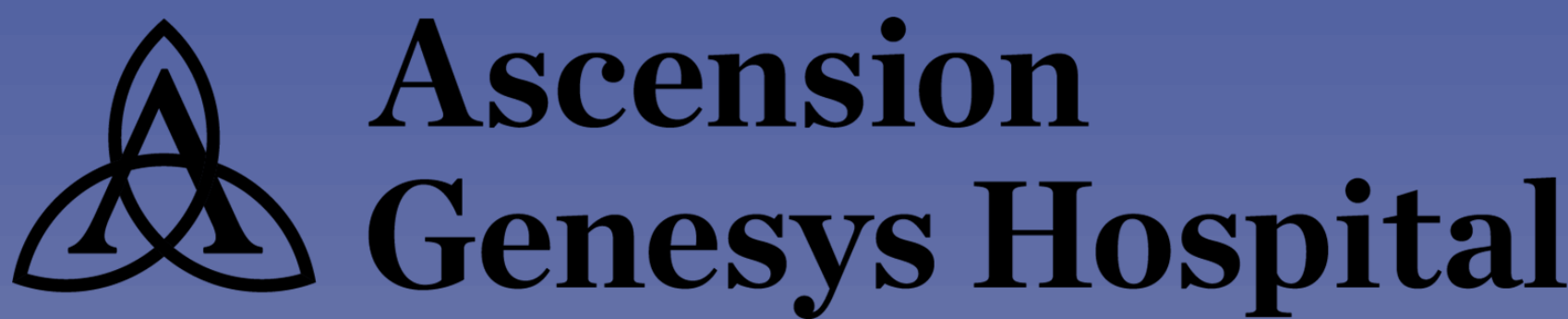


Acute Esophageal Necrosis: A Rarely Encountered Clinical Entity

Michael Beattie, DO; Brandon Wiggins, DO; Derek Thigpin, DO
Ascension Genesys Hospital
Medical Education - Gastroenterology Department
Grand Blanc, MI



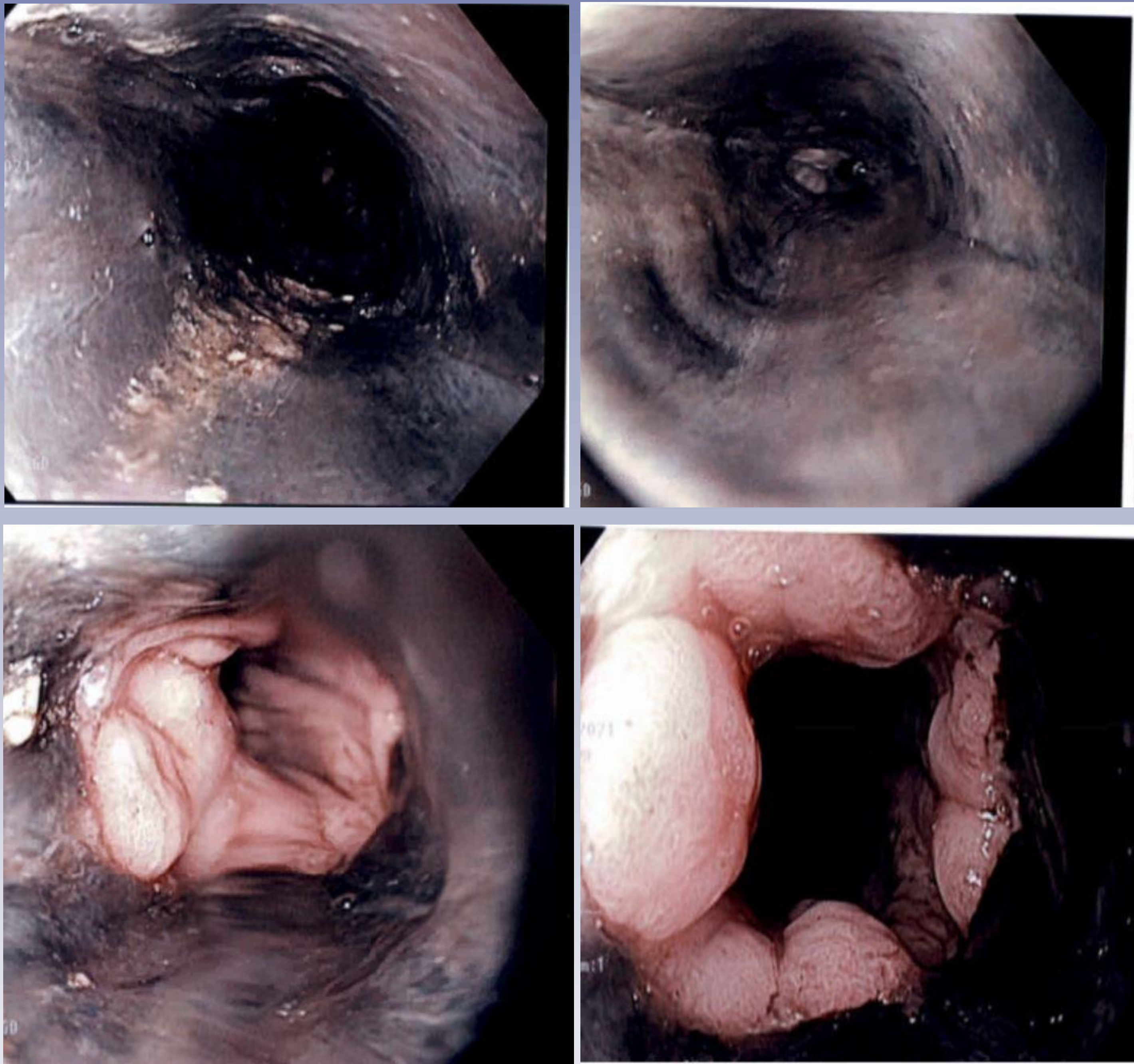
Introduction

- Acute Esophageal Necrosis (AEN), otherwise known as black esophagus for its remarkable appearance during endoscopy, is a rather rare entity in the gastroenterology field.

