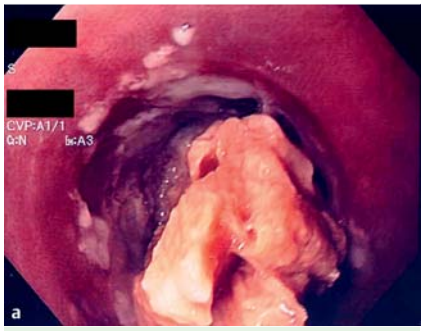
Endoscopic management of esophageal bolus obstruction using the "oil immersion technique"



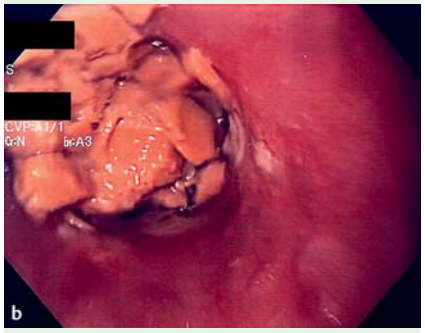


Fig. 1 Appearance of a macerated food bolus and the corresponding esophageal inflammation and mucosal necrosis in a woman with a history of gastroesophageal reflux disease and previous distal esophageal stenosis: **a** on initial inspection; **b** after several attempts at pushing and partial peroral extraction.

Fig. 2 Endoscopic view during application of 20-mL of olive oil into and around the bolus via a standard endoscopic retrograde cholangiopancreatography (ERCP) catheter.

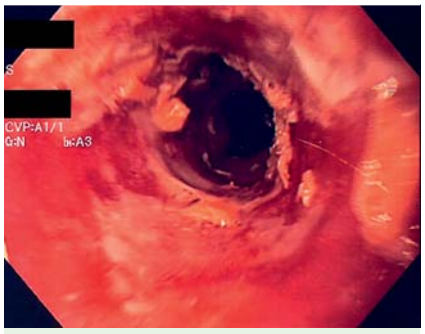


Fig. 3 Endoscopic view of the causative stenosis after the bolus had been successfully pushed into the stomach.

Although the majority of esophageal bolus obstructions eventually clear spontaneously, some require medical interventions. Generally, endoscopists have to decide whether to push the bolus into the stomach or retrieve it by peroral extraction. Pushing may be preferred for objects that cannot be grabbed and extracted in their entirety [1,2]. Peroral extraction is particularly advised for foreign bodies and in patients with a significant narrowing of the esophageal lumen that is causing the blockage distal to the bolus [3]. However, meat and vegetables in particular tend to undergo maceration, which makes retrieval and extraction laborious.

We report the case of a woman who was admitted with recurrent vomiting 6 hours after eating lunch that caused complete esophageal obstruction. She had previously suffered an obstruction 1 year before when gastroesophageal reflux disease (GERD)-associated stenosis of the distal esophagus was diagnosed. Proton pump inhibitor (PPI) therapy had been initiated and she had remained free from dysphagia until the time of this admission.

Esophagogastroduodenoscopy (EGD) showed a bolus consisting of partially macerated meat and corresponding esophageal erosions (**Fig. 1**). It was not possible to push the bolus into the stomach, to pass the endoscope alongside, or to grab the necessary parts of the bolus for extraction. High grade stenosis was considered unlikely because of the long interval between episodes of obstruction. For this reason, 20 mL of olive oil was applied around and into the bolus through a standard endoscopic retrograde cholangiopancreatography (ERCP) catheter to improve lubrication (**Fig. 2**). Meticulous care was taken to prevent oil running proximally and minimize the risk of aspiration. After the bolus had been immersed in the oil, it was easily pushed beyond the inflammatory stenosis and into the stomach. Final assessment showed a moderate circumferential ulcerative stenosis of the distal esophagus (**Fig. 3**).

To our knowledge, this is the first report of using oil immersion to facilitate effective resolution of esophageal bolus obstruction. We recommend this technique particularly for boluses that are inappropriate for efficient peroral extraction in patients without high grade stenosis.

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Competing interests: None

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