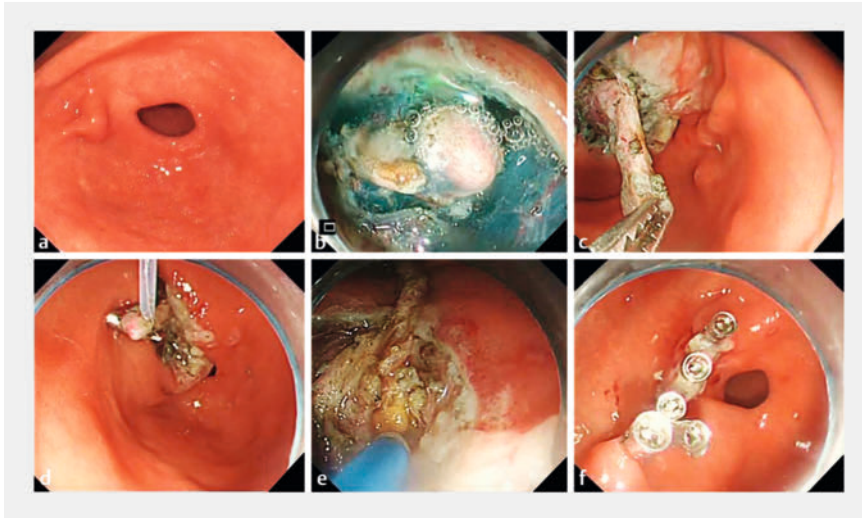
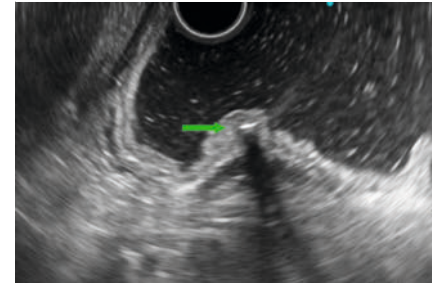


Removal of an embedded gastric fishbone by traction-assisted endoscopic full-thickness resection



► **Fig. 1** Endoscopic images showing: **a** a submucosal eminence on the anterior wall of the gastric antrum; **b** partial exposure of the fishbone; **c** attempts to extract the fishbone using foreign body forceps; **d** snare traction being employed; **e** endoscopic full-thickness resection being performed; **f** closure of the perforation with metal clips.



► **Fig. 2** Endoscopic ultrasonography image showing a hyperechoic lesion in the gastric submucosa.

Conflict of Interest

The authors declare that they have no conflict of interest.

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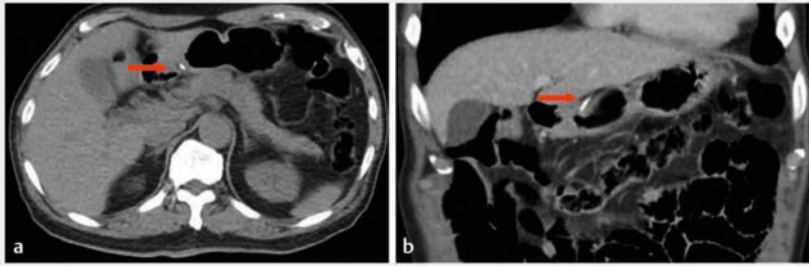
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A 65-year-old man was referred to our hospital with a half-year history of upper abdominal pain. Endoscopy showed a submucosal eminence on the anterior wall of the gastric antrum (► **Fig. 1 a**). Endoscopic ultrasonography (EUS) revealed a hyperechoic lesion in the gastric submucosa (► **Fig. 2**). A computed tomography (CT) scan showed a long, high density shadow in the gastric antrum, locally protruding into the serosal cavity (► **Fig. 3**). Emergency endoscopy was performed with the patient under general anesthesia and with endotracheal intubation (► **Video 1**).

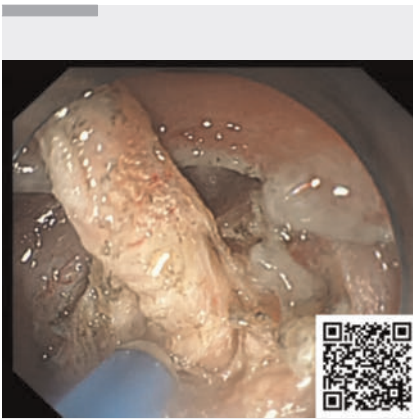
The mucosa of the gastric antrum was circumferentially incised, exposing one side of the fishbone (► **Fig. 1 b**). Attempts to extract it using foreign body forceps were unsuccessful, indicating significant adhesion with the surrounding tissues (► **Fig. 1 c**). Snare traction was then employed (► **Fig. 1 d**). Subsequently, we performed traction-assisted endoscopic full-thickness resection (EFTR), revealing that the base of the fishbone was envel-

oped within the omentum (► **Fig. 1 e**). After the adhesions had been dissected, a 2.5-cm long fishbone was successfully extracted (► **Fig. 4**) and the perforation was immediately closed with several metal clips (► **Fig. 1 f**). The operative and postoperative periods were uneventful, without any complications. A fishbone invading the intrinsic muscularis and serosa of the gastric wall is rare [1]. Removal is often more challenging when there has been prolonged penetration of the gastric wall, and the risk of complications increases [2,3]. We performed traction using a snare combined with endoclips to assist in EFTR to successfully remove the fishbone. In this case, laparoscopic and open surgery were avoided.

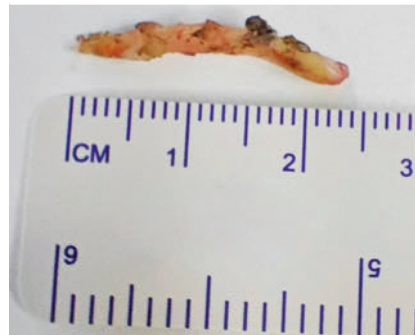
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► **Fig. 3** Computed tomography images showing the location and depth of the fishbone (red arrow) on: **a** transverse plane; **b** coronal plane.



► **Video 1** Removal of an embedded gastric fishbone by traction-assisted endoscopic full-thickness resection.



► **Fig. 4** Photograph of the extracted fishbone.

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