



Black Esophagus: a striking etiology of gastrointestinal bleeding



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Background

- Black esophagus, or acute esophageal necrosis (AEN), is an uncommon etiology of upper gastrointestinal bleeding with incidence 0.01%-0.2% and poor prognosis.
- AEN is characterized by endoscopic findings of diffuse circumferential black discoloration of distal esophageal mucosa with sharp demarcation at the GEJ.
- The pathophysiology of AEN is unknown, however current hypotheses implicate ischemia, thromboembolic injury, critical illness, and corrosive injury.

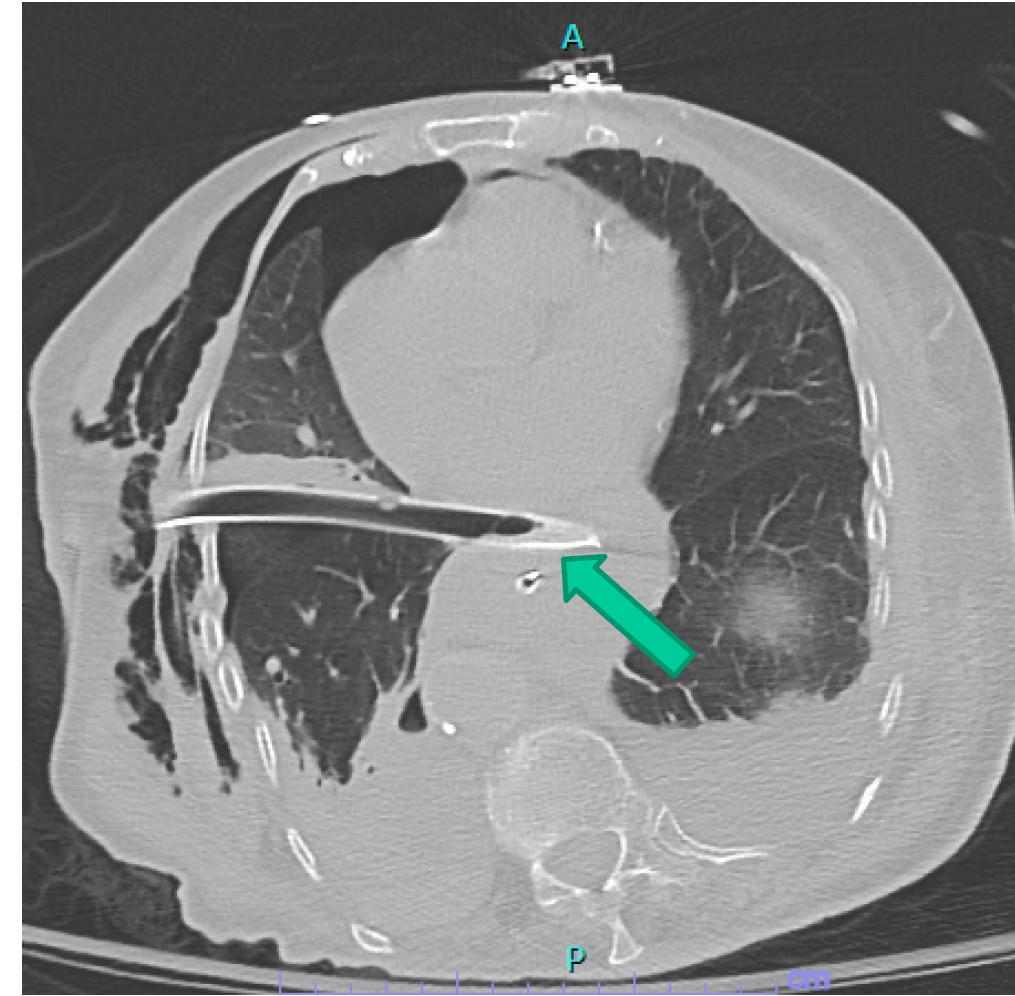


Figure 1: CT scan revealing the right thoracostomy tube traveling through the right middle lobe parenchyma and terminating within the mediastinum between the left atrium and the distal esophagus associated with a right pneumothorax, pneumomediastinum, pneumopericardium and bilateral pleural effusions with a right hemothorax.

