Efficacy and Safety of SPRINT and STAR Protocol on Malaysian Critically-Ill Patients

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Abstract

Intensive care unit patients may have a better glycaemic management with the right control protocol. Results of virtual trial performance on Malaysian critically-ill patients adopting a model-derived and model-based control protocol known as SPRINT and STAR are presented in this paper. These ICU patients have been treated by intensive sliding-scale insulin infusion. The effectiveness and safety of glycaemic control are then analysed. Results showed that patient safety improved by 83% with SPRINT and STAR protocol as the number of hypoglycaemic patients significantly reduced (BG<2.2 mmol/L). Percentage of time within desired bands and median BG improves in both SPRINT and STAR. However, the improvements are associated with higher number of BG measurements (workload).

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