Technically simplified peroral endoscopic myotomy: blunt dissection making submucosal tunneling fast and safe

As a primary treatment for patients with achalasia [1], peroral endoscopic myotomy (POEM) is a technically demanding procedure [2]. To perform a high-quality POEM and to prevent complications such as leakages, infections, major bleeding, and gas-related events, the establishment of a submucosal tunnel and the integrity of the mucosal flap are crucial [3, 4]. We present a blunt dissection technique to achieve rapid and safe submucosal tunneling in the aim to build a technically simplified POEM, which we call blunt POEM (▶ Video 1).

A 58-year-old woman suffered from solid food dysphagia and regurgitation. The endoscopy presented two surgical scars (▶ Fig. 1a, b) and a contraction ring at the lower esophagus (▶ Fig. 1c). The patient was diagnosed with type II achalasia under barium esophagography (▶ Fig. 1d) and high resolution esophageal manometry. We decided to perform POEM on the patient. Briefly, a mucosal incision was made on the posterior esophageal wall (▶ Fig. 2a). Once the endoscope was maneuvered into the submucosal space, the transparent cap was applied to bluntly dissect the fibers and thus establish a submucosal tunnel (▶ Fig. 2b). The blunt dissection was so efficient that it took only 2 minutes to establish a 10-cm tunnel (▶ Fig. 2c). After the submucosal tunnel was extended 2 cm into the proximal stomach, the selective inner circular myotomy and full-thickness myotomy were conducted (▶ Fig. 2d). Finally, the mucosal entry was closed using endoclips (▶ Fig. 2e). After the procedure, the lower esophageal sphincter (LES) was open and the endoscope smoothly passed the cardia (▶ Fig. 2f).

The simplest strategy to establish a tunnel is to dissect the submucosal fibers without a knife, and the most effective way to prevent complications is to preserve the intact mucosal flap [5]. In the current method of blunt POEM, we develop...
oped blunt dissection to simultaneously create a safe tunnel and preserve the mucosal flap. Compared with traditional POEM, blunt POEM is more easily maneuverable and less time-consuming for the treatment of achalasia.

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Competing interests

The authors declare that they have no conflict of interest.

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