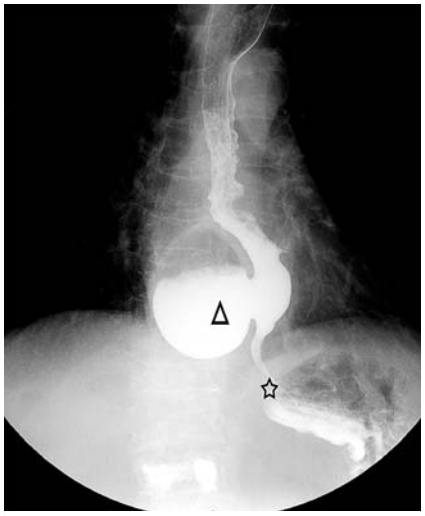
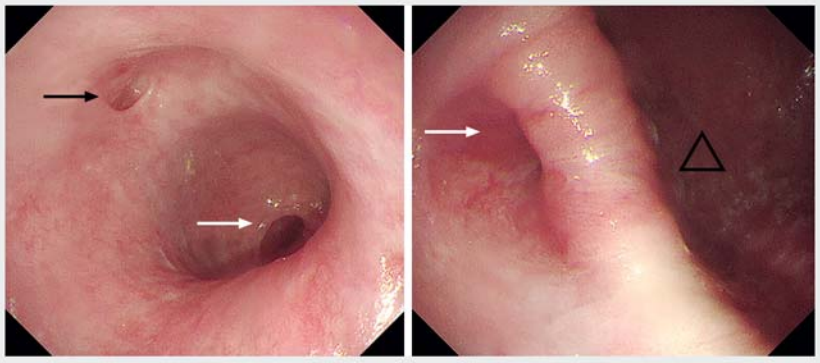
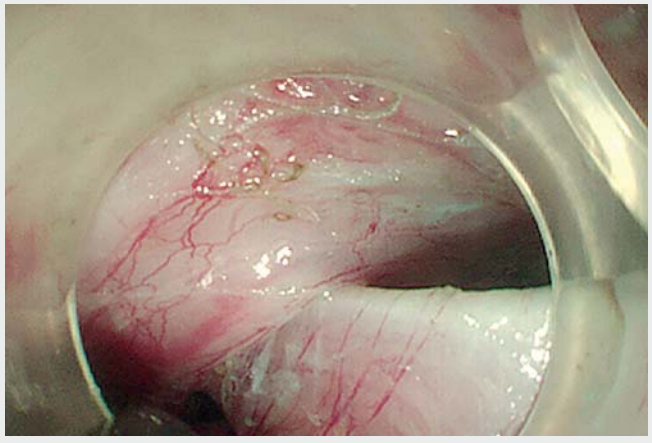
Peroral endoscopic myotomy and simultaneous endoscopic diverticuloseptotomy in a case of achalasia with diverticula



▶ **Fig. 1** Contrast esophagogram before peroral endoscopic myotomy shows a large epiphrenic diverticulum (black triangle) on the right anterolateral esophageal wall. A thin streak of contrast medium is visible across the lower esophageal sphincter (black star).



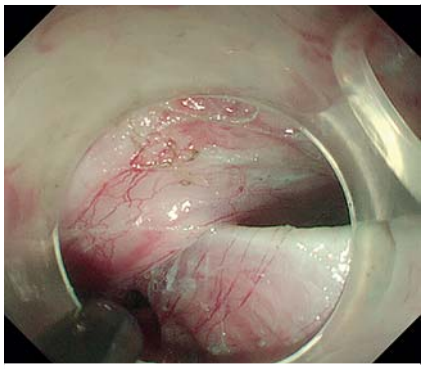
▶ **Fig. 2** Endoscopic images show a small mid-esophageal diverticulum (black arrow) and a large epiphrenic diverticulum (black triangle). White arrows show the entrance of the narrow lumen of distal esophagus.



