Less invasive than minimally invasive: peroral endoscopic myotomy with a slim scope in the treatment of esophageal achalasia

Peroral endoscopic myotomy (POEM) is an established therapy [1–3]. We describe a new technique for POEM using a slim/pediatric endoscope, which aims to provide a less-invasive approach compared with traditional POEM.

A 16-year-old girl was diagnosed with achalasia based on symptoms (dysphagia, regurgitation, 6-kg weight loss over 4 months, Eckardt score of 7), barium swallow showing mildly dilated esophagus with retention of contrast (▶ Fig. 1), and manometry demonstrating increased lower esophageal sphincter relaxation pressure of 13.1 mmHg.

POEM was initiated using a standard gastroscope. A submucosal cushion was made with succinyl gelatin-methylene blue solution 8.0 cm proximally to the gastroesophageal junction. The endoscope was exchanged for a slim gastroscope (EG-530NW, 5.9 mm external diameter, 2.0 mm working channel; Fujifilm, Tokyo, Japan), fitted with a cap cut from the tip of a 5.5 mm endotracheal tube (Solidor; Well Lead Medical Co., Ltd, Guangzhou, China) (▶ Fig. 2). A mucosal opening was made with the tip of an oval 13-mm polypectomy snare (Profile Snare; Boston Scientific, Marlborough, Massachusetts, USA), which was also used for the creation of the submucosal tunnel and myotomy (▶ Fig. 3a, ▶ Video 1). A submucosal tunnel was dissected for 2.0 cm distally to the gastroesophageal junction. When further submucosal injection was needed, we utilized a 22-gauge needle (Injectra; Mediglobe, Achenmühle, Germany) by removing the needle and outer sheath, and using the inner sheath as an injection device. Myotomy was then performed from 2.0 cm below the mucosal opening to the...
end of the submucosal tunnel (▶Fig. 3 b). All steps were done with E-Cut, pure with 90 watts (SS601MCa; WEM, São Paulo, Brazil). The mucosal opening was closed using a single endoscopic clip (EzClip; Olympus, Tokyo, Japan) (▶Fig. 3 c). The following day the patient was asymptomatic and was discharged on soft food. At 2 months’ follow-up, her Eckardt score was 1 on a nonrestricted diet. POEM with a slim gastroscope is a feasible, safe, and effective procedure. The procedure is even less invasive than the standard POEM procedure.

Competing interests

None

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