

Continuous Glucose Monitoring in Pregnancy: New Frontiers in Clinical Applications and Research

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Abstract

Current treatment of diabetes in pregnancy relies on intermittent self-monitoring of blood glucoses using finger sticks to monitor capillary blood glucoses. Continuous glucose monitoring (CGM) systems are an emerging technology that allow frequent glucose measurements (every 5 min) and the ability to monitor glucose trends in real time. Although these devices are currently expensive and mildly invasive to use, there is huge potential for their use in both the research and clinical realms. From a research perspective, there is the potential to better understand glucose metabolism in pregnancy, both in patients with and without diabetes. For the treating clinician, CGM has the potential to improve detection of hyperglycemic excursions as well as asymptomatic hypoglycemia and the data to improve management of glucose levels in diabetes patients. In this article, we review current literature examining use of CGM in both research and clinical applications.

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Abbreviations: (AUC) area under the curve, (CGM) continuous glucose monitoring, (CSII) continuous subcutaneous insulin infusion, (GDM) gestational diabetes mellitus, (HbA1c) hemoglobin A1c, (MAD) mean absolute difference, (MARD) mean absolute relative difference, (SMBG) self-monitoring of blood glucose, (T1DM) type 1 diabetes mellitus, (T2DM) type 2 diabetes mellitus

Keywords: continuous glucose monitor, diabetes, pregnancy

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