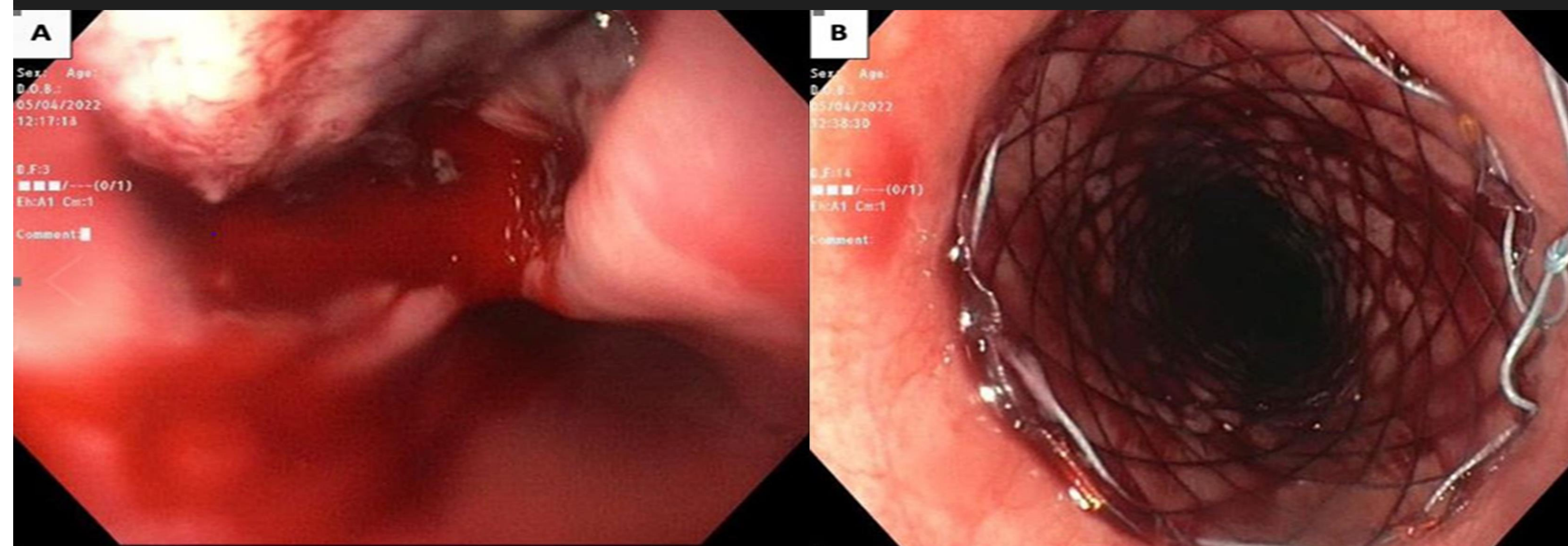
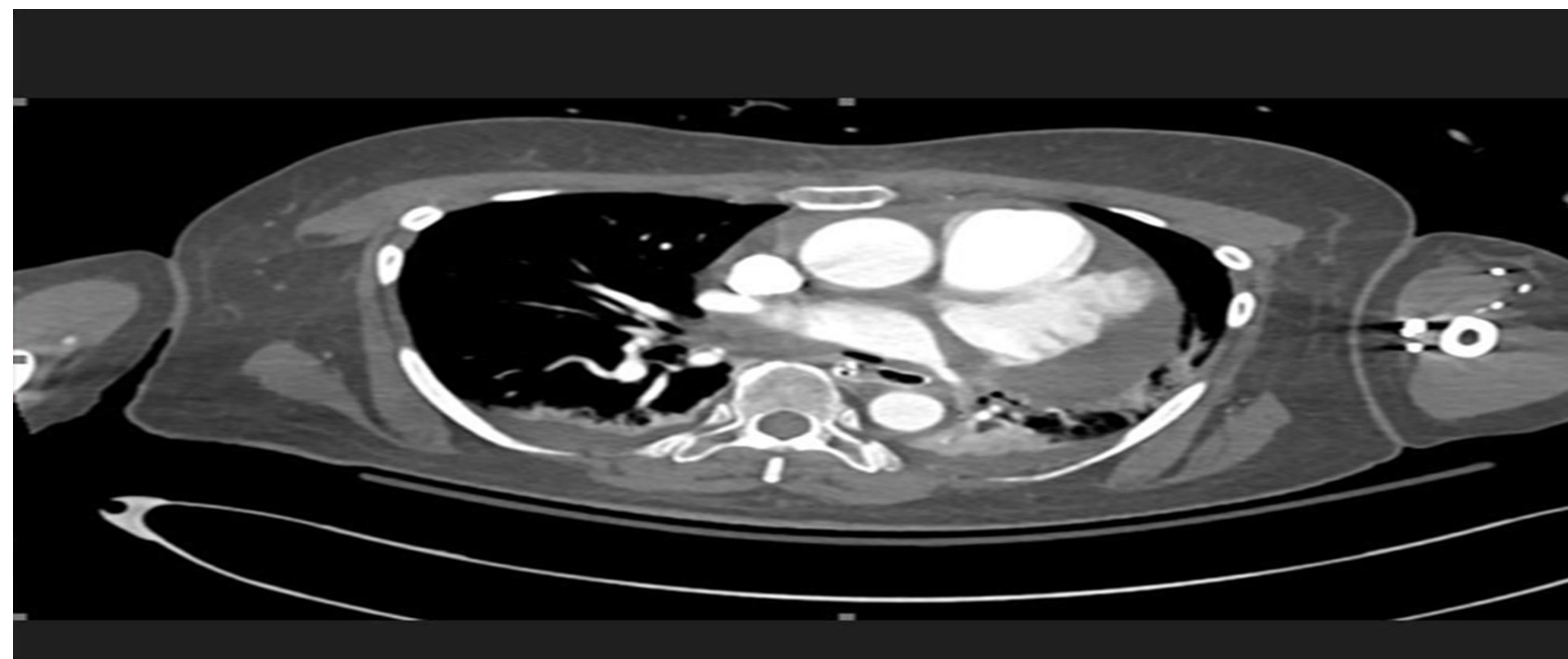


