Use of a long, stiff, overtube placed by a colonoscope to facilitate the POEM procedure for a 36-year history of achalasia with 13-cm esophageal dilation

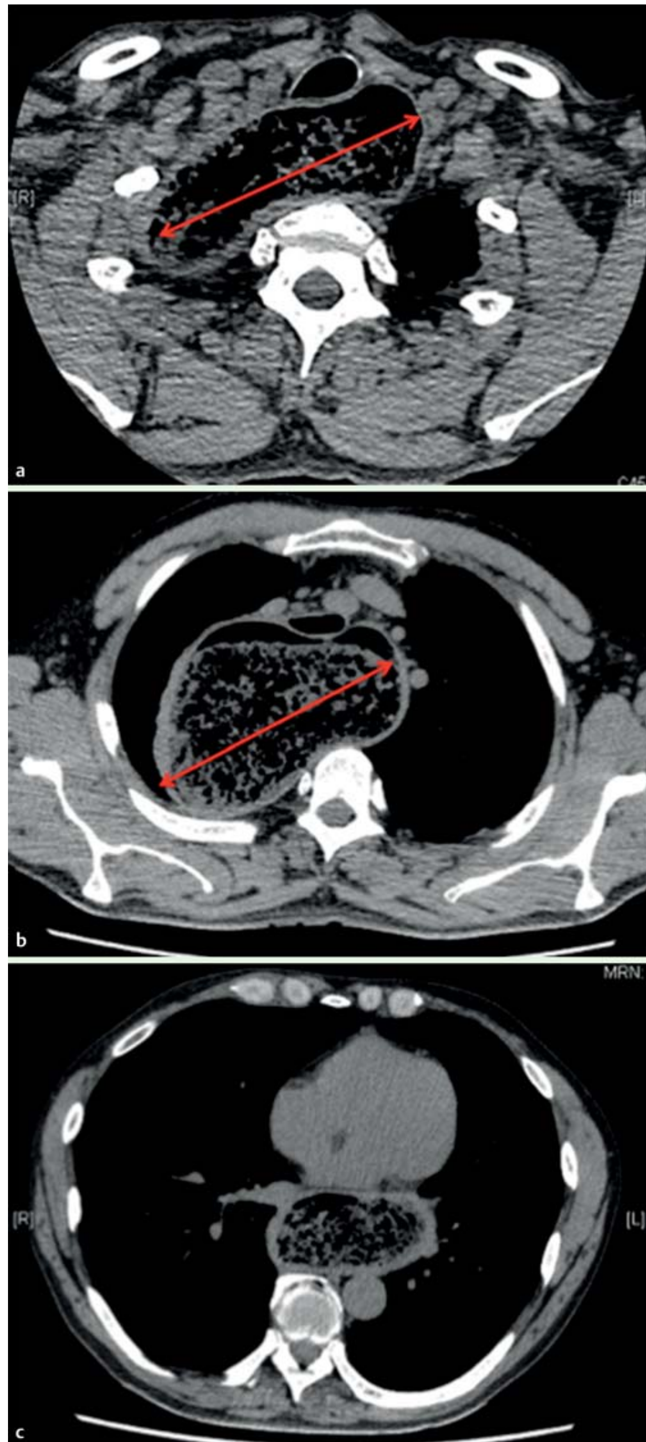

Fig. 1 Computed tomography scan showing the esophageal dilation. **a** The 13 cm dilation (arrow) containing a large amount of residual food. **b** The same aspect in the middle third of the esophagus (arrow). **c** Dilation in the lower third of the esophagus.

Fig. 2 Facilitation of gastroscope insertion, using a long, stiff, overtube, prior to peroral endoscopic myotomy. **a** The colonoscope was inserted into the stomach. **b** The overtube was inserted over the colonoscope. **c** The colonoscope was replaced with the gastroscope through the overtube.

Achalasia has an insidious onset, and disease progression is gradual. Patients typically experience symptoms for years prior to seeking medical attention, with a mean duration of symptoms of 4.7 years [1]. The delay in diagnosis is mainly due to misinterpretation of typical clinical features rather than atypical findings, and many patients are treated for other disorders, such as reflux, before diagnosis [2].

We report the case of a 56-year-old man who was referred after a 36-year history of progressive dysphagia with occasional complaints of chest pain and regurgitation without significant weight loss (Eckardt score 5, weight 72 kg, body mass index 20.8 kg/m^2).

