan), the mean lower esophageal sphincter (LES) pressure and integrated relaxation pressure were 44.3 and 43.3 mmHg, respectively (Fig. 2). Type II achalasia was diagnosed according to the Chicago classification criteria [1].

Peroral endoscopic myotomy (POEM) was successfully performed in the right anterolateral side of the esophagus, as previously described by Inoue et al. [2]. At the 2-month follow-up, hypercontractile peristalsis was seen, with a reduction of the LES pressure on high resolution manometry (Fig. 3). Additionally, an esophageal diverticulum had developed (Fig. 4), although the patient’s symptoms were markedly reduced; his pre-operative Eckardt score of 7 had decreased to 0 postoperatively (a higher score indicates more pronounced symptoms) [3].

The formation of an esophageal diverticulum after POEM for achalasia has not previously been reported. The anterior and right sides of the lower esophagus are anatomically predisposed to the formation of diverticula [4]; thus, clinicians must pay careful attention when they use POEM to treat jackhammer esophagus [5] or type II achalasia associated with complex pleural pan-pressurization, as in this patient. Posterior myotomy can be considered in such cases.

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References

Fig. 1 Endoscopy shows a tight esophagogastric junction in a 34-year-old man with chest pain and dysphagia of 5 years’ duration. The esophageal diverticulum could not be seen before peroral endoscopic myotomy.

Fig. 2 On high resolution manometry, the mean lower esophageal sphincter pressure and integrated relaxation pressure were 44.3 and 43.3 mmHg, respectively. Type II achalasia was diagnosed.

Fig. 3 After peroral endoscopic myotomy, hypercontractile peristalsis was seen at the 2-month follow-up, with a reduction of the lower esophageal sphincter pressure on high resolution manometry.

Fig. 4 An epiphrenic diverticulum of the esophagus had developed on the anterior side.
5 Badillo R, Francis D, DeVault K. Formation of large esophageal diverticulum after peroral endoscopic myotomy. Gastrointest Endosc June 20. [Epub ahead of print]. DOI: 10.1016/j.gie.2015.05.020

Bibliography
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