

## Introduction

- In one of its most severe forms, esophagitis may present as acute esophageal necrosis (AEN).
- AEN is characterized by a diffusely black esophageal mucosa and has a prevalence of only 0.2%.<sup>1</sup>
- Since the first endoscopic characterization, the underlying pathophysiology remains elusive.
- There are only four previously documented cases of AEN in patients who initially presented with diabetic ketoacidosis (DKA).<sup>2</sup>
- **This case demonstrates the more recently identified correlation between DKA and AEN.**

## Case Presentation - Continued

- Gastroenterology was consulted for coffee ground emesis and down-trending hemoglobin.
- Upper endoscopy showed severe active esophagitis with ischemic appearing mucosa in the entire esophagus (Figure 1a and 1b).
- Biopsies revealed severe esophagitis with ulceration.
- Immunohistochemical testing for CMV and HSV was negative.
- The patient was managed medically with oral Protonix, twice daily and discharged home.

## Discussion

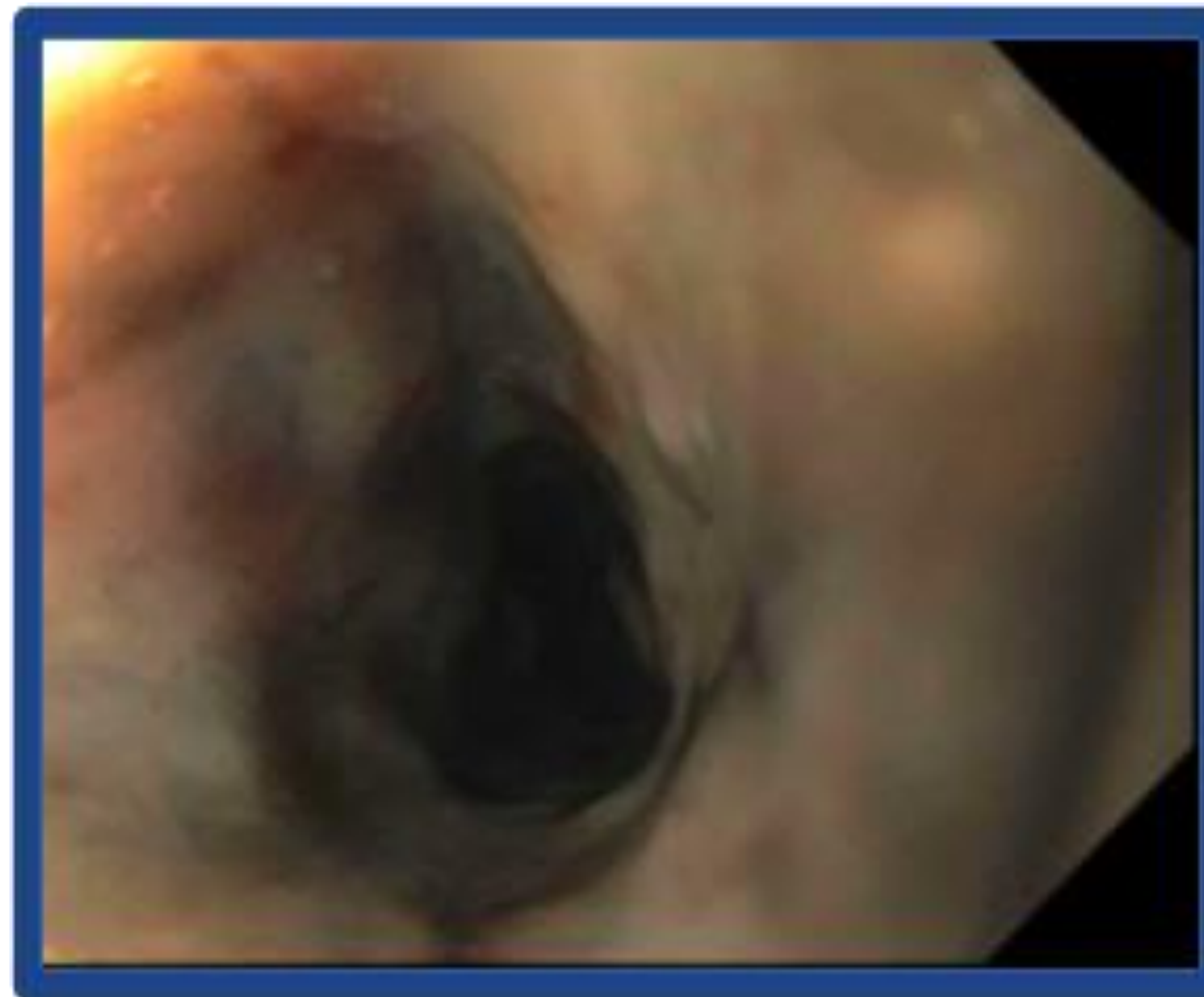
- AEN is characterized by diffuse, circumferential black esophageal mucosa with an abrupt transition at the gastroesophageal junction.<sup>1,2</sup>
- The underlying pathophysiology is thought to be multifactorial, including:
  - Tissue hypoperfusion
  - Poor local defense barriers
  - Insult to esophageal mucosa from reflux of gastric contents.<sup>2</sup>

