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## Diabetes & Glucose Metabolism

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### *Ketosis-prone Type 2 Diabetes (Flatbush Diabetes) In Remission: Report Of Two Cases*

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Diabetic ketoacidosis (DKA) is a triad of uncontrolled hyperglycemia, metabolic acidosis, and increased total body ketone concentration<sup>1</sup>. Diabetic ketoacidosis (DKA) is a well-known manifestation of Type 1 diabetes<sup>2</sup>; however, there has been an increase in the incidence of DKA as the first presentation in Type 2 diabetes. This subtype of diabetes is typically seen in non-Caucasian middle-aged obese males due to non-autoimmune disruption of glucose metabolism, which requires an initial intensive insulin regimen. After initial insulin treatment for several weeks to several months, a significant percentage of people can become insulin independent with an oral hypoglycemic agent (OHA) and/or just lifestyle modification, and in remission for many years<sup>3</sup>. This hybrid form of diabetes sharing the characteristics of T1DM and T2DM is called "Flatbush diabetes", also known as "ketosis-prone T2DM"<sup>4</sup>. This article aims to emphasize the importance of early recognition of this heterogeneous syndrome through the two representative case reports of Ketosis-prone T2DM.

**Case presentation:** We describe two cases of African American men (elderly and young adult) with no past medical histories, who presented to the Emergency Department with a few days history of polyphagia, polydipsia, polyuria and fatigue. New onset of Type 2 diabetes and unprovoked DKA were diagnosed. Both of them received standard treatment with intravenous fluid and insulin drip, recovered uneventfully and discharged with insulin. Both of them followed up closely in our endocrinology clinic, their GAD antibodies were 0.00 (n<=0.02 nmol/L), Islet cell antibody <1:4 (n<1:4) and C-peptide were 2.6 ng/mL and 6 ng/mL (1.1-4.4 ng/mL) respectively. Their insulin was gradually withdrawn with the addition of an oral hypoglycemic agent. Both the patients are currently insulin independent for more than 15 months. **Conclusion:** This is an important clinical entity to recognize ketosis-prone T2DM as insulin independence positively impacts quality of life and

decreases economic burden on the health care system. For patients with suspected ketosis-prone T2DM, B-cell auto-antibodies and C-peptide level should be obtained 1-3 weeks at the first outpatient visit, as it can predict patients' prognosis. These patients should also be referred to an endocrinologist and need careful follow-up. Among all ketosis-prone T2DM patients, those with preserved B-cell function are more likely to be insulin independent and go into remission phase.

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