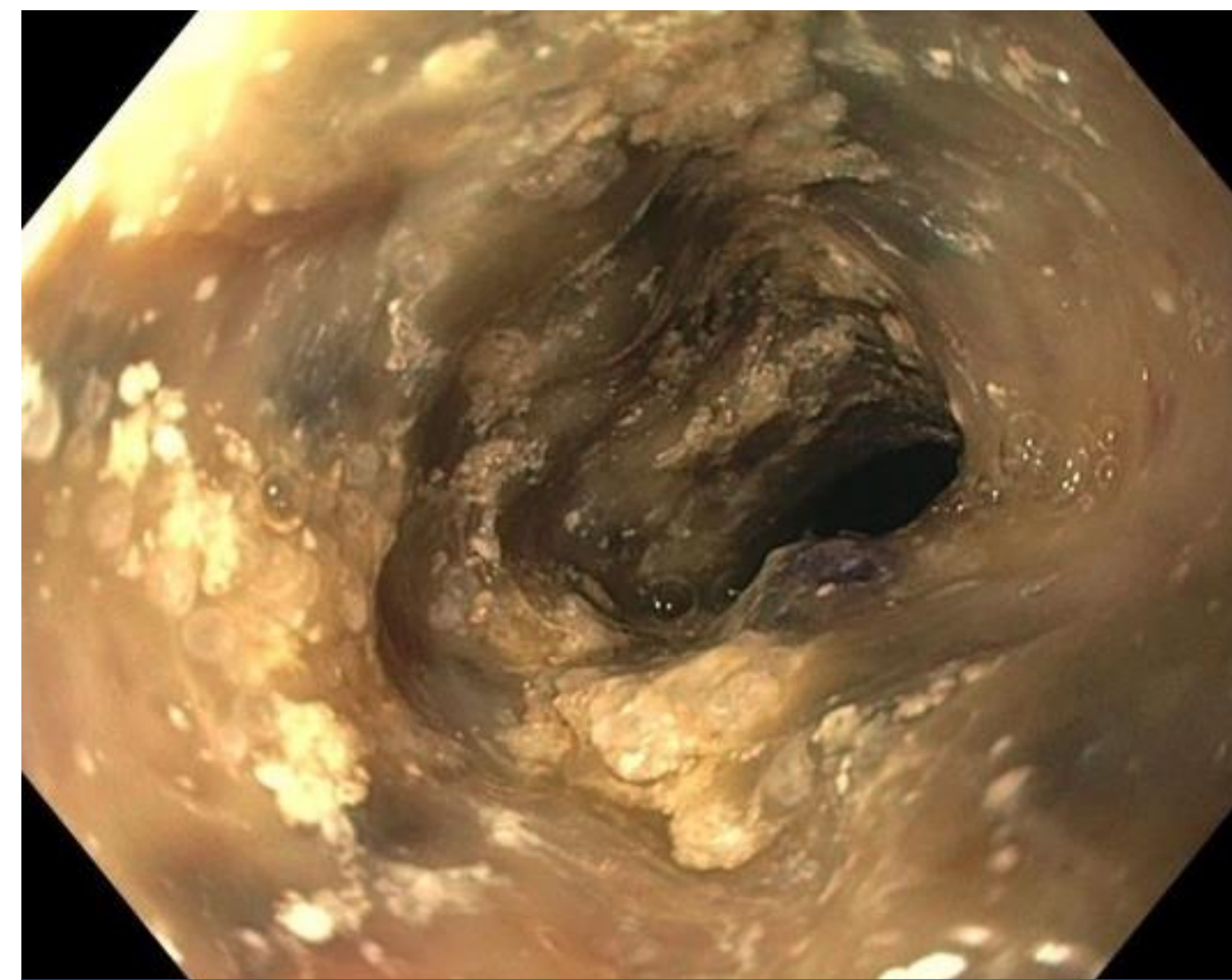


## Introduction

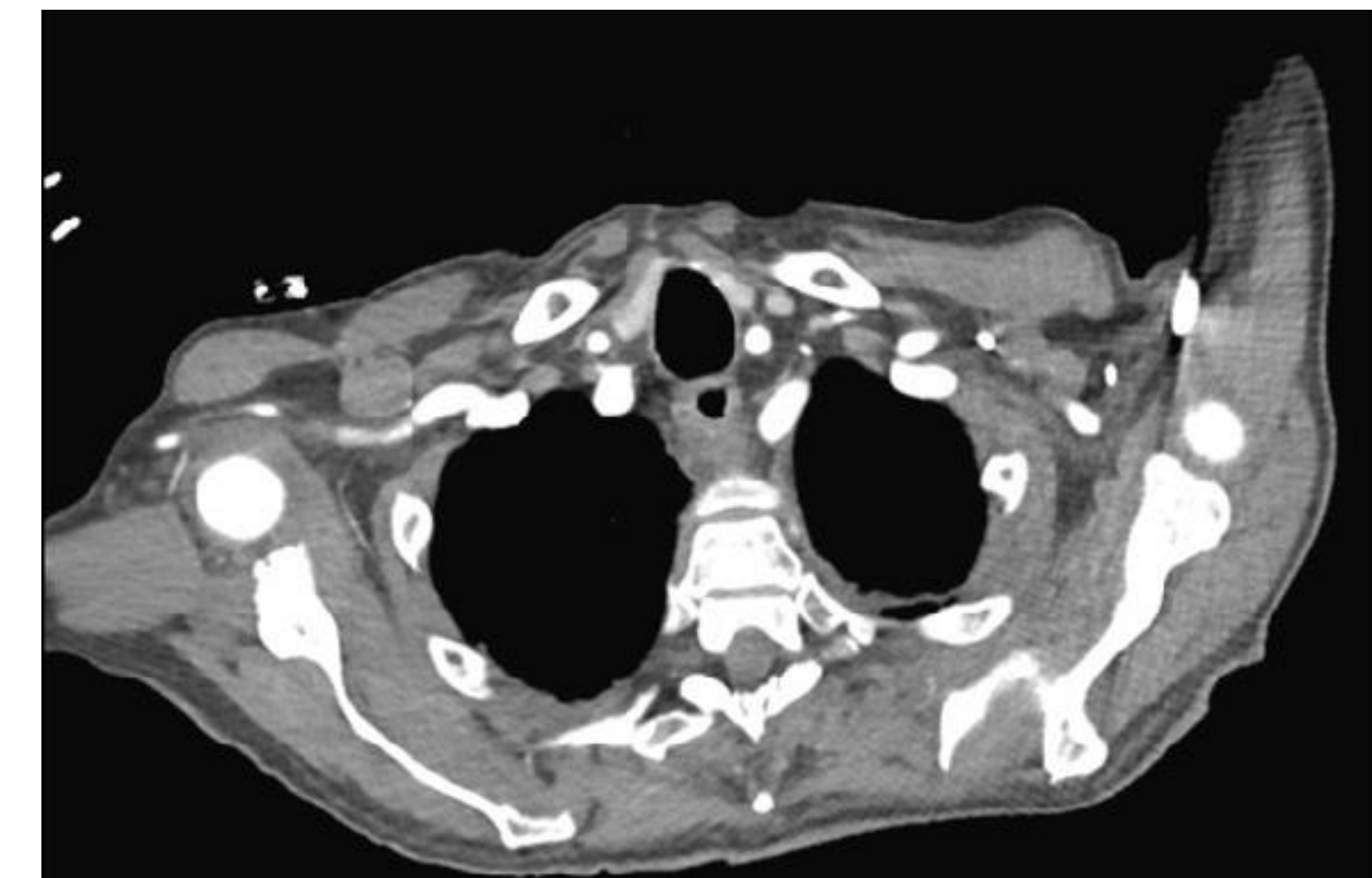
- Acute esophageal necrosis (AEN), also called 'black esophagus' due to its appearance is a rare clinical disease, recently described in medical literature. The etiology is multifactorial, often in the setting of severe systemic conditions such as sepsis and trauma, and outcomes are poor.
- Severe SARS-CoV2 infection can lead to overwhelming inflammation and multi-organ failure.
- Herein, we present a case of black esophagus with severe SARS-CoV2 infection.

## Case Description

- 69-year-old with rheumatoid disease, on immune suppression, was admitted to our hospital with dyspnea, coffee ground emesis and melena.
- He tested positive for SARS-CoV2 and was found to have acute blood loss anemia.
- An urgent EGD was performed which revealed a black, necrotic mucosa of the distal 2/3rd of the esophagus, consistent with AEN.
- Biopsies were avoided due to risk of perforation and subsequent images were negative for any perforation.
- Management was started with high dose PPI and supportive care in addition to recognized treatment for COVID-19.
- However, his hospital stay became complicated with progressive clinical decline and development of multi-organ failure.
- Eventually, he was transitioned to comfort care and passed away shortly after.



Diffuse necrotic appearing esophagus with black discoloration on EGD



CT findings: Dilated esophagus with diffuse esophageal wall thickening

## Discussion

- AEN or black esophagus, as defined by its endoscopic appearance, is a manifestation of ischemic and corrosive injury to the esophagus in the setting of severe systemic disease processes.
- Diffuse, circumferential, necrotic and friable esophageal mucosa, especially in the distal 2/3rd, is the hallmark.
- The relatively poor vascular supply of the distal esophagus makes it more susceptible to such injury.
- Often, a sharp demarcation is seen at the Z-line.
- Histology shows extensive transmural necrosis.
- Pathogenesis of AEN is thought to be a combination of a sudden low flow, prothrombotic state from severe systemic illness causing ischemic injury and impaired healing ability.
- At the same time, increased exposure to gastric content occurs from gastric hypokinesia and increased secretions which exacerbate injury.
- Typical presentation is upper GI bleed, and management revolves around treatment of underlying etiology and supportive measures with acid suppression and mucosal protection with PPI and sucralfate.
- NG tubes should be avoided due to risk of perforation, which is the most serious complication.
- Surgical intervention is reserved for perforation, and balloon dilation can be required in cases of stenosis or strictures.