Simplified endoscopic septotomy for a large symptomatic Zenker’s diverticulum

Zenker’s diverticulum is a pulsion diverticulum occurring because of abnormal cricopharyngeal muscle (CPM) relaxation during swallowing (▶Fig. 1) [1]. Traditionally, Zenker’s diverticulum has been treated by surgery; however, open surgery has high complication rates and morbidity. Flexible endoscopic options are a safe and effective treatment alternative for Zenker’s diverticulum, with comparable efficacy and low recurrence rates [2]. The Zenker’s diverticulum peroral endoscopic myotomy (zPOEM) and modified Z-POEM have been described as effective treatment options [3]. These procedures are technically demanding and require high levels of expertise. We present a simplified technique that was used to treat a large symptomatic Zenker’s diverticulum (▶Video 1).

A 79-year-old man presented with a 2-year history of dysphagia, weight loss, and regurgitation. Esophagogastroduodenoscopy showed a large (5cm) Zenker’s diverticulum (▶Fig. 2). A computed tomography scan and barium studies confirmed the large Zenker’s diverticulum, which was compressing the esophagus and occluding the lumen (▶Fig. 3). The patient was therefore planned to undergo a simplified endoscopic septotomy under general anesthesia. We equipped the endoscope with a distal cap and used CO2 insufflation. First, we marked the esophageal lumen by advancing a feeding tube into it. Second, we cleaned the diverticular sac until it was free of debris. Third, we used a rotatable short insulated scissor-type knife (SB knife; Sumitomo Bakelite, Japan) to cut the septum and the CPM, using blended current for dissection. We started at the center and cut the septal muscosa and CPM sequentially to prevent flap formation. We regularly inspected the Zenker’s diverticulum and the esophageal lumen to ascertain the dissection depth, and ensured that the septum was dissected adequately to create a common space between the sac and the esophagus. Lastly, we secured hemostasis and closed the defect with clips (▶Fig. 4). The patient was kept on a liquid diet and was discharged after 24 hours with analgesics.

In conclusion, our simplified stepwise approach is less technically challenging and could be quickly adopted to treat large Zenker’s diverticula safely.

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Competing interests

R. Asokkumar is a consultant for Apollo Endosurgery, USA. J. Ng, C. Francisco, T. Yi Yuan, C. Khor, and M. Cheah declare that they have no conflict of interest.

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