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Pregnancy and Preexisting Diabetes: Bridging Evidence, Technology, and Care in 2025

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Abstract

The risk of maternal and neonatal death and morbidity is elevated in individuals with preexisting diabetic mellitus (PDM). These hazards can be decreased by lowering maternal hyperglycemia both before and during pregnancy. Preconception care (PCC), which involves meeting stringent glycaemic targets, has been shown to significantly lower the risk of congenital defects and other unfavourable pregnancy outcomes. However, only a small proportion of people are given PCC. Real-world evidence showing suboptimal pregnancy outcomes emphasises the necessity of further optimising prenatal glucose levels. Emerging technologies have the potential to aid in achieving that objective. More factors besides dysglycemia contribute to poor pregnancy outcomes in PDM. The significance of managing insulin-sensitive drugs and maintaining optimum nutrition during prenatal care for PDM is highlighted by the growing influence of obesity on pregnancy outcomes. In individuals with T2DM, recent guidelines suggest discontinuation of glucagon-like peptide-1 receptor agonist (GLP-1RA) before conception rather than discontinuation between the start of pregnancy and the end of the first trimester. This suggestion was based on limited data regarding the risk of exposure to GLP-1RA receptor agonists during pregnancy. We advise against routinely adding metformin to pregnant people with type 2 diabetes who are already taking insulin. This was proposed in light of the Guideline Development Panel (GDP) ruling that the possible harm of raising the risk of small for gestational age infants or unfavourable childhood outcomes associated with large for gestational age infants was not outweighed by the benefit of adding metformin to insulin to reduce rates of large for gestational age infants. As such, the evidence was insufficient to support a recommendation either for or against a carbohydrate intake cutoff of 175 g/day. To avoid serious mortality and morbidity for people with PDM and their offspring, investments in implementation science for PCC are essential. Further defining glycaemic targets during pregnancy through RCTs and improving new technologies to meet those targets can significantly lessen harm and the burden of diabetic treatment. There is a lack of data on managing obesity and proper nutrition during pregnancy. There is also a need for more research on when women with PDM should deliver their babies. *[J Assoc Clin Endocrinol Diabetol Bangladesh, 2025;4(Suppl 1): S25]*

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