Incidence of Hypoglycemia in Patients with Type 2 Diabetes when Home Insulin Dose is Resumed vs Reduced While Inpatient

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Abstract

Background: Diabetes is a highly prevalent disease state in the United States. Many patients with a diagnosis of diabetes are prescribed insulin in the outpatient setting. Currently there is no guideline consensus on how to approach insulin dosing for these patients while they are hospitalized. This study aimed to investigate if there is a link between those who have their insulin regimens resumed while inpatient and an increased incidence of hypoglycemia compared to those who have their home doses reduced.

Methods: This study is a retrospective chart review of 200 patients with insulin dependent type 2 diabetes who were admitted to a community teaching hospital for any diagnosis other than DKA/HHS from February 18, 2023 through August 31, 2024. The primary endpoint was incidence of hypoglycemia (defined as BG < 70 mg/dl) in inpatients who had their home insulin doses restarted compared to those who had doses decreased. Secondary outcomes included length of stay, D5W/glucagon administration for hypoglycemia treatment, and time to hypoglycemia.

Results: Hypoglycemic events occurred in 22 percent of the home dose resumed group compared to 7 percent in the group who had their home dose decreased (P=0.007). D5W or glucagon administration for hypoglycemia occurred in 8 percent of the resumed group compared to 2 percent of the decreased group (P-0.052). The average length of stay was 6.4 days in those who had an incidence of hypoglycemia compared to 6.15 days in those who did not (P- 0.86). The average time to hypoglycemia was 21.9 hours in the resumed group and 23.9 in the decreased group (P-(0.717).

Conclusion: In this small retrospective chart review, resuming home insulin doses was associated with a significantly increased risk of hypoglycemia compared to decreasing the dose in hospitalized patients.