

Glucose control in the ICU.

Abstract

PURPOSE OF REVIEW:

Critically ill patients usually develop hyperglycemia, which is associated with adverse outcome. Controversy exists whether the relationship is causal or not. This review summarizes recent evidence regarding glucose control in the ICU.

RECENT FINDINGS:

Despite promising effects of tight glucose control in pioneer randomized controlled trials, the benefit has not been confirmed in subsequent multicenter studies and one trial found potential harm. This discrepancy could be explained by methodological differences between the trials rather than by a different case mix. Strategies to improve the efficacy and safety of tight glucose control have been developed, including the use of computerized treatment algorithms.

SUMMARY:

The ideal blood glucose target remains unclear and may depend on the context. As compared with tolerating severe hyperglycemia, tight glucose control is well tolerated and effective in patients receiving early parenteral nutrition when provided with a protocol that includes frequent, accurate glucose measurements and avoids large glucose fluctuations. All patient subgroups potentially benefit, with the possible exception of patients with poorly controlled diabetes, who may need less aggressive glucose control. It remains unclear whether tight glucose control is beneficial or not in the absence of early parenteral nutrition.