

Virtual Trial and Monte Carlo Analysis of Model-Based Glycaemic Control Protocol with Reduced Nursing Effort.

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Abstract

Tight glycaemic management has been shown to be beneficial to the outcomes of patients receiving intensive care. However, tight glycaemic control (TGC) protocol within intensive care (ICU) comes with a high clinical demand, namely high nursing effort. Thus, there is a need or a protocol that is safe, effective, robust, yet does not require a high nursing effort. A less intensive protocol is designed to use a combination of subcutaneous long-acting insulin (glargine) with IV insulin bolus and only requires blood glucose (BG) measurements every 4 hours while maintaining measurement within 4.0-6.1 mmol/L.

Keywords: Monte Carlo, Model-based protocol, Stress hyperglycaemia, glargine, nursing intervention