Acute Esophageal Necrosis: A Case Series and Long-Term Follow-Up
Stephanie G. Worrell, MD, Daniel S. Oh, MD, Christina L. Greene, MD, Steven R. DeMeester, MD, and Jeffrey A. Hagen, MD
Department of Surgery, University of Southern California, Keck School of Medicine, Los Angeles, California

Acute esophageal necrosis (AEN) is a rare condition characterized by circumferential necrosis of varying lengths in the intrathoracic esophagus. Endoscopically, this process is manifested as a black esophagus. To date, limited case series exist describing AEN, and none report long-term follow-up. Our objective was to report 3 patients with AEN, all diagnosed within 1 year at a tertiary academic medical center, describing early and long-term outcomes of this rare disease. In the absence of perforation, patients can be managed conservatively with serial esophagogastroduodenoscopy (EGD). Long-term strictures may occur that require dilation.

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Case Reports

Case 1
An 84-year-old man with cirrhosis presented with melena and hematemesis. An esophagogastroduodenoscopy (EGD) was performed, revealing black mucosa of 24 to 36 cm with sharp demarcation at the gastroesophageal junction and no evidence of perforation (Fig 1A). He was managed conservatively with broad-spectrum antibiotics, nasogastric tube, and nothing by mouth. A second EGD 13 days later showed complete resolution of the black esophagus and a mild esophageal stricture (Fig 1B). He tolerated a regular diet and was discharged from the hospital.

Case 2
An 84-year-old man with diabetes and hypertension presented to an outside hospital with nausea, chest pain, and hematemesis. An EGD showed black mucosa in the distal esophagus. The patient was given nothing by mouth, placed on total parenteral nutrition, and referred to our center. A second EGD 6 days later revealed partial mucosal healing with a fibrinous exudate of 25 to 34 cm. Endoscopy performed 2 weeks later showed complete mucosal healing and an 8-mm stricture. He underwent 7 endoscopic dilations over 7 months. Sixteen months after the initial event, he is maintaining his weight and eating an unrestricted diet.

Case 3
A 77-year-old man with cirrhosis and diabetes was transferred from an outside hospital after presenting with hematemesis and diarrhea. On admission, computed tomography showed perforation of the distal esophagus with pneumomediastinum and a right-sided pleural effusion. EGD showed a black esophagus with distal perforation. He was emergently taken to the operating room, and an esophagectomy with cervical diversion was performed. He died of acute small bowel ischemia and multiorgan failure 17 days postoperatively.

Fig 1. (A) Initial endoscopy of patient 1, which visualized black mucosa of 24 to 36 cm. (B) Second endoscopy of patient 1 13 days after image in A, with resolution of the black mucosa.
Comment
AEN is a rare condition of unknown cause. Potential causes include ischemia, severe viral infection, antibiotic hypersensitivity, gastric outlet obstruction, and nasogastric tube trauma [5]. Most reported patients were elderly with comorbid conditions, including diabetes, vascular disease, and hypertension. In our case series, the mean age was 82 years, and comorbid conditions included diabetes, hypertension, and cirrhosis. Typical presenting symptoms include hematemesis, nausea, and melena, all of which were present in our patients. The diagnosis is made by the endoscopic visualization of black mucosa, which is typically confined to the distal esophagus. This may be related to a relative vascular watershed zone. Mortality is usually related to the underlying medical condition rather than the AEN. In the absence of perforation, conservative management is often successful, but stricture formation should be anticipated.

References