A computed tomography scan showed a 13-cm dilated esophagus with residual food (▶ **Fig. 1**). Although manometry was difficult because of the sigmoid shape, the result was consistent with achalasia.

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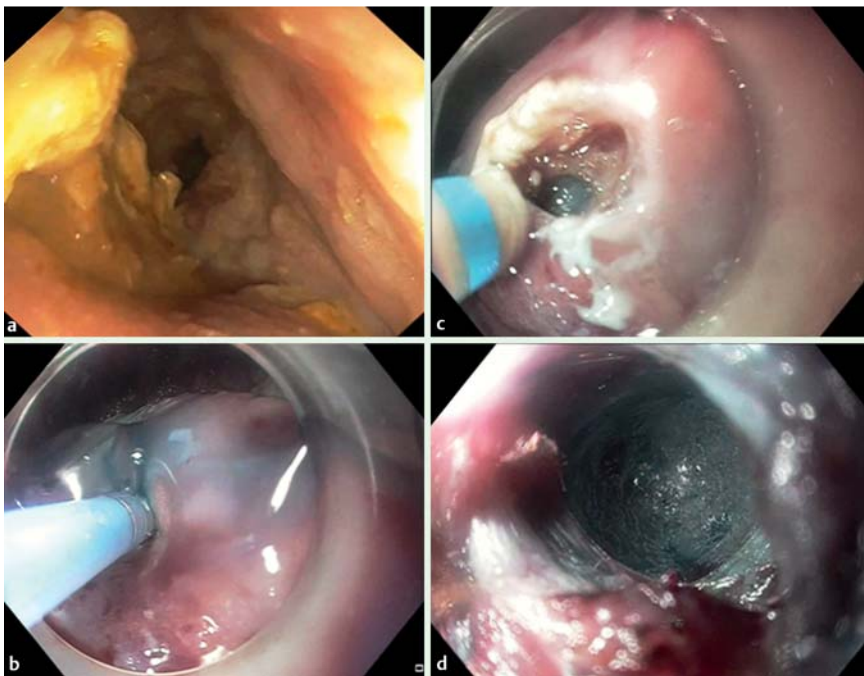

Fig. 3 Peroral endoscopic myotomy procedure through the overtube. **a** Removal of residual food. **b** Injection. **c** Incision using a Dual Knife (Olympus, Tokyo, Japan). **d** Short myotomy using a Hook Knife (Olympus).

A diagnostic esophagoscopy using a flexible gastroscope was attempted but it was impossible to reach the cardia because of the severe dilation. Therefore, in order to perform peroral endoscopic myotomy (POEM) [3 – 5], we first used a colonoscope to place a 40-cm rigid overtube (Entrada; Life Partners Europe, Bagnolet, France) (▶ **Fig. 2**). After the overtube had been placed, it became possible to reach the lower esophageal region with a gastroscope, with no looping of the scope.

Next, a submucosal tunnel was created, and a short circular myotomy was performed using a Hook Knife (Olympus, Tokyo, Japan), 2 cm above and 2 cm below the cardia (▶ **Fig. 3**, ▶ **Video 1**). No adverse events occurred during or after the procedure, and the patient was able to leave the hospital 2 days after the procedure.

After 5 weeks, the Eckardt score was 2, with only rare dysphagia and regurgitation (once a month) but with weight gain of 3 kg.

Although this dilation was severe and the esophagus was atonic, the patient significantly improved following POEM. This technique should be attempted in similar patients, using an overtube in order to reach the cardia.

Endoscopy_UCTN_Code_TTT_1AO_2AD

Competing interests: None

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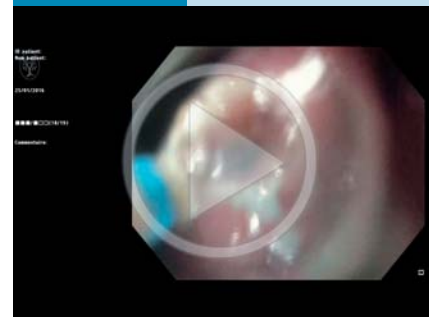
Video 1



Short myotomy after overtube placement in a patient with a 13 cm dilation of the esophagus and a long history of achalasia.

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DOI http://dx.doi.org/10.1055/s-0042-107595
Endoscopy 2016; 48: E172–E173
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

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