

In Response to "In Reference to: 'Preventing Hypoglycemia Following Treatment of Hyperkalemia in Hospitalized Patients'"

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We appreciate the comments and interest of Al-Sharefi and colleagues who highlight the use of glucose-only infusion in the management of hyperkalemia.¹ The incidence of hypoglycemia following hyperkalemia treatment with insulin/dextrose is high and measures to reduce this should be pursued.² However, evidence of the efficacy of glucose-only infusions on lowering potassium in heterogeneous inpatient populations is lacking. The small study by Chothia et al demonstrated potassium lowering efficacy in ten clinically stable patients without diabetes receiving chronic hemodialysis.³ In contrast, multiple observational studies consistently show a clinically significant effect of insulin/dextrose on potassium lowering across different populations.⁴

Importantly, inpatient hyperglycemia is associated with increased morbidity and mortality and occurs in those with preexisting diabetes and also those without, due to stress hyperglycemia from acute illness, medication or nutrition support.⁵ Determining intact insulin sensitivity during acute illness is not straightforward and deciding on the appropriateness of glucose-only

hyperkalemia treatment compared with insulin/dextrose would be challenging. With the rising prevalence of diabetes in the inpatient setting (>30% in our study), the number of eligible individuals for glucose-only treatment would be small and does not justify the use of two separate hyperkalemia treatment protocols.

Given the potential life-threatening consequences of hyperkalemia, rapid potassium lowering is a priority. For glucose-only infusions to be applied, there needs to be more convincing evidence across more representative inpatient populations to ensure efficacy.

References

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