Open peroral endoscopic myotomy for refractory benign esophageal stricture

A 36-year-old woman suffered thoracic pain and dysphagia following a barbecue 6 months earlier. Gastroscopy showed an ulcer in the lower esophagus. The thoracic pain disappeared after taking proton pump inhibitors (PPIs) for a week, but dysphagia continued. Repeat gastroscopy showed a thickened and rigid lower esophageal wall and esophageal stricture (Fig. 1a). The stricture was about 4.0 cm from the cardia. Endoscopic biopsy diagnosed inflammation. Esophagography showed severe stricture in the lower esophagus (Fig. 2a). Thoracic computed tomography showed a thickened lower esophageal wall, and endoscopic ultrasonography showed thickening of the muscularis propria in the lower esophagus (Fig. 3), without manifestation of tumors. The patient continued to take PPIs and underwent three sessions of endoscopic dilation, without success; she lost 8.0 kg in weight.

We performed open peroral endoscopic myotomy (O-POEM) (Video 1). The mucosal and circular muscle layers of the stricture were incised completely without submucosal tunnel creation (Fig. 4), and with the upper and lower edge incisions extending about 2.0 cm beyond the stricture.

The patient recovered uneventfully after endoscopic treatment and gradually returned to a normal diet. Her body weight had increased by 4.0 kg at 6 months after treatment. Follow-up esophagography showed that the stricture had significantly improved post-procedure (Fig. 2b). Follow-up gastroscopy showed that the original esophageal incision had healed well and the lumen was only mildly strictered (Fig. 1b), with smooth passage of the endoscope.

Endoscopic balloon dilation [1] or stenting [2] is an effective treatment for benign esophageal stricture. Radial incision and cutting [3] can also be performed. Due to the poor effect of balloon dilation, the rigid wall, and the presence of stricture, we performed O-POEM for this case.

Fig. 1 Gastroscopy. a Pre-procedure, showing a thickened and rigid lower esophageal wall and a stricture. b At follow-up, showing that the incision had healed well, with only mild stricture remaining.

Fig. 2 Esophagography. a Pre-procedure, showing severe stricture of the lower esophagus. b At follow-up, showing significant improvement, with only mild stricture.

Fig. 3 Endoscopic ultrasonography showed a thickened muscularis propria in the lower esophagus.

Fig. 4 The mucosal and circular muscle layers of the stricture were incised completely without submucosal tunnel creation.
patient. O-POEM is a safe and effective treatment for achalasia [4], as well as an effective therapy for benign esophageal stricture.

Endoscopy_UCTN_Code_TTT_1AO_2AN

Funding

Sichuan Province Science and Technology Department (China) 2018SZ0134

The authors thank Sichuan Province Science and Technology Department (China) (2018SZ0134) for their support.

Competing interests

The authors declare that they have no conflict of interest.

The authors

Chuncheng Wu1,*, Shuanghong Luo2,*, Linjie Guo1, Bing Hu1

1 Department of Gastroenterology, West China Hospital, Sichuan University, Chengdu, Sichuan, China
2 Department of Pediatrics, West China Second University Hospital, Sichuan University, Chengdu, Sichuan, China

Corresponding author

Bing Hu, MD
Department of Gastroenterology, West China Hospital, Sichuan University, No. 37 Guo Xue Xiang, Chengdu, Sichuan, 610041, China
Fax: +86-28-85423387
hubingnj@163.com

* These authors contributed equally to this work.

References


Bibliography

DOI https://doi.org/10.1055/a-1089-7551
Published online: 2020
Endoscopy
© 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 gastrointestinal 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

Video 1 The lower esophagus was rigid and strictured, and the mucosal and circular muscle layers of the stricture were incised completely without submucosal tunnel creation.