

Introduction

- Tuberculosis (TB) is a primary lung disease affecting approximately 10 million people worldwide.
- Extrapulmonary manifestations can involve the lymph nodes, vertebrae, and gastrointestinal tract.
- In immunocompromised patients, TB can manifest in the esophagus as fistulas with the trachea and bronchus and rarely with the mediastinum.

Case Description

- 29-year-old male with recently diagnosed human immunodeficiency virus (HIV) and tuberculosis who presented with dysphagia for the past month.
- He has difficulty swallowing solids and thin liquids, pleuritic chest pain, cough, and weight loss.
- A mediastinal lymph node biopsy was done to diagnose TB before his symptoms started.
- Vitals were stable and basic labs were unremarkable but exam showed healed scar below sixth rib and decreased breath sounds in the right lower lung field.
- CT and EGD showed an esophagomediastinal fistula, so six endoclips were placed to close the defect.
- Gastrograffin study after EGD did not show contrast extravasation and a percutaneous jejunostomy tube was placed for nutrition and fistula healing.
- On follow-up, fistula healed and symptoms resolved.

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There are no financial disclosures or conflicts of interest.



Figure 1. CT Chest showing esophagomediastinal fistula.

Trace extraluminal contrast (blue arrow) to the right of the esophagus with a small focus of gas within the mediastinum concerning for a esophagomediastinal fistula.

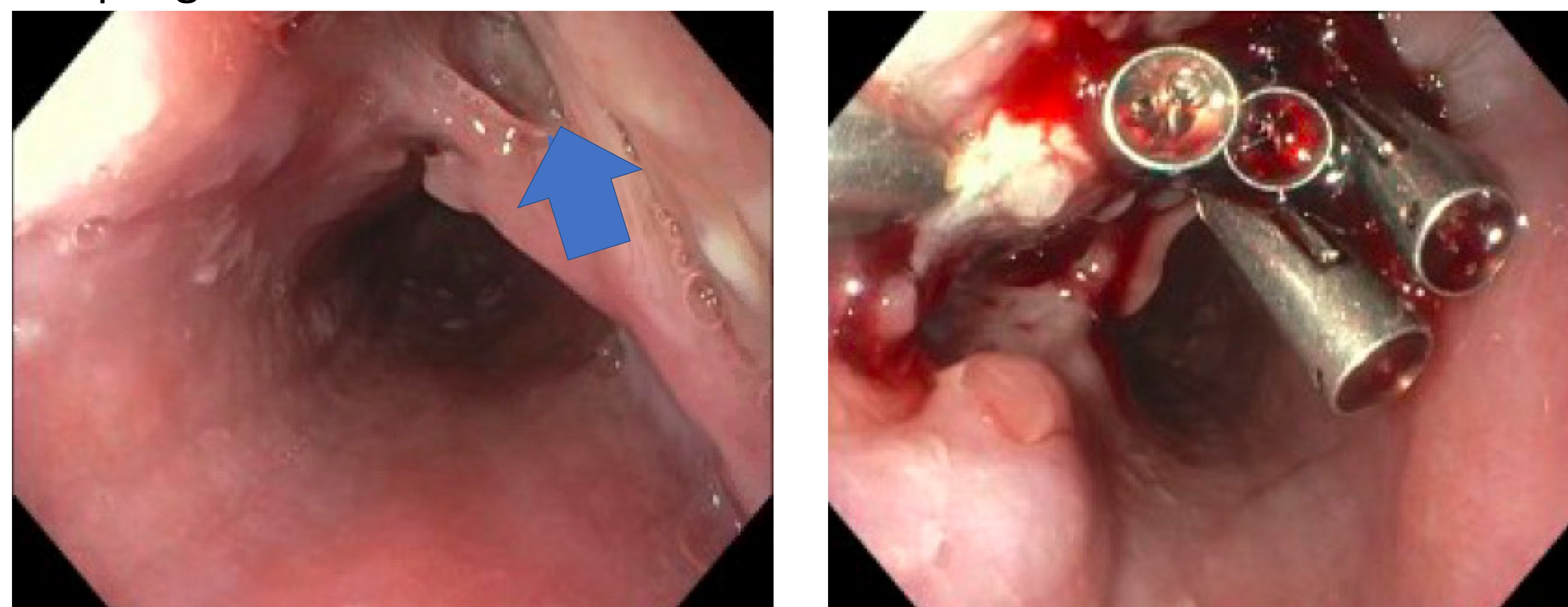


Figure 2. EGD showing fistula before (left) and after (right) closure.

Esophagogastroduodenoscopy (EGD) was done that showed esophagitis without bleeding and a fistula in the middle third of the esophagus (left). Six through-the-scope endoclips were placed to close the defect (right).

Discussion

- Esophagomediastinal fistulas are rare in patients with tuberculosis, occurs in about 17.6% of patients with TB and 35% of patients with concomitant HIV
- Fistula tracts develop spontaneously from caseating lymph nodes that erode into adjacent organs or from iatrogenic procedures such as biopsies
- Symptoms include cough after eating, leading to long term malnutrition and weight loss. Diagnosis can be made with an esophagram, CT, or EGD
- Treatment involves closing the defect, controlling the infection, and optimizing nutrition. Fistulas are typically closed surgically, but they can now be closed endoscopically using clips, stents, and stitches.
- This is the first use of through-the-scope endoclips to successfully close a TB esophagomediastinal fistula, and can be considered the gold standard because it is low risk, minimally invasive, low-cost, and effective

References

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