### Introduction

Atrio-esophageal fistula (AEF) is a rare yet devastating complication of ablation therapy for atrial fibrillation, with a prevalence of 0.015%-0.04%. Unfortunately, AEF tends to be rapidly fatal without swift recognition and emergent intervention. We present a unique case of AEF in a patient presenting with focal weakness and hemodynamic instability.

### Case Description and Methods

A 65-year-old female with a history of Hypertrophic Cardiomyopathy, Atrial fibrillation on Eliquis who had undergone elective thermal ablation two weeks prior to presentation to the ED, presented with left-sided weakness (NIHSS score of 6). A non-contrast CT head revealed multiple infarcts in the right frontal and cerebellar region. Her hospital course was complicated by recurrent episodes of painless large volume, bright red blood per rectum, fever of 105.7F, and hypotension. A massive transfusion protocol was initiated, and she was intubated for airway protection. An emergent upper endoscopy demonstrated a blood-filled esophagus that was adequately suctioned. A 3cm tear gushing blood in a pulsatile manner was unveiled at the 10 o'clock position, 28cm from the incisors. A 20x120mm Through-The-Scope fully covered self-expandable metallic stent was deployed and secured under direct vision with a stent fixation device. After successful hemostasis, she underwent a CT Angiogram of the chest and abdomen, which unveiled air within the left atrium and a defect in the wall suggestive of an AEF. Given her rapid deterioration requiring three pressors and persistent bacteremia, she was not a candidate for surgical intervention and later expired following comfort care.



Coronal view of a CT angiogram showing air within the left atrium and a small defect in the esophageal wall suggestive of an atrio-esophageal fistula with esophageal stent placement. Additionally, air seen within the pericardium (Top)  
Upper endoscopy demonstrating 3cm esophageal tear at 10 o'clock position, 28 cm from the incisors (Left, A)  
Status post 20x120mm TTS stent placement covering the tear with successful hemostasis (Right, B)

### Discussion

Our case demonstrates the rare yet devastating complication of thermal injury via catheter ablation with the formation of an Atrio-esophageal fistula, which has a mortality rate of up to 80% and usually presents within six weeks of the procedure. Primary causes of death include cerebral air embolism, massive gastrointestinal bleeding and septic shock. Therefore, clinicians should have a high index of suspicion for patients presenting with hematochezia, bacteremia, and neurological symptoms in the setting of ablation therapy. Early recognition and management with antibiotics and surgical repair are key. In cases where immediate surgery is not feasible, an esophageal stent provides immediate hemostasis. Preventative measures during the ablation process such as reducing power titration, the use of conscious sedation, and monitoring intraluminal esophageal temperature as well as patient education regarding warning signs and symptoms have been proposed.

### Conclusion

- Atrio-esophageal fistula is a rare yet devastating complication which warrants early recognition
- The classical clinical manifestations of fever, chest pain and neurological events tend to present 2-60 days following thermal ablation
- Chest computed tomography remains the preferred diagnostic imaging modality
- Causes of death include cerebral air embolism, massive gastrointestinal blood loss and septic shock
- Early diagnosis is integral to allowing for swift and aggressive treatment including antibiotic therapy, stenting, and potential surgical intervention in the hopes of improving morbidity and mortality

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