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Visual Vignette

A Case of Appetite Loss Did Not Improve After Treatment for Hyperglycemia and Diabetic Ketoacidosis

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Case Presentation

A 67-year-old man had been receiving medical treatment for type 2 diabetes mellitus of 30 years' duration. His glycemic control was extremely poor with a hemoglobin A1c level of 10% to 12%. Six months ago, he stopped treatment and visited our emergency room with appetite loss. Laboratory analysis revealed severe hyperglycemia (975 mg/dL), serum β-hydroxybutyrate level was elevated (16 288 μmol/L), and arterial blood gas analysis confirmed metabolic acidosis (pH level, 7.149 and bicarbonate level, 9.5 mmol/L). He was urgently admitted to the hospital on the same day with diabetic ketoacidosis. After admission, the patient was started on high-dose intravenous infusion and continuous insulin administration. On the second day of treatment, his plasma glucose level stabilized at 120 to 180 mg/dL, and the ketoacidosis disappeared; however, his anorexia did not improve. On the fourth day after admission, the patient suddenly vomited blood. Emergent esophagogastroduodenoscopy revealed circumferential blackening of the esophageal mucosa from the middle esophagus to just above the esophagogastric junction (Fig. *A* and *B*). The patient was treated with fasting and an intravenous proton pump inhibitor, and esophagogastroduodenoscopy 1 week later showed improvement (Fig. *C* and *D*).

What is the diagnosis?

Answer

He was diagnosed with acute esophageal necrosis (AEN). AEN is based on endoscopic findings consisting of circumferentially black esophageal mucosa of the distal esophagus that abruptly terminate at the gastroesophageal junction.[1,2] The prevalence of AEN is extremely rare, accounting for 0.01% to 0.28% of patients undergoing esophagogastroduodenoscopy.[1,2] Compared with the upper and middle esophagus, the lower esophagus is poorly supplied with blood because of its anatomy; therefore, AEN is more prevalent in the lower esophagus. AEN is relatively common in older men with diabetes mellitus and has also been reported to be associated with diabetic ketoacidosis.[1,2] Hyperglycemia and ketoacidosis may lead to decreased gastric blood flow and mucosal damage. In addition, the progression of atherosclerosis because of diabetes mellitus can cause conditions that predispose to decreased blood flow. There is no established treatment for AEN. Correction of underlying disease, improvement of nutritional status, and aggressive intravenous proton pump inhibitor therapy under fasting conditions are recommended.[1,2] In the present case, despite rapid improvement of hyperglycemia and ketoacidosis, anorexia did not improve. Clinical experience has shown that once ketosis resolves, appetite is often quickly restored. In addition, there has been a report of AEN with only persistent severe heartburn.[3] If anorexia

Abbreviation: AEN, acute esophageal necrosis.

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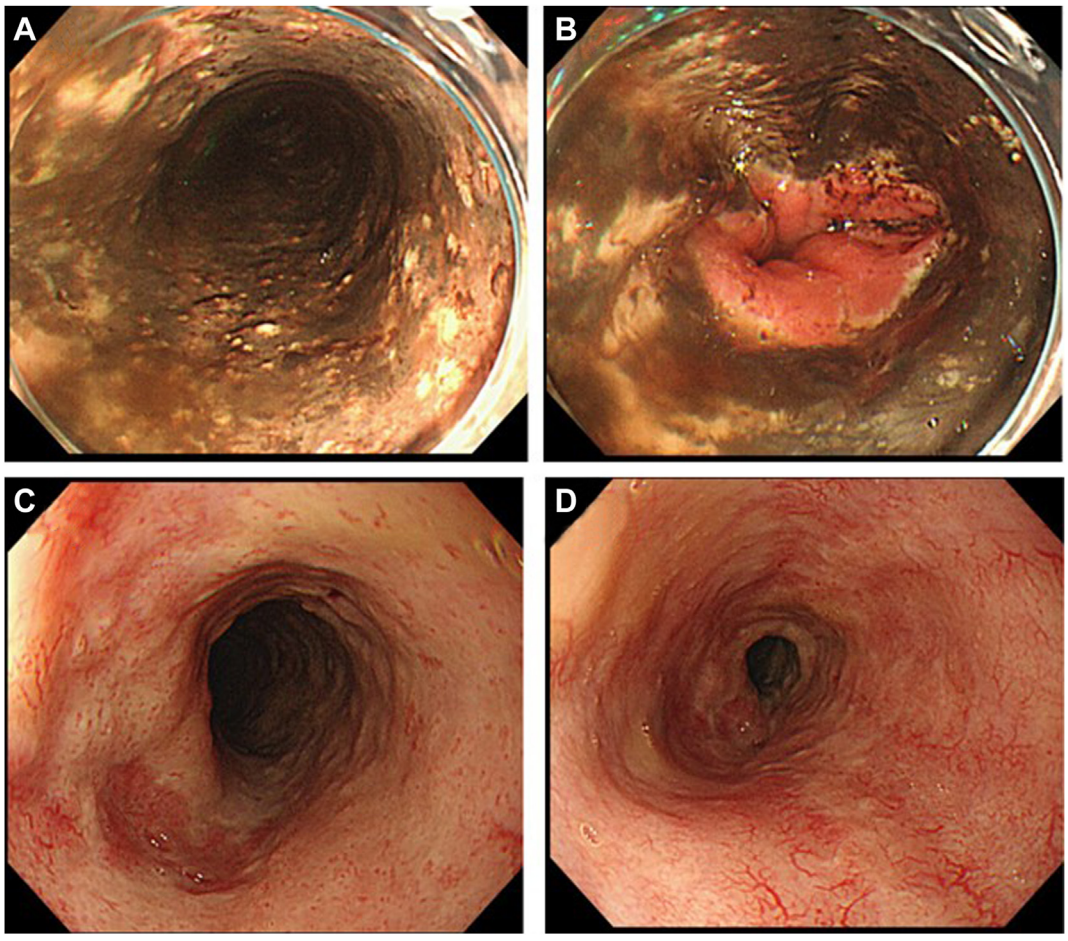

Fig.

persists after treatment for ketoacidosis, a detailed examination of the gastrointestinal tract should be performed, with the presence of AEN in mind.

Disclosure

The authors have no conflicts of interest to disclose.

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