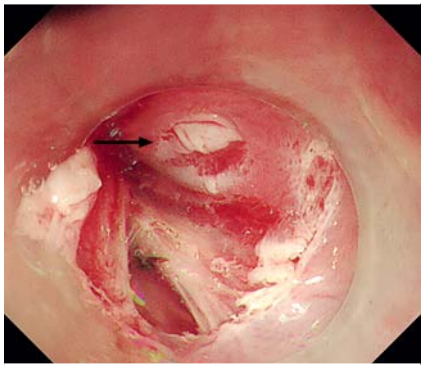
Video 1 Peroral endoscopic myotomy and simultaneous endoscopic diverticuloseptotomy in a case of achalasia with diverticula.

A 58-year-old man with symptoms of dysphagia and regurgitation was admitted for treatment. Evaluation with endoscopy and contrast esophagogram revealed achalasia cardia with a small mid-esophageal diverticulum and a large epiphrenic diverticulum (▶ **Fig. 1**, ▶ **Fig. 2**). Peroral endoscopic myotomy (POEM) and a simultaneous endoscopic diverticuloseptotomy were performed in this case (▶ **Video 1**). Firstly, submucosal injection and mucosal incision were made at about 5 cm above the epiphrenic diverticulum. Secondly, a submucosal tunnel was created pointing toward the diverticular septum and extended on both sides of the septum, i. e., the diverticular and esophageal lumen side (▶ **Fig. 3**). Thirdly, complete myotomies of the muscle layer of the diverticular septum and the esophagus were performed separately. Due to technical difficulty, a small mucosal perforation occurred at the most narrow, twisted, and spasmodic part of the distal esophagus (▶ **Fig. 4**). In the final step, the small mucosal injury and the entry of the tunnel were closed with endoclips. An X-ray contrast study 5 days after POEM revealed a free flow of contrast medium across the gastroesophageal junction and a collapsed epiphrenic diverticulum (▶ **Fig. 5**). There was substantial improvement in the patient's clinical symptoms as well. At the 3-month follow-up, the patient reported complete resolution of dysphagia.

POEM has been introduced for achalasia treatment as a less invasive alternative to laparoscopic Heller myotomy [1]. However, a few patients with achalasia have a co-existing large epiphrenic diverticulum, which may cause technical difficulties and increase the rates of procedure-related adverse events [2, 3]. In our



▶ **Fig. 3** A submucosal tunnel was created pointing toward the diverticular septum and extended on both sides of the septum.



▶ **Fig. 4** A small mucosal injury occurred at the most narrow, twisted, and spasmodic part of the distal esophagus during peroral endoscopic myotomy (black arrow).

case, a small esophageal mucosal injury occurred during POEM, which was completely sealed by an endoclip without any postoperative complications. Classically, a diverticulum of the middle esophagus is classified as a Rokitansky diverticulum, and it rarely attains an appreciable size or produces any symptoms [4]. We did not treat the small mid-esophageal diverticulum in this case.

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▶ **Fig. 5** Contrast esophagogram 5 days after peroral endoscopic myotomy shows quick passage of contrast medium across the gastroesophageal junction into the stomach; the previously large diverticulum has collapsed.

Competing interests

None

The authors

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References

[1] Zaninotto G, Leusink A, Markar SR. Management of achalasia in 2019. Curr Opin Gastroenterol 2019. doi:10.1097/MOG.0000000000000544

[2] Bechara R, Woo M, Hookey L et al. Peroral endoscopic myotomy (POEM) for complex achalasia and the POEM difficulty score. Dig Endosc 2019; 31: 148–155

[3] Li HK, Linghu EQ. New endoscopic classification of achalasia for selection of candidates for peroral endoscopic myotomy. World J Gastroenterol 2013; 19: 556–560

[4] Sato H, Takeuchi M, Hashimoto S et al. Esophageal diverticulum: New perspectives in the era of minimally invasive endoscopic treatment. World J Gastroenterol 2019; 25: 1457–1464

Bibliography

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