Salvage peroral endoscopic myotomy for esophageal diverticulum

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

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. 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.

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.

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.

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Bibliography

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