Endoscopic removal of an esophageal bezoar in a patient with jackhammer esophagus

Keywords: Esophagogastric junction outflow obstruction (EGJOO). Endoscopy. Jackhammer esophagus.

Dear Editor,

Esophageal bezoars are known to be significantly rarer compared to gastric bezoars. A 68-year-old female presented with acute chest pain and worsening dysphagia to both solids and liquids, culminating in inability to consume water without vomiting. The chest computed tomography (CT) scan (Fig. 1A) and upper gastrointestinal endoscopy (Fig. 1B) were performed. On chest CT, a mass-like lesion of around 3 cm was observed. Endoscopic findings identified a bezoar formed by hardened food in the lower esophagus, along with previously ingested medication. The endoscope was unable to pass beyond the obstruction, prompting an endoscopic removal of the bezoar (Fig. 1C). Multiple fragmentation attempts were performed using a snare, and the fragments were retrieved using a retrieval net. Following removal, the esophageal mucosa appeared relatively intact, with mild luminal narrowing observed in the lower esophagus (Fig. 1D). To investigate the underlying cause of the esophageal bezoar, further evaluations for esophageal motility disorders were planned. High-resolution esophageal manometry (HRM) (Fig. 1E) and timed barium esophagography (Fig. 1F) were subsequently performed. Esophagography revealed slightly delayed transit of contrast material. The HRM results revealed an elevated distal contractile integral (DCI) of 14,249 mmHg, leading to a diagnosis of jackhammer esophagus.

Discussion

The detection rate of bezoars during gastrointestinal endoscopy is reported to be approximately 0.31 %, and esophageal bezoars are known to be even rarer. In a study analyzing gastrointestinal bezoars over a 12-year period, only 2.7 % were found to have esophageal bezoars (1). Structural abnormalities, such as esophageal strictures, are commonly associated with these cases. However, rare reports also highlight esophageal motility disorders, including achalasia, nutcracker esophagus, and diffuse esophageal spasm as potential causes (2,3). Hypercontractile esophageal motility, as seen in jackhammer esophagus, disrupts normal bolus transit through excessive, prolonged contractions. This can lead to food stasis and retention, creating an environment for bezoar formation. The intense contractions hinder smooth food passage, predisposing the esophagus to trap undigested materials, increasing bezoar risk (4,5).

In a review of eight cases of esophageal bezoar associated with esophageal motility disorders, seven cases involved elderly patients (6). In elderly patients with sudden-onset dysphagia, prompt history-taking, endoscopic evaluation, and

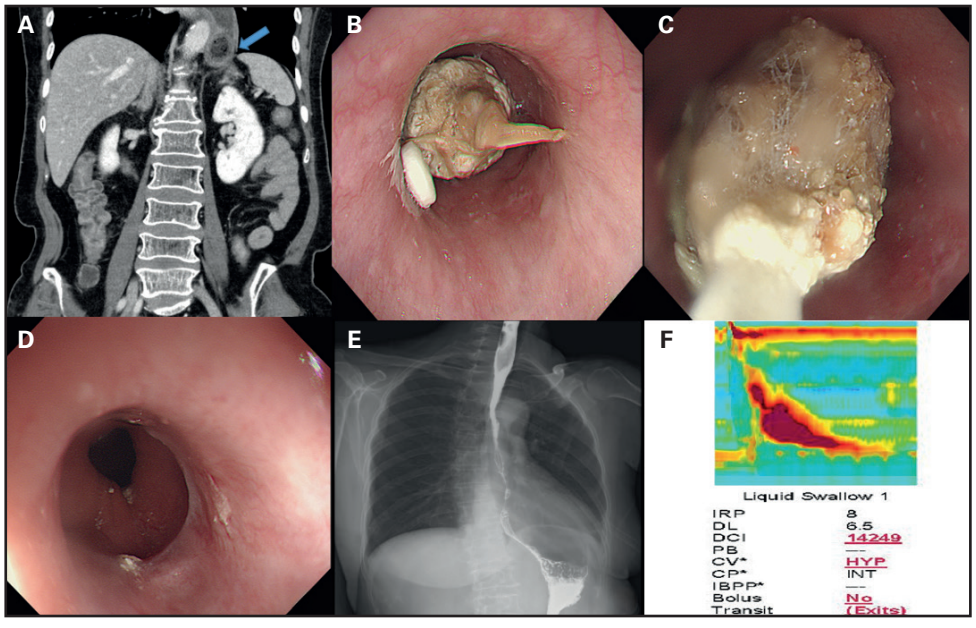

Fig. 1. *A. A computed tomography (CT) scan shows an esophageal foreign body indicated by an arrow. B. Bezoar observed during upper endoscopy. C. Endoscopic fragmentation and removal successfully performed. D. Post-removal endoscopy shows no mucosal lesions. E. Esophagography showing delayed emptying with contrast retention, suggesting impaired bolus transit. F. High-resolution manometry showing mildly delayed esophageal emptying with elevated distal contractile integral (DCI) (14,249 mmHg·s·cm), hypercontractile peristalsis (HYP), and incomplete bolus clearance (INT).*

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assessment for underlying causes are crucial. Dietary modifications, such as avoiding high-fiber foods and opting for smaller, frequent meals, combined with prokinetic agents and acid suppressants, can improve motility and reduce recurrent bezoar risk in esophageal motility disorders. Regular follow-up is essential to monitor and adjust treatment (7).

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