

## Submucosal tunneling endoscopic septum division for Zenker's diverticulum: a reproducible procedure for endoscopists who perform peroral endoscopic myotomy

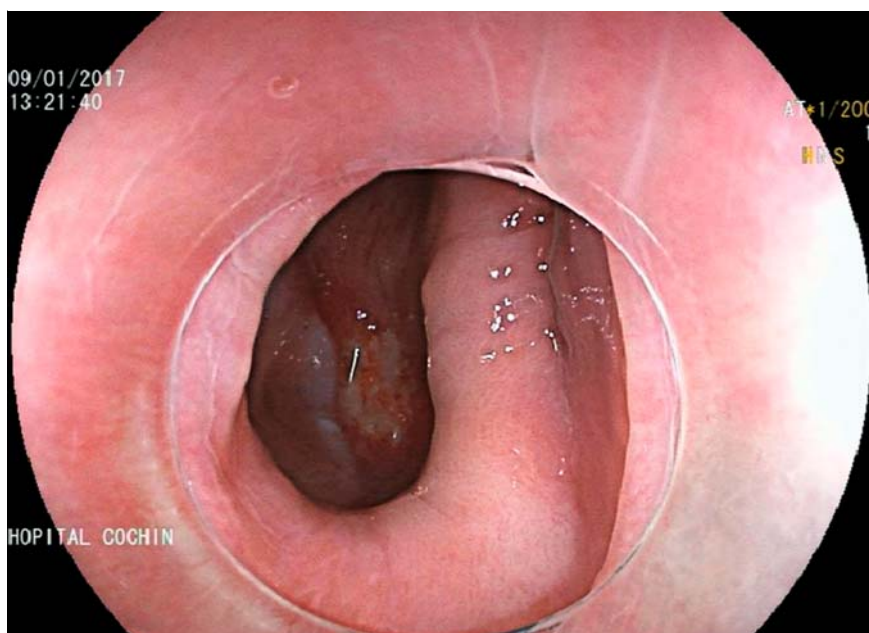
Zenker's diverticulum is a rare disease occurring in less than 0.5% of the global population. Currently, the diverticuloscope-assisted diverticulotomy represents the traditional procedure, the diverticuloscope enabling better exposure of the muscular fibers. Although effective and safer than surgery, this technique could be complicated by perforation, which is reported in as many as 6.5% of patients [1]. Recently, Li et al. reported a novel technique called the submucosal tunneling endoscopic septum division (STESD) [2], inspired by the peroral endoscopic myotomy (POEM) technique [3]. The theoretical advantage is to completely dissect the muscular septum without mucosal opening. This video case reports the second successful treatment of Zenker's diverticulum using this new procedure.

A 72-year-old woman underwent upper endoscopy for dysphagia, revealing a Zenker's diverticulum 20 cm from the incisors (► Fig. 1), which was confirmed by esophagogram (► Fig. 2). We performed the diverticulotomy using the STESD technique (► Video 1) and a gastroscope (Fujinon, Tokyo, Japan) with cap.

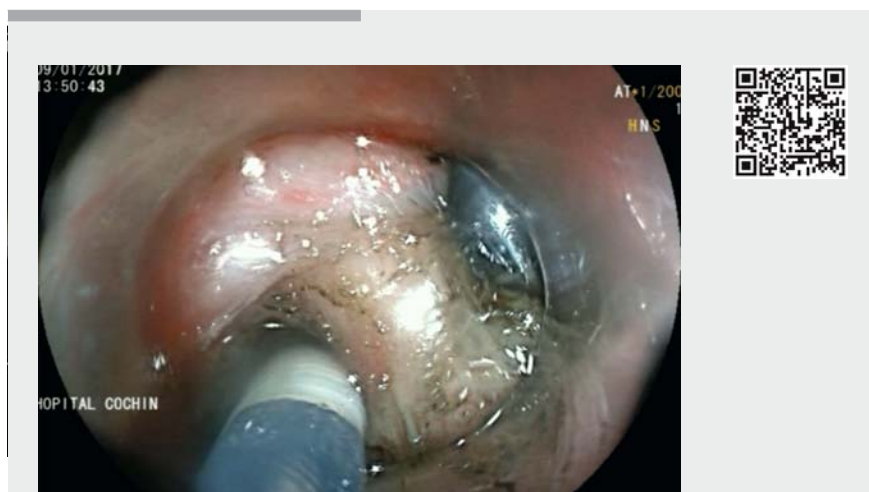
Submucosal incision was performed after submucosal injection, 3 cm above the diverticular septum. A tunnel was made using a 1.5 mm FlushKnife (Erbe Elektromedizin, Tübingen, Germany) between the muscular layers and the mucosa until the muscular septum was reached, and then continued along both sides of the septum, to create a large endoscopic window. Thereafter, the diverticular septum was completely dissected (with spread coagulation) along its entire length. Finally, after hemostasis, the mucosal incision was closed by four clips.

Intravenous antibiotics were continued for 2 days postoperatively, and the patient was discharged at Day 3. Symptoms had totally resolved 15 days later.

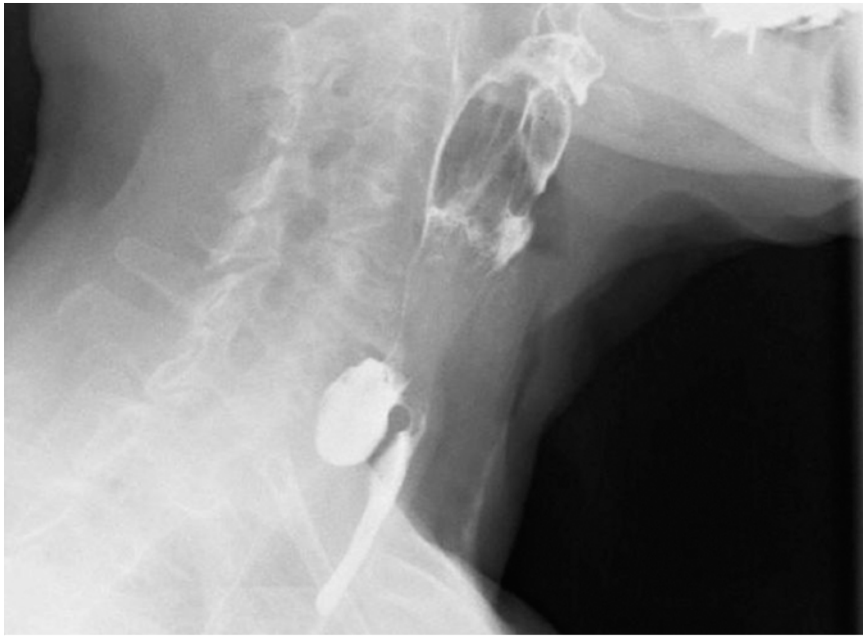
In summary, STESD is a reproducible technique that is easily accessible to en-



► Fig. 1 Endoscopic view of the Zenker's diverticulum with a cap-assisted gastroscope (Fujinon, Tokyo, Japan).



► Video 1 Submucosal tunneling endoscopic septum division for Zenker's diverticulum: Zenker's examination; submucosal injection; incision with submucosal tunneling; dissection of the muscular septum; closing with clips.



► **Fig. 2** Zenker's diverticulum in an esophagogram in sagittal plan.

doscopists who have experience of the POEM procedure. Further studies are required to validate this technique and compare it with classic diverticuloscope-assisted diverticulotomy.

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### Competing interests

None

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