



ACG 2022

OCTOBER 21 - 26, 2022

CHARLOTTE
NORTH CAROLINA



ABSTRACT PREVIEW: ACUTE ESOPHAGEAL NECROSIS IN PATIENTS WITH DIABETIC KETOACIDOSIS: A SYSTEMATIC REVIEW OF DIAGNOSTIC AND THERAPEUTIC CONUNDRUMS

Acute Esophageal Necrosis in Patients With Diabetic Ketoacidosis: A Systematic Review of Diagnostic and Therapeutic Conundrums

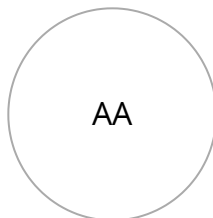
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Abstract Category: Esophagus

Abstract Type: Standard Study

Abstract Status: Complete / Locked

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Disclosure: Nothing to Disclose

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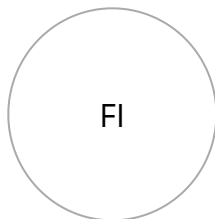
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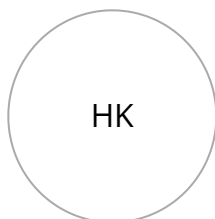
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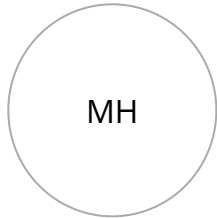
no

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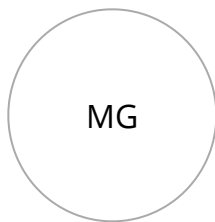
no

Are you a resident?

yes

Are you a medical student?

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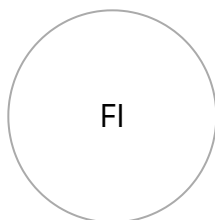
no

Are you a resident?

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Abstract (Standard Study)

Presentation Type

Oral OR Poster

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Introduction

Acute esophageal necrosis (AEN) associated with diabetic ketoacidosis (DKA) remains an exceedingly rare clinical entity. The likely causal mechanism is related to hypoperfusion and transient hyperglycemic gastric dysmotility, potentially increasing the risk of AEN. To our knowledge, this is the first systematic review of AEN in patients with DKA.

Methods

A systematic search of MEDLINE, Embase, Scopus, and Cochrane was conducted for English-only articles published between inception and June 15, 2022. Abstracts from major gastroenterology conferences and bibliography lists were also reviewed. Search terms "esophageal necrosis" and "black esophagus" were combined using the Boolean operators 'AND' and 'OR' with the terms "diabetic ketoacidosis" and "diabetes mellitus," with all permutations. Two authors independently reviewed each article for eligibility. The search yielded a total of 326 results. However, 28 articles fulfilled the inclusion criteria.

Results

A total of 31 case reports only (clinical evidence level: IV) of AEN in the setting of DKA were included, dating from 2014 to 2022. The mean age of patients was 52.81 ± 13.49 years (range: 30–78 years) and 61% of cases were reported in males. Common presenting symptoms were hematemesis (58%), nausea (55%), abdominal pain (53%), vomiting (35%), and altered mental status (19%). Apart from diabetes, major comorbidities were hypertension (29%), alcoholism (23%), GERD (16%), and COPD (10%). On EGD, 58% had pan-esophageal, 26% had mid-to-distal, and 16% of patients had distal segment disease. Esophageal biopsy was documented in 29% of patients. All patients received insulin and fluid replacement therapies. PPIs in 60%, sucralfate in 32%, antifungals in 29%, and antibiotics were administered in 19% of patients. Blood transfusions were performed

