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Introduction:

Despite advances in medical knowledge, esophageal perforation remains a condition with high morbidity and mortality. Prognostic factors include: (1) etiology and location of esophageal injury; (2) presence of underlying esophageal disease; (3) interval between perforation and intervention; and (4) method of treatment. Here, we present two cases of spontaneous esophageal perforation that were managed differently but both resulted in favorable outcomes.

Case Presentation:

Case 1: A 26-year-old female with history of anxiety was admitted to inpatient psychiatry service for impulsive behavior. On day 9 of hospital admission, the patient began experiencing intractable nausea and vomiting followed by excruciating chest pain. Physical examination was notable for tenderness to palpation in epigastrium and minimal amounts of crepitus appreciated in the neck. CT Thorax subsequently revealed small volume pneumomediastinum (see **Figure 1**). The patient was managed conservatively with intravenous fluid hydration, intravenous antibiotics, and nothing by mouth. Repeat imaging was performed 10 days after initial CT which revealed interval resolution of pneumomediastinum. Patient was started on clear liquids on hospital day 16 and diet was advanced thereafter. The patient was discharged uneventfully on hospital day 22.

Case 2: A 20-year-old male with no pertinent medical history presented to the emergency department with intractable nausea and vomiting after inhalation of a "large amount of cocaine." Patient subsequently developed substernal chest pain with shortness of breath while in the emergency department. Physical examination was notable for subcutaneous emphysema in the neck, shoulders, and back. Emergent CT was performed and revealed extensive pneumomediastinum with extension of air into the chest, back, and neck (see **Figure 2**). Gastrografin esophagram would subsequently reveal extravasation of contrast at the anterior aspect of GE junction. The patient was brought emergently to the operating room for primary closure of the esophageal perforation; however, the esophageal defect could not be located despite meticulous examination with methylene blue administration and an air bubble test. The patient was monitored closely on the inpatient service until his symptoms improved and he was discharged on hospital day 14.

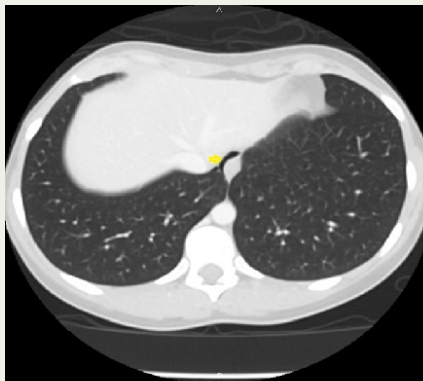


Figure 1. CT thorax revealing free air around distal esophagus (see yellow arrow)



Figure 2. CT thorax demonstrating extensive air throughout the mediastinum, extending into the pericardial sac and soft tissues of the chest

Discussion:

The optimal management of esophageal perforation remains debatable, particularly for small well-contained perforations. With advances in minimal invasive techniques, the need for surgical exploration appears to be diminishing. Neither patient in this case series suffered from underlying esophageal disease. Both patients had an injury to the distal esophagus that was addressed within 24 hours of presentation; however, one patient was managed conservatively whereas the other patient was managed surgically. While the outcome for both cases was favorable, the morbidity involved with surgical intervention was undoubtedly higher.

Conclusion:

Perhaps, a minimally invasive approach should be considered in all non-emergent cases prior to surgical intervention in an effort to further decrease morbidity.

References:

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