

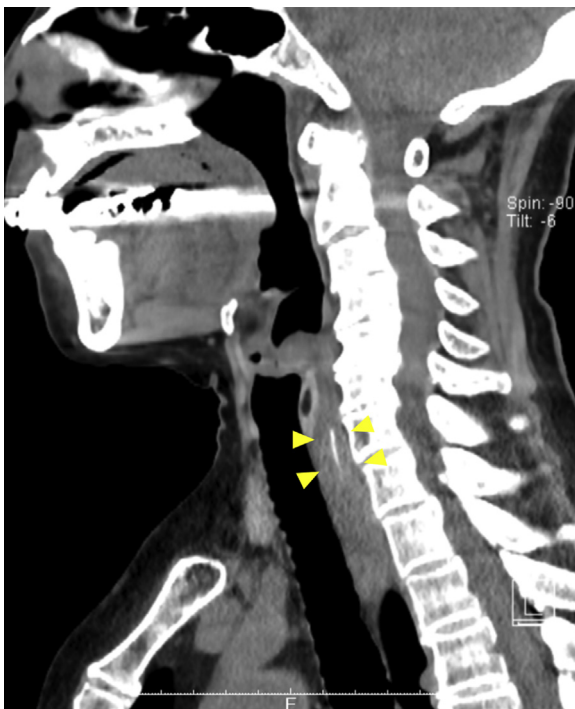


## Efficacy of EUS for detection of a buried fish bone in the esophagus

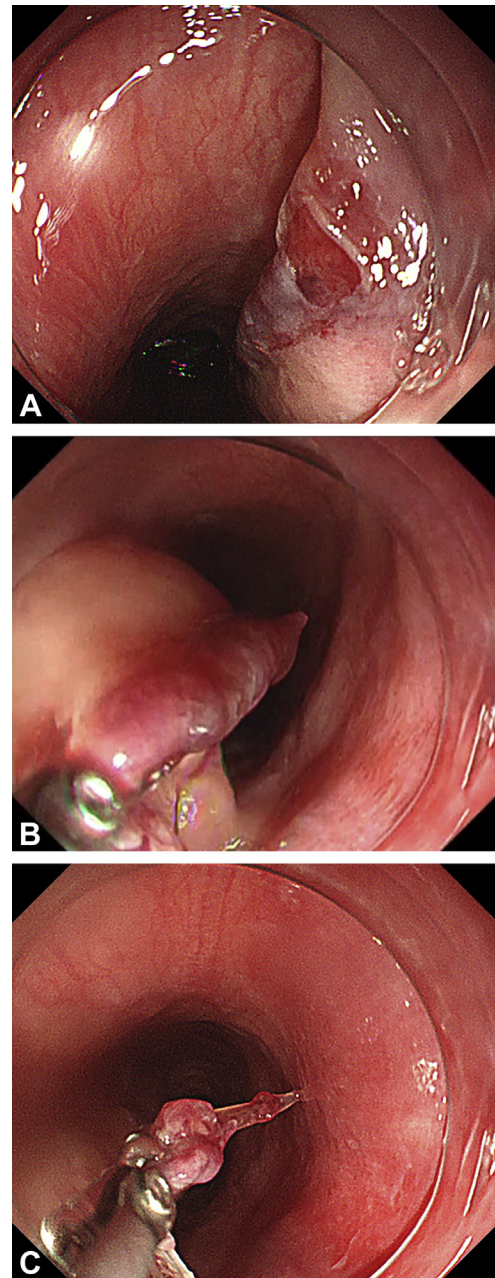
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Fish-bone foreign bodies in the esophagus are a common emergency.<sup>1</sup> They should be removed to prevent perforation and abscess formation, especially in the anterior and posterior areas of the esophagus, where impactions can lead to severe outcomes such as tracheal fistulas or involvement of blood vessels.<sup>2,3</sup> This case suggests that EUS is effective for the detection of fish bones buried in the esophagus.

An 85-year-old woman started having throat pain 4 days after having had a fish dinner and visited a nearby clinic. The fish bone was visualized on reconstructed CT. She was referred to our hospital for removal of the fish bone. Initial EGD was performed, but the fish bone could not be visualized and was detected only by the localized swelling of the esophageal wall and an intramural hematoma. CT after the initial EGD showed the fish bone still in the anterior esophageal wall (Fig. 1).

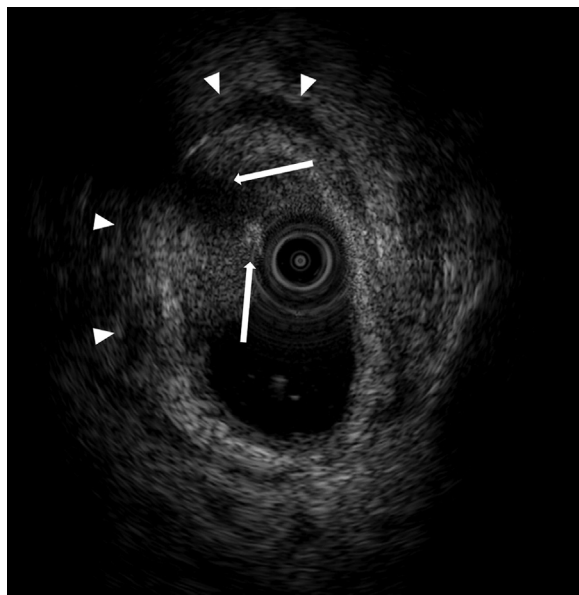


**Figure 1.** CT after the initial EGD showing the fish bone.



**Figure 2.** A, Second EGD showing fish bone insertion point. B, Use of biopsy forceps to clutch the fish bone. C, Careful removal of fish bone.

Written transcript of the video audio is available online at [www.VideoGIE.org](http://www.VideoGIE.org).



**Figure 3.** EUS showing a hyperechoic structure, an acoustic shadow, and the muscular layer of the esophagus.

A second EGD was performed without anesthesia, by use of CO<sub>2</sub> insufflation. The fish bone was invisible on the esophageal surface (Fig. 2A). EUS at a frequency of 20 MHz was performed with the patient in a head-up position and with less water injection to avoid aspiration, and showed esophageal wall thickening and a linear hyperechoic structure forming a posterior acoustic shadow (Fig. 3 and Video 1, available online at [www.VideoGIE.org](http://www.VideoGIE.org)). We determined that the fish bone was located within the swollen superficial wall of the esophagus but had not penetrated through the muscular layer.

We attempted to remove the fish bone endoscopically with biopsy forceps. The fish bone was clutched through the superficial layer of the esophageal mucosa and was successfully extracted (Figs. 2B and C). It was from a Japanese amberfish and was approximately 2 cm long (Fig. 4); there were no adverse events.

EUS is helpful for detecting buried foreign bodies. Furthermore, in this case it was effective in determining



**Figure 4.** Fish bone after removal, measuring approximately 2 cm in length.

the depth at which the foreign body lay in the esophageal wall.

## DISCLOSURE

*All authors disclosed no financial relationships relevant to this publication.*

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