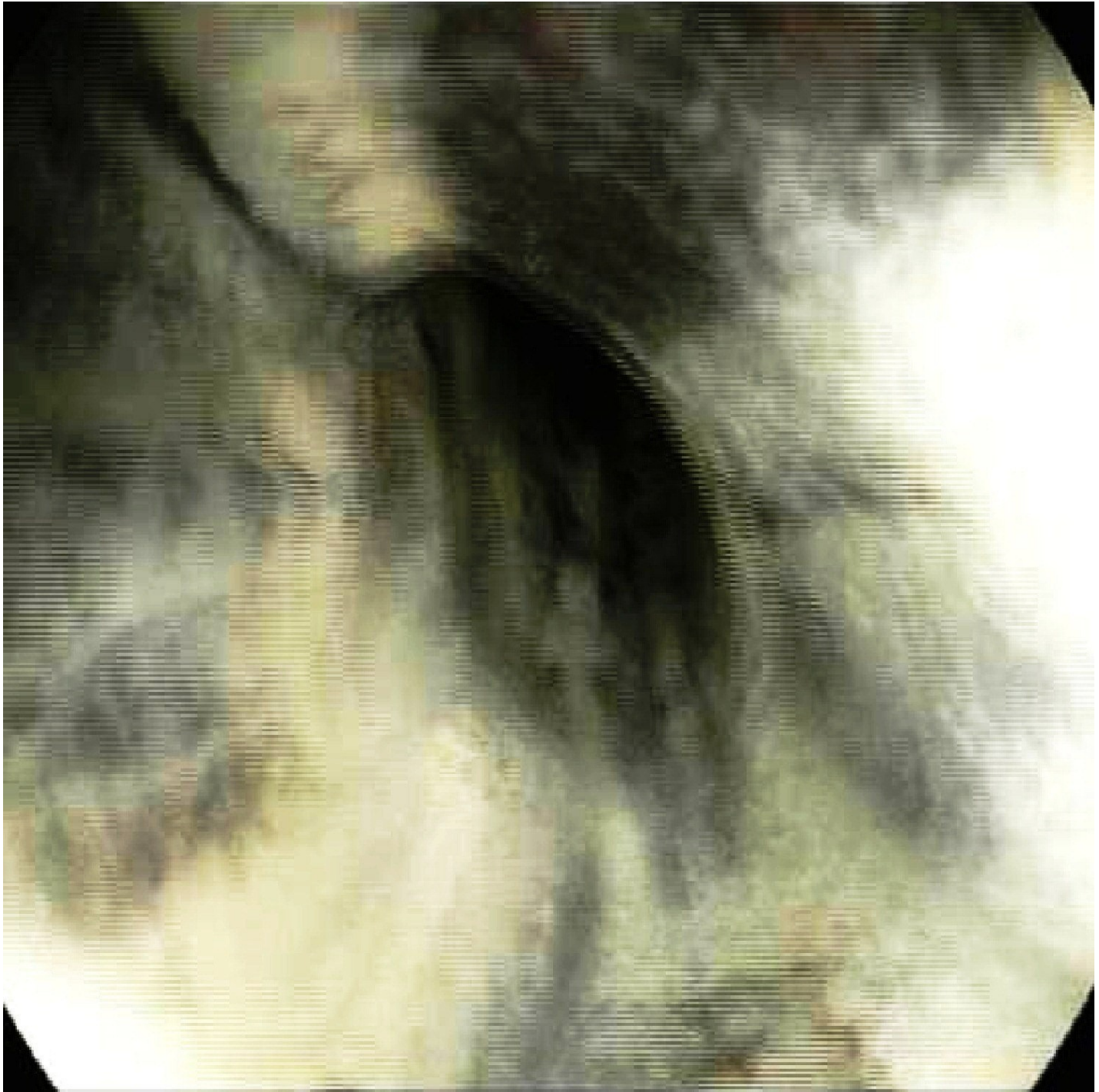
in 16% of patients. The mortality rate was 6.4%. AEN complications included esophageal stenosis (6%), as well as stricture formation (6%).

Discussion

This systematic review reiterates the occurrence of AEN in association with DKA. Overt GI bleeding is a common presentation, but patients may develop nausea, abdominal pain, vomiting, and disorientation as major symptoms. Therefore, endoscopists should keep a low threshold for performing EGD in DKA patients. While the cause-and-effect relation of AEN with hyperglycemia are unclear, fluid replacement and gastric acid suppression are pertinent to the management of AEN.

Uploaded File(s)

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Upper endoscopy showing necrotic-appearing black esophagus in the lower third of esophagus in a female diabetic patient .

Picture1.jpg

IRB Approval

Do you have current IRB approval for this research?

No

If you answered No in the preceding question, you may provide additional comments in the box below.

Not applicable

Disclosure of Relationships in Industry-Supported Research

Initiated Research

Investigator

FDA Approval

No

Designed Study

Investigator

Performed Analyses

Investigator

Investigator Contribution

Yes

Abstract Author

Investigator

Study Results

Yes

Secondary Analyses

No

Supported by Industry Grant

No

If you answered 'yes' to Question 9, please specify which company/companies the grant is from in the box below. If you answered 'no' to Question 9, enter 'NA'.

NA

Agreement

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Naomi Nakao Gender-Based Research Award

No

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Research supported by an ACG Clinical Research Grant?

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