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

Fig. 1 Computed tomographic scan showing a foreign body penetrating through the esophagus into the thoracic aorta in a 55-year-old man presenting with retro-sternal pain and odynophagia.

Fig. 2 **a** Intraoperative aortography showing no extravasation of contrast agent after stent graft placement. **b** Both ends of the bone are impacted in the esophagus close to the second narrowing. **c** The catheter balloon dilating the esophageal lumen. **d** A 40-mm-long sharp bone with two pointed ends.

A 55-year-old man was admitted with retro-sternal 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). Gastro-

intestinal 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 14Fr 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 nasojeunal 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.

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

Bibliography

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