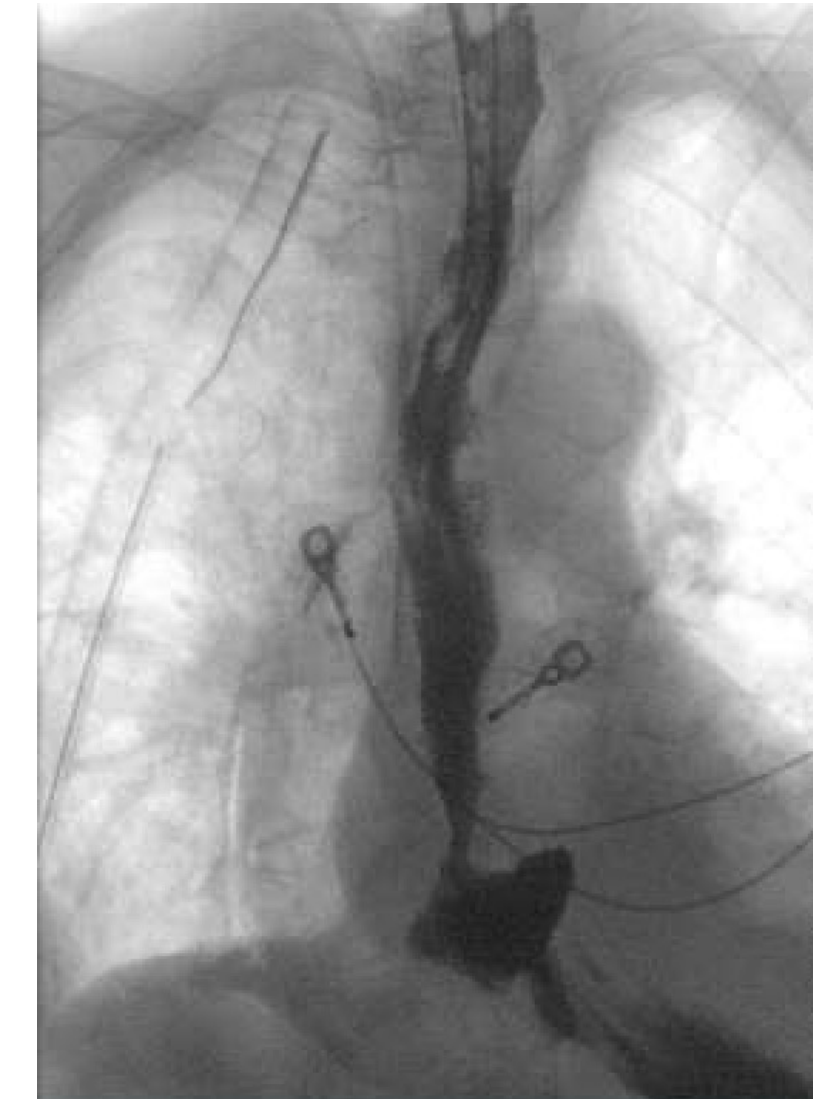


Figure 2: Double contrast esophogram demonstrating normal swallow function, esophageal contour and caliber, esophageal motility, and no esophageal leak.

Case Conclusion

- EGD demonstrated sharply demarcated circumferential black ulceration of the distal esophagus consistent with black esophagus without obvious signs of perforation.
- IV PPI and therapy aimed at reversing the underlying shock was pursued.
- After a prolonged hospital course complicated by acute respiratory distress syndrome, the patient's family elected to pursue comfort measures and the patient died.

Case

An 83-year-old woman with hypertension presented to an outside hospital after a fall with lethargy, acute hypoxic respiratory failure, and shock.

