Epiphrenic diverticulum of the esophagus after peroral endoscopic myotomy

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.

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]

Fig. 4 An epiphrenic diverticulum of the esophagus had developed on the anterior side.

or type II achalasia associated with complex pleural pan-pressurization, as in this patient. Posterior myotomy can be considered in such cases.

Endoscopy_UCTN_Code_CPL_1AH_2AJ

Competing interests: None

Hiroki Sato, Kazuya Takahashi, Manabu Takeuchi, Yuichi Sato, Satoru Hashimoto, Kenichi Mizuno, Shuji Terai

Division of Gastroenterology and Hepatology, Niigata University Medical and Dental Hospital, Niigata, Japan

References

- 1 Bredenoord AJ, Fox M, Kahrilas PJ et al. Chicago classification criteria of esophageal motility disorders defined in high resolution esophageal pressure topography. *Neurogastroenterol Motil* 2012; 24 (Suppl. 01): 57–65
- 2 Inoue H, Minami H, Kobayashi Y et al. Peroral endoscopic myotomy (POEM) for esophageal achalasia. *Endoscopy* 2010; 42: 265–271
- 3 Eckardt VF. Clinical presentations and complications of achalasia. *Gastrointest Endosc Clin N Am* 2001; 11: 281–292
- 4 Soares R, Herbella FA, Prachand VN et al. Epiphrenic diverticulum of the esophagus. From pathophysiology to treatment. *J Gastrointest Surg* 2010; 14: 2009–2015

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.

- 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

DOI <http://dx.doi.org/10.1055/s-0034-1393232>
Endoscopy 2015; 47: E509–E510
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

Corresponding author

Hiroki Sato, MD, PhD

Division of Gastroenterology
Niigata University Medical and Dental Hospital
757-1, Asahimachidori
Chuo-ku
Niigata City
Niigata 951-8510
Japan
Fax: +81-25-223-0776
pyloki@yahoo.co.jp