Improved glycemic control does not eliminate the risk of DKA after corticosteroid injection in patients with type 1 diabetes.

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INTRO

- Corticosteroid injections commonly cause transient hyperglycemia, but progression to diabetic ketoacidosis (DKA) after a local injection is exceedingly rare. This case describes DKA following a glenohumeral corticosteroid injection in a patient with type 1 diabetes despite recently improved glycemic control.

CASE

- A 54-year-old patient with type 1 diabetes on continuous insulin infusion presented with chronic shoulder pain from rotator cuff tendinopathy after failed conservative treatment. HbA1c had recently improved from 8.6% to 7.6%, and an ultrasound-guided left glenohumeral corticosteroid injection was performed after shared decision-making.

RESULTS

- Within 24 hours, the patient developed polydipsia, polyuria, weakness, and vomiting. Evaluation confirmed DKA with severe hyperglycemia, anion-gap metabolic acidosis, and ketonemia. No infection, insulin-pump malfunction, medication nonadherence, or other precipitating factor was identified. The patient required ICU treatment with IV fluids and insulin and recovered without complication.

DISCUSSION

- Even with improved baseline glycemic control and insulin-pump therapy, patients with type 1 diabetes may remain vulnerable to significant metabolic decompensation after corticosteroid injection. Individualized counseling, anticipatory insulin management, and enhanced glucose/ketone monitoring should be considered after injection.