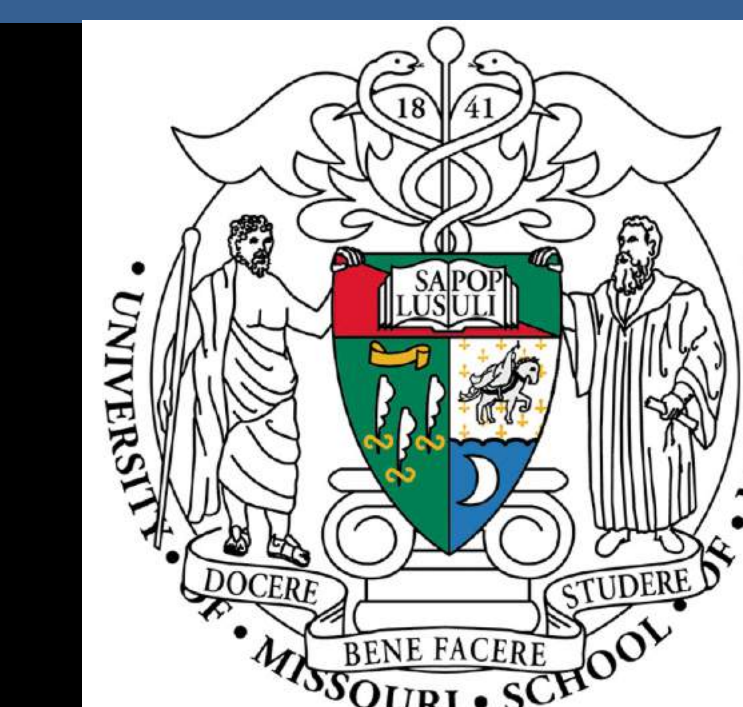




Black Esophagus: A Syndrome of Acute Esophageal Necrosis Associated With Diabetic Ketoacidosis

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Introduction

- Acute esophageal necrosis (AEN) or 'black esophagus' or Gurvitis' syndrome is a rare entity with a high mortality rate that can present with life-threatening upper gastrointestinal bleeding (UGIB).
- This case illustrates this rare presentation of black esophagus due to diabetic ketoacidosis (DKA) with a high mortality rate and life-threatening complications that must be managed promptly to improve survival.

