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Figure 1. CT of the neck (axial view) showing air tracking into the prevertebral space (arrow).



Figure 3. Esophagram with water-soluble contrast showing extravasation of contrast along the right side of the esophagus (arrow), suggesting perforation.



Figure 2. CT of the neck (sagittal view) showing air tracking into the prevertebral space (arrow).

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A 30-year-old man presented to the emergency department with throat pain and oral intolerance of fluids for several hours. Earlier that day, an outpatient operation was aborted after multiple unsuccessful intubation attempts in the operating room. The patient had unremarkable vital signs, noting only odynophagia. Computed tomography (CT) of the neck and an esophagram with water-soluble contrast were acquired.

For the diagnosis and teaching points, see page 461.

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(continued from p. 414)

DIAGNOSIS:

Esophageal perforation. CT demonstrated pneumomediastinum and air tracking into the prevertebral space, with disruption of the proximal esophagus (Figures 1 and 2). The esophagram showed contrast retention concerning for extravasation or esophageal wall dissection (Figure 3). The majority of esophageal perforations are due to iatrogenic causes, such as esophageal endoscopy, composing approximately 70% of cases.¹

Perforations have also been attributed to trauma, foreign body ingestion, and forceful vomiting.² Traumatic intubation is also a rare and dangerous mechanism of esophageal injury.^{3,4} It can be diagnosed by CT imaging, endoscopy, or swallowing studies. Because of the exposure of surrounding spaces to the contents of the gastrointestinal tract, perforation can rapidly lead to severe sepsis and death. Evidence shows that mortality correlates with time to diagnosis, doubling if treatment begins after 24 hours.⁵ In light of this high mortality, initial management includes aggressive resuscitation, broad-spectrum antibiotics, and immediate surgical consultation.^{5,6}

The patient received broad-spectrum antibiotics and was admitted for observation. Repeated esophagram 5 days afterward did not demonstrate any contrast extravasation and the patient was discharged home with instructions to adhere to a liquid diet and planned follow-up with cardiothoracic surgery.

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