CLINICAL VIGNETTE

Flatbush Diabetes

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A 22-year-old Hispanic male presented to the emergency department (ED) with persistent weakness and polydipsia for at least one month. By the time of ED presentation he developed dizziness, polyuria, and diarrhea. Past medical history was significant for mild intermittent asthma, lactose intolerance, obesity, with a BMI of 33, and tobacco use. His initial labs included blood glucose of 739, bicarb 23, anion gap 19, and negative serum acetone. HgbA1c was 10.4. He was admitted and given IV fluids and subcutaneous insulin.

Additional evaluation included: negative chest x-ray; abdominal ultrasound with hepatomegaly and hepatic steatosis; EKG with nonspecific ST changes with large inferior Q waves; and negative troponin.

Patient was admitted to the hospital with presumptive diagnosis of Type I diabetic mellitus (DM1), hyponatremia and acute kidney injury (AKI). He was treated with IV fluids and sliding scale insulin. His glucose continued to decrease overnight and he was discharged home the next day with home insulin. Discharge glucose was 295, with improved anion gap of 15.

He was seen in clinic three months after hospital discharge and had discontinued home insulin one month prior. Home fasting blood glucose was 80-90. Other labs included HgbA1c 5.8, blood glucose 108, negative glutamic acid decarboxylase (GAD) antibody, negative islet cell antibody, negative cystic fibrosis panel, normal c-peptide, negative insulin antibody, negative islet antigen 2 (IA-2) antibody as well as negative G6PD screening.

Patient was referred to Endocrinology who concurred that this was likely a rare form of diabetes called Flatbush diabetes. This is also referred to as ketosis-prone diabetes [KPD], atypical diabetes or type 1B diabetes. Tobacco cessation was encouraged. Monofilament was performed and he was referred for retinal exam. He declined pneumococcal vaccine and was recommended to monitor HgbA1c but was lost to follow up.

Discussion

Flatbush diabetes or ketosis-prone diabetes (KPD) is characterized by an acute onset of hyperglycemia (some with ketosis) requiring insulin therapy, with return to normoglycemia after weeks to months. Patients are both GAD and anti-islet cell antibody negative [1-3] and tend to be male, middle-aged, overweight or obese, with a family history of type 2 diabetes.[2,3] Most patients are of sub-Saharan African descent, but it is also seen in Hispanics and Asians.[3-6] Pathogenesis is not well-understood. These patients are often initially misdiagnosed with type 1 diabetes mellitus due to the acuity of initial clinical presentation. However, their clinical course is more like that of type 2 diabetes due to preserved beta cell function. The recovery of beta cell function allows most patients who return to euglycemia to remain insulin-independent.[4] Some patients will relapse within 2 years of diagnosis and require treatment with oral hypoglycemic agents or insulin.[7]

As these patients are diagnosed with a type of diabetes, it is still recommended to screen for micro- and macrovascular complications and advise lifestyle modification including tobacco cessation, exercise, and aggressive weight loss.

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