

Analysis: Continuous Glucose Monitoring in the Intensive Care Unit

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Abstract

Control of glycemia in hospitalized patients is important; hypoglycemia is associated with increased mortality, and hyperglycemia is associated with adverse outcomes. For these reasons, though no such device is currently available, continuous glucose monitoring (CGM) is an attractive option, especially in the critical care setting. Schierenbeck and coauthors, in this issue of *Journal of Diabetes Science and Technology*, report on the use of a specialized central catheter designed to monitor glucose continuously in post cardiac surgery patients. This catheter, which was indwelled within the great veins, was specially designed with a separate lumen and membrane that allowed continuous glucose microdialysis. Accuracy was quite good, better than has been reported with the use of commercially-available CGM devices. Ideally, further development of this quite promising catheter-based device would allow it to be used also to deliver fluids and drugs, thus avoiding the need for a second catheter elsewhere.

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Abbreviations: (BG) blood glucose, (CGM) continuous glucose monitor, (CVC) central venous catheter, (ICU) intensive care unit, (ISO) International Organization for Standardization, (MARD) mean absolute relative difference

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