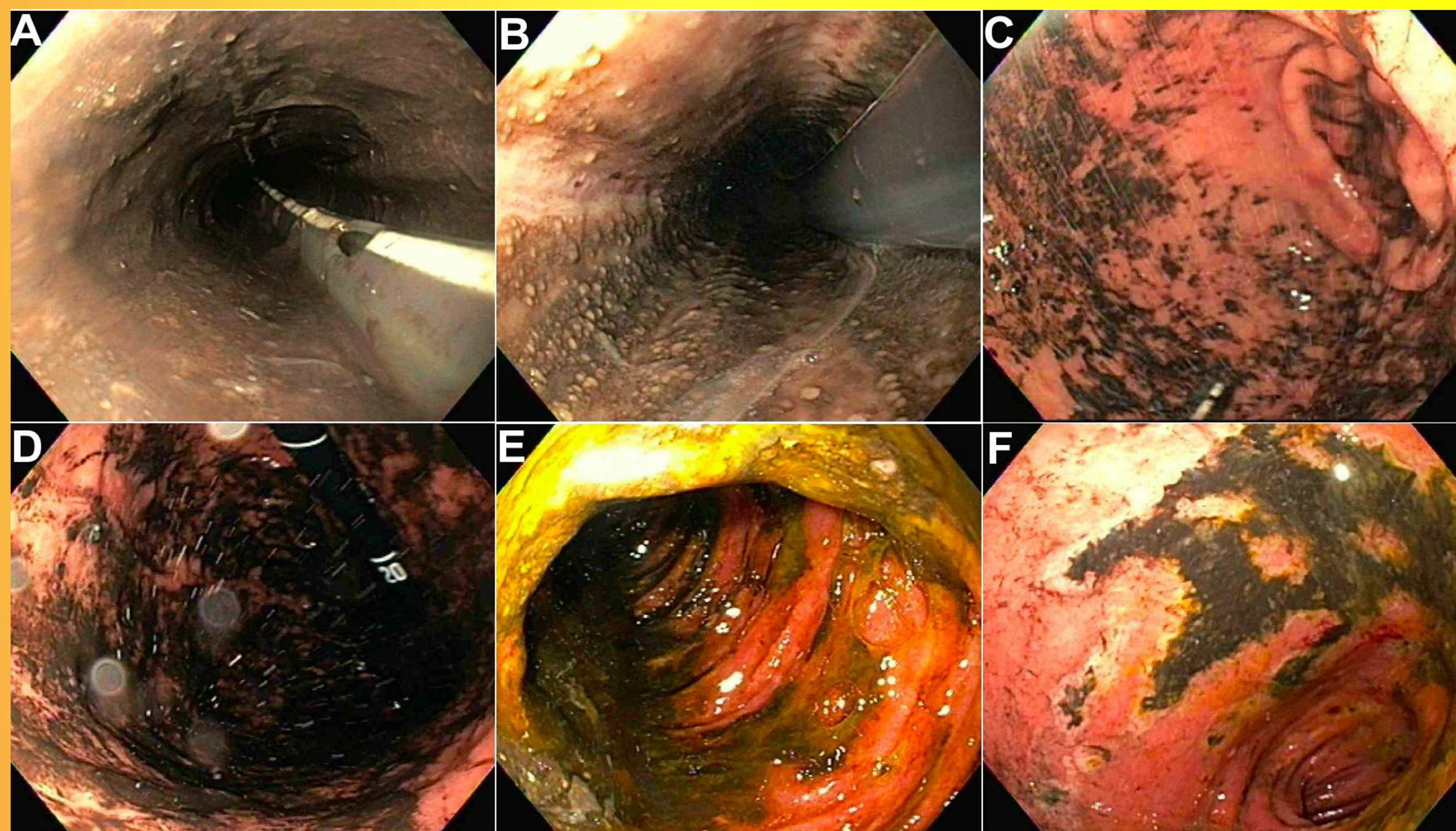


Figure 1 : Black necrotic mucosa of the esophagus (A, B). Scattered areas of ischemic necrosis in the gastric antrum (C) and fundus (D). Ulcerated duodenal mucosa (E, F).

Case Description

- A 25-year-old man with type 1 DM and amphetamine abuse presented with several days of nausea, emesis, and an altered mental state.
- Nasogastric aspiration revealed coffee-ground fluid concerning for upper GI bleed.
- Laboratory work-up revealed hyperglycemia, hyperkalemia, hyponatremia, and acute kidney injury. Urine studies revealed ketonuria and a positive amphetamine drug test.
- Abdominal CT: Gastrointestinal mucosal hyperenhancement and ascites.
- The patient was initially resuscitated with IV fluids, proton pump inhibitors (PPI), and vasopressors and started on insulin to manage DKA.
- Esophagogastroduodenoscopy (EGD) revealed diffuse black discoloration with mucosal ulcers from the upper esophagus to the gastro-esophageal junction, scattered necrosis in the stomach, and large demarcated black ulceration in the bulb and D2 segment of the duodenum (figure 1).
- Discharge after 12 days of hospital care with a plan to repeat EGD in 8 weeks.

Discussion

- AEN should be considered in critically ill, diabetic patients who present with DKA and UGIB as DKA can trigger ischemic injury to the esophageal mucosa due to hemodynamic instability and acid reflux from the stomach.
- Rapid initial resuscitation with IV fluids, PPI, and treatment of the underlying DKA with insulin is the mainstay of management along with continued supportive care.
- A high index of clinical suspicion is required for early identification of AEN in patients with UGIB and concomitant DKA
- Surgical intervention is required for complications like esophageal perforation, and mediastinal infections.

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