

Background: Diabetic Ketoacidosis (DKA) is a life-threatening complication of Diabetes Mellitus type-1 and occasionally type-2 diabetes, associated with high blood glucose levels >250 mg/dl. Normal glucose levels in all diabetic patients may delay diagnosis and management of DKA and result in increased morbidity and mortality.

Case Presentation: A 68-year-old male having a medical history of Diabetes Mellitus type-2, atrial fibrillation, aortic stenosis status post total valve replacement, coronary artery disease, gastric bypass surgery, and previous stroke presented with two episodes of hematemesis a few hours prior to admission. The patient denied using drugs or ingestion of methanol, ethylene glycol, and salicylate. His home medications include apixaban (Eliquis), Empagliflozin (Jardiance) SGLT-2 inhibitor, and metformin. Physical exam was unremarkable except for dry mucous membrane. While in the emergency department, the patient suffered shortness of breath with increased respiratory rate 24/min (12-16/min) and use of accessory muscles. IV fluid was administered, and initial laboratory data indicated negative ethanol and salicylate levels, with normal parameters including electrolytes and glucose level of 192mg/dl (<250mg/dl). To eliminate the rare probability of Euglycemic Diabetic Ketoacidosis (EDKA), an extensive lab work showed PH 7.07 (7.35-7.45), bicarbonate 3.5mmol (23-30mmol/L), anion gap 24mmol/L (3-10mmol/L), serum ketone 8mmol/L (0.6-1.5mmol/L), serum osmolality 323mmol/kg (285-295mmol/kg) and osmolar gap 28mmol/kg (<10mmol/kg).

Euglycemic DKA was diagnosed, and treatment started with insulin drip, IV fluid, discontinuation of Jardiance and Eliquis. Endoscopy showed stomach inflammation with no ulcer. Pathology confirmed mild active gastritis, but no intestinal metaplasia, dysplasia, or malignancy was identified. The patient's condition improved drastically and was discharged on the third day.

Conclusion: Diagnosis of DKA is challenging especially with normal glucose levels. SGLT-2 inhibitor was believed to be the culprit. Ketones should be checked in all admitted diabetic patients with high anion gap metabolic acidosis, regardless of blood glucose level