

Bell's palsy complicated with undiagnosed Ketosis-prone diabetes mellitus—when the unexpected coincidence goes south?

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Background: Bell's palsy is caused by the inflammation and compression of the facial nerve secondary to the edema. Diabetic patients are more prone to nerve degeneration that resultant in mononeuropathy. Herein, we reported a case of ketosis-prone diabetes mellitus (KPDM) presented with diabetic ketoacidosis as an initial presentation after receiving a high-dose oral steroid treatment for Bell's palsy.

Clinical Case: A21-year-old Thai obese man had a history of polyuria and weight loss for 1 month. He also developed an acute right hemiplegia of facial muscles and received 60 mg/day of oral prednisolone for 2 days. He presented with marked mucosal dehydration, though no tachypnea. The laboratory investigation revealed the following: plasma glucose 469 mg/dl, A1C 12.7%, bicarbonate 18 mEq/L, serum ketone 1.0 mmol/L. Diabetic ketoacidosis was diagnosed. Additionally, further history taking revealed a history of excessive intake of sugar-containing soft drinks (>2 liters/day) for several months. Assessment of the beta-cell response to a standardized mixed meal and pancreatic autoantibodies showed absence of autoantibodies, but preserved beta-cell function (subtype A-β+ of KPDM). In this case, insulin withdrawal may occur in the near future. Consequently, the patient recovered spontaneously from Bell's palsy a few weeks later after resolution of DKA.

Conclusion: Bell's palsy could represent as a form of diabetic mononeuropathy that can be developed in any type of diabetes including KPDM. A careful history taking in Bell's palsy is important prior to starting a steroid treatment as it may aggravate hyperglycemia in undiagnosed diabetes, or worse, ketoacidosis in this case.