Salvage peroral endoscopic myotomy for esophageal diverticulum

Esophageal diverticulum often causes secondary dysmotility. If a diverticulum associated with a functional disorder is growing and exacerbating symptoms, surgical treatment is usually indicated [1, 2]. Peroral endoscopic myotomy (POEM) was introduced by Inoue et al. in 2010 as a novel treatment technique for achalasia [3]. Here, we report our clinical experience of salvage POEM for esophageal diverticulum.

An 84-year-old woman was referred to our hospital with a 30-year history of dysphagia. Endoscopy and esophagography revealed a giant diverticulum in the mid esophagus, into which most of the barium flowed (Fig. 1, Fig. 2a). The diverticulum compressed the true esophageal lumen, although high resolution manometry (Star Medical Co., Tokyo, Japan) showed no findings of a primary motility disorder (Fig. 3). The patient was not suitable for curative surgery, and salvage POEM was undertaken as a less invasive treatment. A posterior wall myotomy (side opposite the diverticulum) was performed longitudinally, from the oral side of the diverticulum to the gastric side, and a pathologic thick layer of muscle was completely resected (Fig. 4a, b). The patient’s subjective dysphagia was markedly decreased, and the smooth passage of barium flow was observed during esophagography (Fig. 2b).

The most common treatment for esophageal diverticulum is surgical resection. However, the surgical procedure is invasive and often difficult because of factors...

Fig. 1 A diverticulum is seen in the mid esophagus.

Fig. 2 a Preoperative esophagography showing barium inflow into the diverticulum and an empty true lumen. b After the peroral endoscopic myotomy procedure, barium flow through the true lumen is significantly improved, and pathologic muscle contraction is relieved.

Fig. 3 There are no findings of a primary motility disorder by high resolution manometry.

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such as mediastinal adhesion. It also carries a high risk for complications, related mainly to suture leakage. POEM may be an appropriate salvage therapy for esophageal diverticulum in patients who cannot undergo an invasive operation.

**Competing interests:** None

**References**


**Bibliography**

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**Fig. 4** a, b A posterior wall myotomy is performed longitudinally from the oral side of the diverticulum, and a pathologic thick muscle layer is completely resected.