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Hypoglycemia and Mortality in Critically Ill Patients with Type 2 Diabetes

Jan Brož Jana Malinová

Department of Internal Medicine University Hospital Motol,
Second Faculty of Medicine, Charles University,
Prague, Czech Republic

Dear Editor,

The article by Wernly et al. [1] entitled “Hypoglycemia but not hyperglycemia is associated with mortality in critically ill patients with diabetes” reports on the association between a single episode of blood glucose deviation during an intensive care unit stay with mortality in critically ill patients, including those with type 2 diabetes mellitus (T2DM). The authors concluded that in patients with T2DM, hypoglycemia but not hyperglycemia was associated with increased mortality, whereas in patients without diabetes, both hyper- and hypoglycemia were associated with adverse outcomes.

We would like to comment on the definition of hypoglycemia used in the study. The authors correctly used values ≤ 70 mg/dL as a threshold for hypoglycemia. However, this level is generally considered as an “alert value” to trigger individual patients to take appropriate steps to increase glucose concentration [2]. A value of < 54 mg/dL has been factored into the definition of hypoglycemia [2] to determine “clinically significant” hypoglycemia, and this level can be taken to indicate the onset of significant neuroglycopenia in patients with diabetes [3]. In patients with T2DM, a decrease in

glucose concentration below this level is associated with cardiac arrhythmias [4] and increased mortality [5].

We suggest that this point be taken into consideration if the authors plan to continue their study; we recommend analyzing glycemic data separately for values between levels ≤ 70 and 54 mg/dL as well as < 54 mg/dL, at least in T2DM patients. We believe that this could provide further insights into the relationship between hypoglycemia and mortality, and could be important for the clinical approach regarding maintenance of glycemia in critically ill T2DM patients.

Acknowledgement

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References

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