

## Retained Mediastinal Contrast

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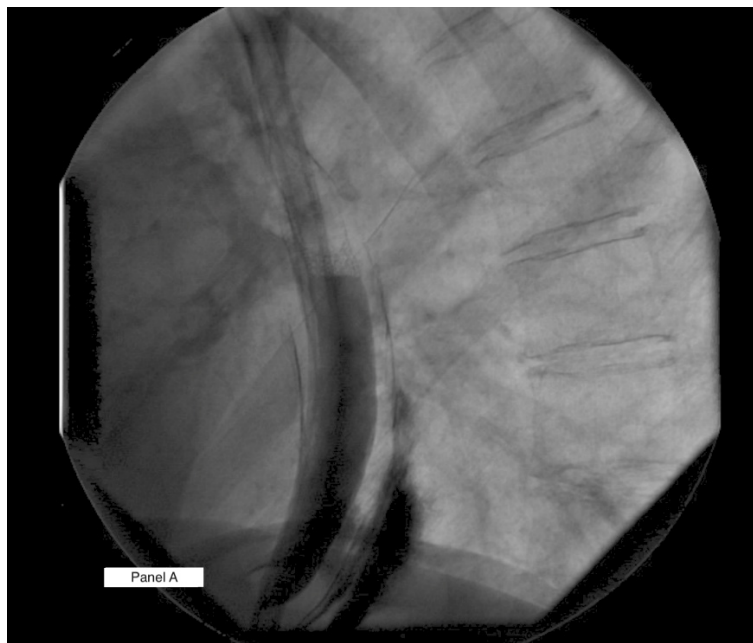


Figure 1. Barium swallow study from 2006 demonstrating non-communicating extraluminal contrast within the mediastinum.



Figure 2. Axial computed tomography image from 2019 demonstrating non-communicating extraluminal contrast within the mediastinum.



Figure 3. Sagittal computed tomography image from 2019 demonstrating non-communicating extraluminal contrast within the mediastinum.

### CASE DESCRIPTION

A 79-year-old female is presented with history of total laryngectomy, placement of tracheoesophageal puncture for phonation, and radiation therapy secondary to laryngeal cancer in the year 2000. Over the course of 2004, she developed progressive dysphagia due to esophageal strictures requiring a number of dilation procedures with the complication of esophageal perforation in late 2005. The perforation was treated conservatively, however, her esophageal strictures became refractory to dilation. In 2006, the patient underwent a barium swallow study for diagnostic purposes and subsequently had multiple x-rays and computed tomography (CT) scans demonstrating pre-existing non-communicating extraluminal contrast, likely from her known esophageal perforation in late 2005 (Figure 1). Following those scans, she underwent reconstruction of the pharyngoesophageal stricture with tubed left radial forearm free flap. In 2019, she presented for aortic valve replacement work-up and underwent a CT scan with findings initially puzzling to the medical team. The scan demonstrated the retained contrast 13 years later (Figures 2 and 3). The patient did not exhibit any systemic signs of infection or dysphagia.

### DISCUSSION

This unprecedented finding has not been reported in the literature previously. Although the patient has not had any clinical sequelae secondary to the retained barium contrast, long-term effects remain unknown. This finding demonstrated the importance of utilizing an absorbable water-soluble contrast as a first step for the diagnosis of perforated viscus given the serious implication of non-absorbable barium contrast and resultant inflammatory reaction.<sup>1,2,3</sup> However, in a contained rupture, as in this case, barium contrast did not elicit mediastinitis and the patient remained asymptomatic from it.

## REFERENCES

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