

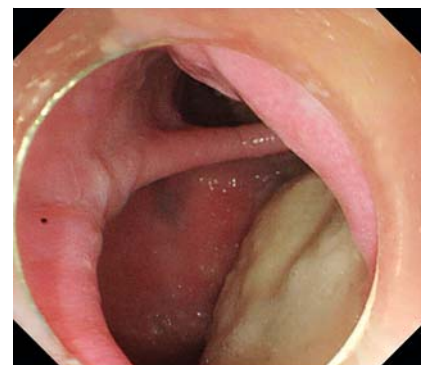
Successful treatment of giant esophageal diverticulum by per-oral endoscopic myotomy

A 79-year-old woman was referred to our department with a 20-year history of dysphagia, retrosternal pain, and several episodes of aspiration and pneumonia. Esophageal radiograph showed a giant diverticulum in the mid-esophagus containing a large amount of the barium (► **Fig. 1**). Gastroscopy revealed food impaction in the giant esophageal diverticulum; the real opening of the esophagus was relatively narrow and compressed at the side (► **Fig. 2**). Given the advanced age of the patient and the potential complications of a surgical procedure, the patient underwent per-oral endoscopic myotomy (POEM) (► **Video 1**). First, a 2-cm mucosal incision was made approximately 4 cm above and on the same side of the diverticulum using a DualKnife (Olympus, Tokyo, Japan). Then, a submucosal tunnel was created in the septum between the diverticulum and esophageal lumen (► **Fig. 3**). Third, the muscle of the septum was completely dissected (► **Fig. 4**). Finally, the entry of the tunnel was closed with hemostatic clips. The procedure was performed smoothly and there were no complications after the endoscopic treatment. After endoscopic treatment, the patient's clinical symptoms gradually subsided and diet increased. Body weight had increased by 2 kg 3 months later. A repeat esophageal radiograph showed only a small amount of barium remaining in the diverticulum (► **Fig. 5**), and repeat gastroscopy showed that the opening of the esophagus had increased and there was no food in the residual diverticulum (► **Fig. 6**).

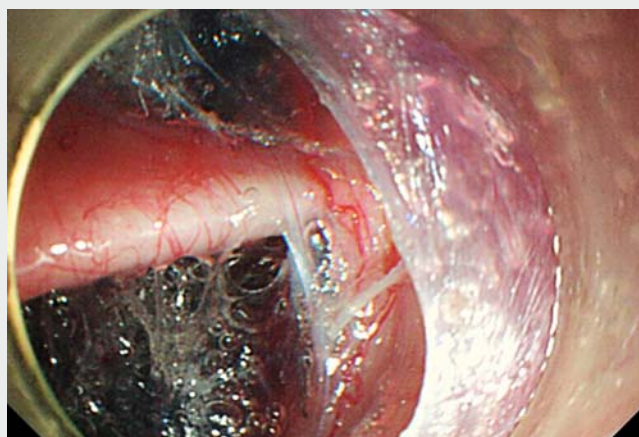
Esophageal diverticula are congenital or acquired malformations of the gastrointestinal tract, and large ones often cause secondary dysmotility. For the symptomatic esophageal diverticulum, surgery is the traditional treatment [1]. But, surgery is more invasive, and poses a



► **Fig. 1** Esophageal radiograph showed a giant diverticulum in the mid-esophagus containing a large amount of barium.



► **Fig. 2** Gastroscopy revealed food impaction in the giant esophageal diverticulum, and the real opening of the esophagus was narrow.



► **Video 1** Gastroscopy showed a giant diverticulum in the mid esophagus and it was treated successfully by per-oral endoscopic myotomy.

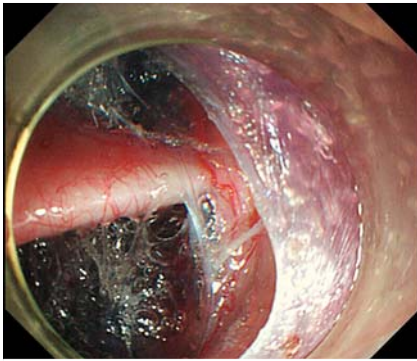


higher risk in older patients. POEM is now an effective and safe treatment technique for achalasia [2]. The septum between the diverticulum and the esophageal tract is the key focus of endoscopic treatment [3]. POEM is safer and less invasive than surgery for patients with esophageal diverticulum.

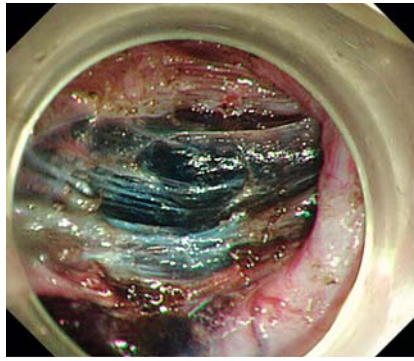
Endoscopy_UCTN_Code_TTT_1AO_2AN

Competing interests

None



► **Fig. 3** A submucosal tunnel was created in the septum between the diverticulum and esophageal lumen.



► **Fig. 4** The muscle of the septum was completely dissected.



► **Fig. 5** Repeat esophageal radiograph showed only a small amount of barium remaining in the diverticulum.



► **Fig. 6** Repeat gastroscopy showed that the opening of the esophagus had increased and there was no food remaining in the residual diverticulum.

The authors

Chuncheng Wu^{*}, Qiongying Zhang^{*}, Wei Liu, Bing Hu

Department of Gastroenterology, West China Hospital, Sichuan University, China

Corresponding author

Bing Hu, MD

Department of Gastroenterology, West China Hospital, Sichuan University, No. 37 Guo Xue Alley, Chengdu 610041, Sichuan Province, China
 Fax: +86-028-85423387
 hubingnj@163.com

* These authors contributed equally to this work.

References

- [1] Onwugbufor MT, Obirize AC, Ortega G et al. Surgical management of esophageal diverticulum: a review of the Nationwide Inpatient Sample database. *J Surg Res* 2013; 184: 120 – 125
- [2] Swanstrom LL, Kurian A, Dunst CM et al. Long-term outcomes of an endoscopic myotomy for achalasia: the POEM procedure. *Ann Surg* 2012; 256: 659 – 667
- [3] Goelder SK, Brueckner J, Messmann H. Endoscopic treatment of Zenker's diverticulum with the stag beetle knife (sb knife) – feasibility and follow-up. *Scand J Gastro enterol* 2016; 51: 1155 – 1158

Bibliography

DOI <https://doi.org/10.1055/s-0043-125310>

Published online: 16.2.2018

Endoscopy 2018; 50: E107–E108

© Georg Thieme Verlag KG

Stuttgart · New York

ISSN 0013-726X

ENDOSCOPY E-VIDEOS

<https://eref.thieme.de/e-videos>



Endoscopy E-Videos is a free access online section, reporting on interesting cases and new

techniques in gastroenterological endoscopy. All papers include a high quality video and all contributions are freely accessible online.

This section has its own submission website at

<https://mc.manuscriptcentral.com/e-videos>