- CT chest revealed right sided hemothorax.
- The patient was intubated, resuscitated with IV fluids and blood products, initiated on vasopressors, and a chest tube was placed prior to transfer to our institution.
- Repeat CT chest was concerning for the right thoracostomy tube traveling through the right middle lobe parenchyma and terminating within the mediastinum between the left atrium and the distal esophagus.
- The chest tube was removed and replaced in the OR
- Double contrast esophogram was without esophageal leak.
- The patient subsequently developed melena and worsening anemia.

Discussion

In this case, AEN was most likely caused by ischemia secondary to hemorrhagic shock.

- Black esophagus carries a very poor prognosis, usually related to the underlying condition.
- Timely recognition of AEN and treatment aimed at reversing the underlying etiology can help prevent complications such as infection, esophageal stricture, and perforation.
- AEN is managed with aggressive IV PPI, NPO, and avoiding passage of nasogastric tubes due to risk of perforation.

This case highlights the need to maintain a wide differential diagnosis for gastrointestinal bleeding and the importance of early recognition and treatment of this rare condition to prevent complications.

References

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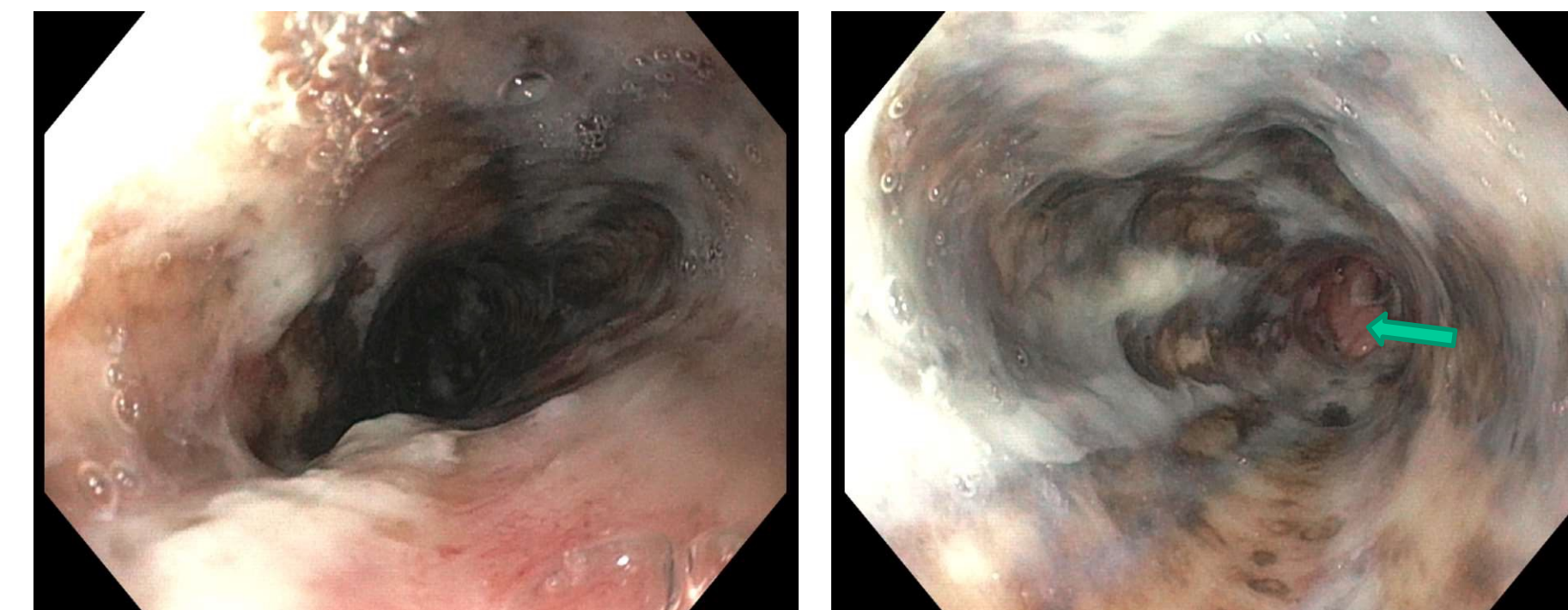
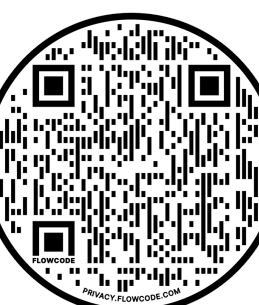


