Endoscopic extraction of a fish bone with a Foley catheter after endovascular stent graft placement for penetrating aortoesophageal injury

A 55-year-old man was admitted with retrosternal pain and odynophagia of 5 days' duration. The patient had ingested a fish bone just before the onset of symptoms. He had a 4-year history of coronary artery disease and myocardial infarction. Computed tomography showed a foreign body penetrating through the esophagus into the thoracic aorta (Fig. 1). No signs of mediastinitis were identified.

After a multidisciplinary discussion, endoscopic bone removal was planned with simultaneous endovascular stent graft placement. A 34 × 180-mm stent graft was implanted in the thoracic aorta via the femoral artery (Fig. 2a). Gastrointestinal endoscopy revealed a fish bone lodged in the esophagus at 250 mm from the incisors. Both ends were impacted in the esophagus, with a short segment in the lumen (Fig. 2b). Despite numerous attempts at removal with a foreign body forceps, neither end could be separated from the esophageal wall because of the narrow space. It was impossible to cut the hard bone endoscopically.

As a last attempt before surgery, a 14 Fr Foley catheter was introduced beyond the bone. The catheter was inflated with 15 mL of normal saline, dilating the portion of the esophageal lumen distal to the bone (Fig. 2c). The bone, which was almost 40 mm long with two pointed ends (Fig. 2d), was then separated and extracted. A nasojejunal feeding tube was placed. The patient's postoperative recovery was uneventful (Fig. 3).

Several instruments have been used to retrieve foreign bodies, including forceps, polypectomy snare, and Roth basket. A major disadvantage of these tools is their limited ability to overcome anatomical obstacles [1]. A Foley catheter is usually used under fluoroscopic guidance to remove blunt foreign bodies from children [2]. In our case, we used this simple and primitive type of catheter to dilate the esophagus before bone removal. The use of a Foley catheter is an option for extracting sharp objects with two ends impacted in the esophagus.

Competing interests: None

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References
Fig. 3 Computed tomographic scan before nasojugal tube removal showing no paraesophageal collection or mediastinitis.