## Discussion Continued

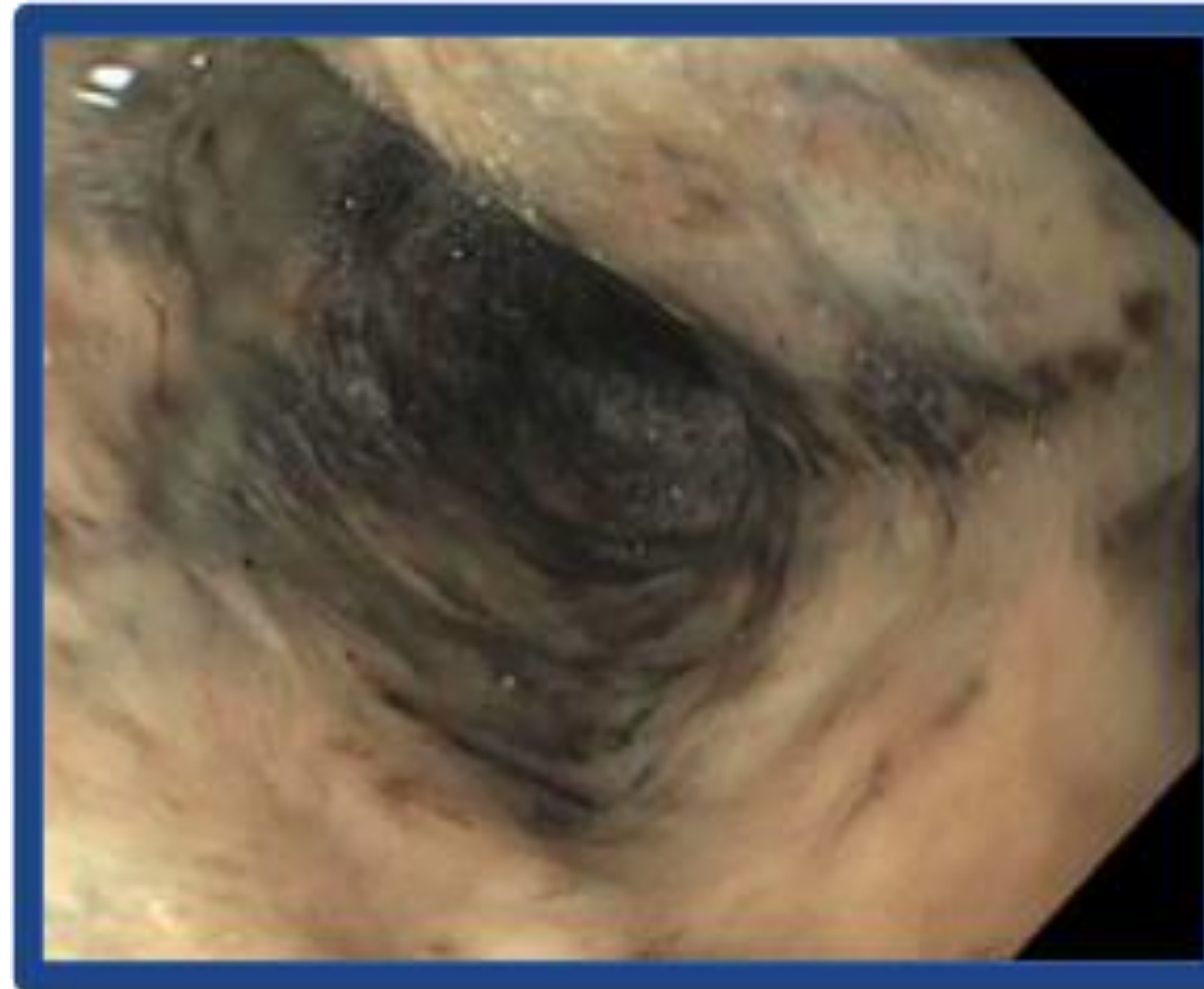
- Underlying clinical conditions such as diabetes mellitus, cardiovascular disease, cirrhosis, sepsis, and renal insufficiency are likely predisposing factors.<sup>2,3</sup>
- There is also a strong link between DKA and AEN.<sup>3</sup>
- AEN diagnosis requires a high index of suspicion as it generally carries a poor prognosis, with one-third of patients succumbing to their underlying illness.<sup>3</sup>

## Case Presentation

- 46-year-old male with a medical history of cocaine use disorder, type 2 diabetes, and hypertension.
- Presented with hematemesis and altered mental status.
- He denied melena or hematochezia and no prior history of endoscopic evaluation.
- On arrival, he was hypotensive, tachycardic, and tachypneic.
- Physical exam revealed abdominal tenderness.
- He was in DKA and urine toxicology was positive for cocaine.
- He was fluid resuscitated and started on a Protonix drip.
- Insulin drip was also initiated per DKA protocol.



**Figure 1a:** Circumferential necrosis in the upper third of the esophagus.



**Figure 1b:** Circumferential necrosis in the middle third of the esophagus.

## Take Away Message

The goal of therapy is:

- Prompt treatment of coexisting, underlying medical diseases
- Adequate fluid resuscitation
- Hemodynamic stabilization
- Appropriate nutrition

## References

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2. Gurvits GE, Shapsis A, Lau N, Gualtieri N, Robilotti JG. Acute esophageal necrosis: a rare syndrome. *J Gastroenterol*. 2007 Jan;42(1):29-38. doi: 10.1007/s00535-006-1974-z. Epub 2007 Feb 16. PMID: 17322991.
3. Marie-Christine BI, Pascal B, Jean-Pierre P. Acute necrotizing esophagitis: another case. *Gastroenterology*. 1991 Jul;101(1):281-2. doi: 10.1016/0016-5085(91)90511-i. PMID: 2044923.

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