Figure 3: Esophagoduodenoscopy indicating circumferential black ulceration of the distal esophagus with clear demarcation (arrow)

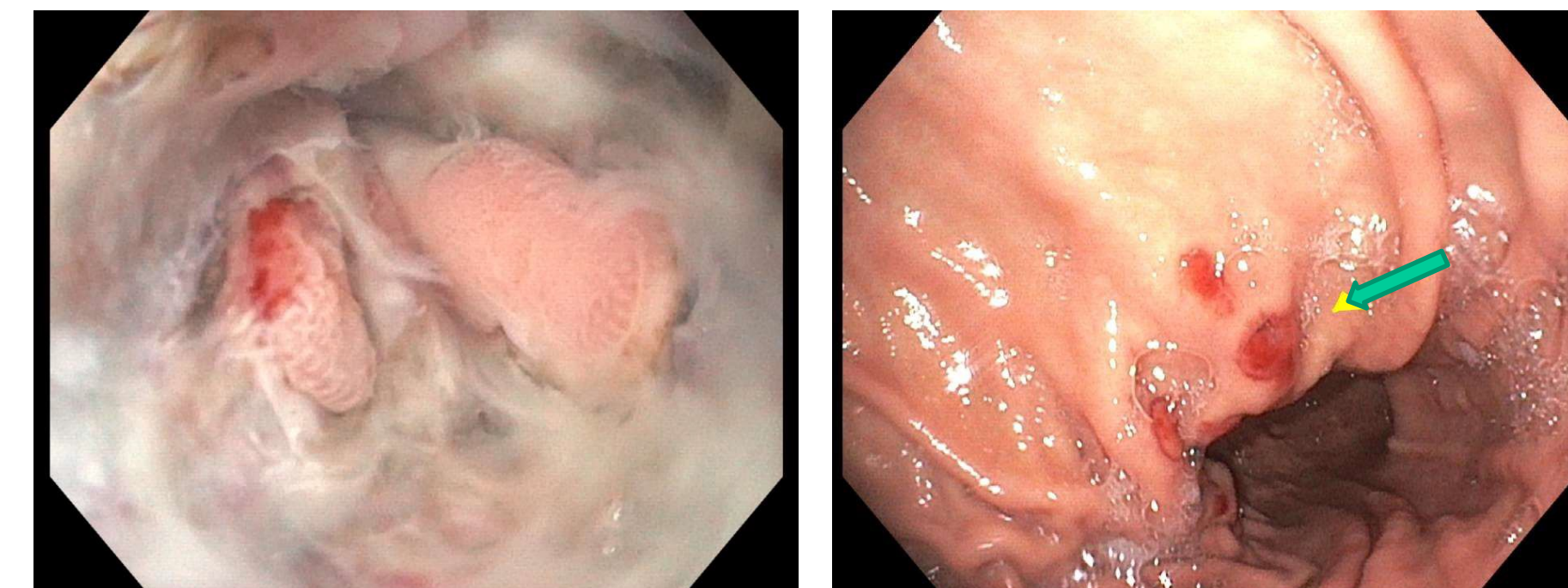


Figure 4: Esophagoduodenoscopy indicating black ulceration of the distal esophagus and focal erythema on the lesser curvature of the gastric body consistent with nasogastric tube suction trauma