Case

- A 51-year-old male with a past medical history of diabetes complicated by peripheral neuropathy presented to the hospital with left lower extremity swelling and pain after a fall.
- On admission he underwent lower extremity x-ray with subcutaneous air concerning for necrotizing fasciitis. He was taken emergently to the operating room where he underwent 3 compartment exploration with irrigation and drain placement.
- On day 7 of hospitalization he developed persistent nausea and vomiting for which we were consulted. The following morning he was taken to the endoscopy suite.
- He was noted to have circumferential black appearance of the esophagus from 28 to 40 cm with abrupt transition to normal-appearing gastric mucosa at the GE junction. This was endoscopically consistent with acute esophageal necrosis
- He was placed on high-dose intravenous proton pump inhibitor (PPI) therapy as well as sucralfate suspension. Transfer was facilitated to a tertiary care center where repeat endoscopy confirmed the diagnosis.
- He had a gastrostomy tube placed and ultimately underwent repeat endoscopy 8 weeks later at the same tertiary care center which revealed severe benign appearing esophageal stricturing with inability to pass adult endoscope.
- It was recommended to continue on PPI therapy with repeat endoscopic evaluation with possible dilation the following month.
- Unfortunately, in the meantime the patient expired due to unknown causes.

Images



Discussion

- AEN is defined by a circumferential, necrotic appearance that almost always affects the distal esophagus with abrupt cessation of the black contour at the GE junction.¹ Incidence is 0.28%,² affects men over 4 times more often than women with a mortality near 32%.²⁻³
- AEN is usually multifactorial and affects people with many comorbidities.⁴ Presenting symptoms varied greatly, with the most prevalent being hematemesis (34%)⁴ Injury is related to esophageal ischemia and topical injury.⁵
- AEN is almost always diagnosed by endoscopy. Biopsy can rule out other similarly appearing pathologies.⁷ Management of AEN typically involves treating the underlying cause. Empirical treatment includes IV fluids, PPI, sucralfate, NPO, and TPN in patients with poor nutritional status after 24 hours.⁹

References

1. Moret  M, Ojembarrena E, Zaballa M, T nago JG, Ib nez S. Idiopathic acute esophageal necrosis: not necessarily a terminal event. Endoscopy. 1993 Oct;25(8):534-8. doi: 10.1055/s-2007-1009121. PMID: 8287816.
2. Augusto F, Fernandes V, Cremers MI, Oliveira AP, Lobato C, Alves AL, Pinho C, de Freitas J. Acute necrotizing esophagitis: a large retrospective case series. Endoscopy. 2004 May;36(5):411-5. doi: 10.1055/s-2004-814318. PMID: 15100949.
3. 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.
4. Deliwala, Smit, Wiggins, Brandon, Ponnappalli, Anoosha, Hussain, Murtaza, Beere, Thulasi, Kunaprayoon, Lalida, Lakshman, Harini, Obeld, Michele, Bala, Areeg, Gurvits, Grigoriy. Black Esophagus Trends Across American College of Gastroenterology (ACG) Scientific Meetings Over a Decade: 2010–2020, The American Journal of Gastroenterology: October 2020 - Volume 115 - Issue - p S194 doi: 10.14309/01.aig.0000703612.62358.65
5. Goldenberg SP, Wain SL, Marignani P. Acute necrotizing esophagitis. Gastroenterology. 1990 Feb;98(2):493-6. doi: 10.1016/0016-5085(90)90844-q. PMID: 2295407.
6. Ben Soussan E, Savoye G, Hochain P, Herv  S, Antonietti M, Lemoine F, Ducrott  P. Acute esophageal necrosis: a 1-year prospective study. Gastrointest Endosc. 2002 Aug;56(2):213-7. doi: 10.1016/s0016-5107(02)70180-6. PMID: 12145599.
7. Gurvits GE, Robilotti JG. Isolated proximal black esophagus: etiology and the role of tissue biopsy. Gastrointest Endosc. 2010 Mar;71(3):658. doi: 10.1016/j.gie.2009.07.021. PMID: 20189530.
8. Neumann DA 2nd, Francis DL, Baron TH. Proximal black esophagus: a case report and review of the literature. Gastrointest Endosc. 2009 Jul;70(1):180-1. doi: 10.1016/j.gie.2008.09.055. Epub 2009 Jan 18. PMID: 19152880.
9. Gurvits GE. Black esophagus: acute esophageal necrosis syndrome. World J Gastroenterol. 2010 Jul 14;16(26):3219-25. doi: 10.3748/wjg.v16.i26.3219. PMID: 20614476; PMCID: PMC2900712.