Diabetes after pregnancy less controllable for people who had gestational diabetes, finds study

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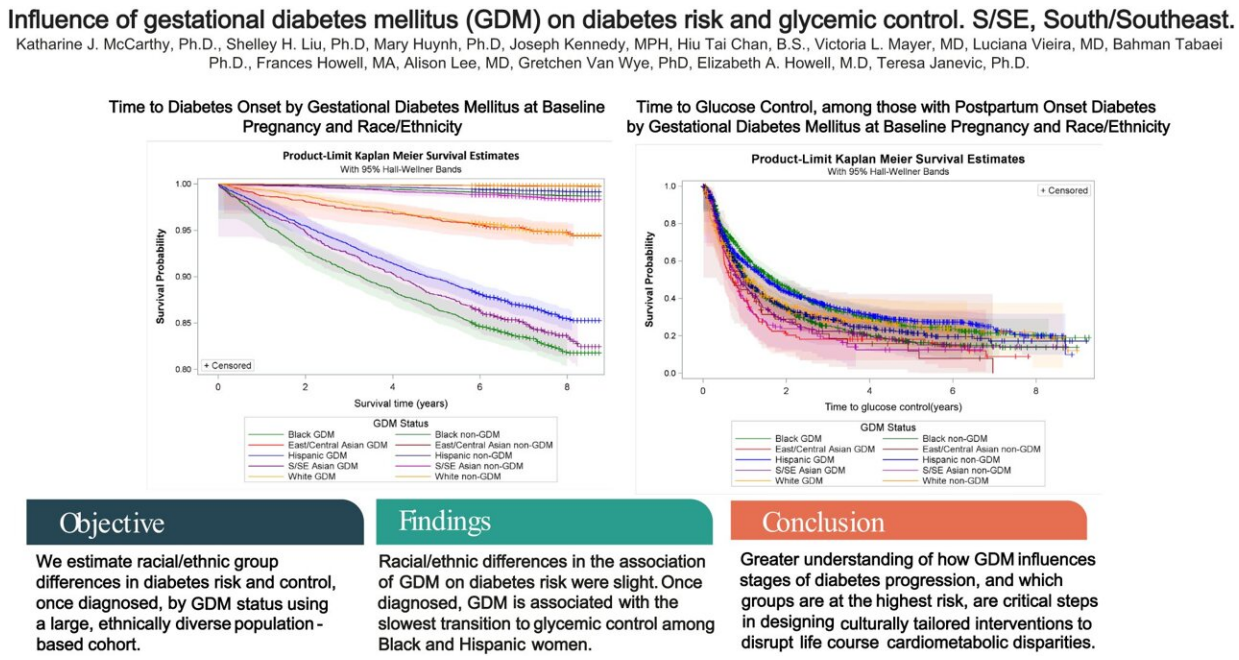

Graphical abstract. Credit: *Diabetes Care* (2023). DOI: 10.2337/dc22-1676

People who develop diabetes following pregnancy were significantly less likely to be able to bring it under control if they had experienced gestational diabetes during their pregnancy, especially if they were Black or Hispanic, according to a Mount Sinai study published in the journal *Diabetes Care*.

The study also found that people who experienced gestational diabetes were more than 11 times as likely as those whose pregnancies did not involve gestational diabetes to develop diabetes within nine years after delivery.

The researchers, from the Icahn School of Medicine at Mount Sinai, found that the first 12 weeks to one year postpartum had the highest incidence of diabetes and the least likelihood of diabetes control. The researchers state that these findings suggest that regular diabetes screenings, particularly in the early postpartum period, have the potential to alter the speed and course of disease progression in the years to come.

Gestational diabetes and type 2 diabetes, also known as adult-onset diabetes, are among the leading risk factors for cardiovascular disease. Both conditions are also marked by persistent racial and ethnic disparities, often a result of gaps in access to health care and treatment. While existing research has focused on how gestational diabetes influences type 2 diabetes later in life, few have examined how gestational diabetes influences disease severity or control after diabetes diagnosis.

In this study, the Mount Sinai researchers explored how race, ethnicity and gestational diabetes interact to influence both diabetes risk and glycemic control, or achieving clinical recommendations for blood sugar levels.

The researchers found that the groups with the highest incidence of gestational diabetes were people of South and Southeast Asian descent; these groups had a somewhat lower risk for diabetes after delivery, compared to other racial/ethnic groups, although the risk was still very high.

Among those who experienced diabetes after delivery, the researchers

found that a history of gestational diabetes was associated with more difficulty in controlling glucose levels. In particular, of those with postpartum-onset diabetes following gestational diabetes, Black and Hispanic people experienced a longer time to achieve control of their glucose levels than those without gestational diabetes.

"Our findings highlight the importance of regular diabetes screening following a gestational diabetes, particularly in the first 12 months following delivery—which was marked by the highest incidence of diabetes and least likelihood of glycemic control—in order to facilitate early detection and appropriate diabetes management," said corresponding author Katharine McCarthy, Ph.D., MPH, Assistant Professor of Population Health Science and Policy, and Obstetrics, Gynecology and Reproductive Science, and a member of the Blavatnik Family Women's Health Research Institute at Icahn Mount Sinai.

"In addition to care coordination between obstetric and primary care providers, provider education on the importance of obstetric history-taking is essential in facilitating diabetes awareness and early glycemic control."

The research team developed a novel population-based cohort of more than 330,000 postpartum women in New York City, using data from 2009 to 2017, to examine how gestational diabetes interacts with race and ethnicity to influence diabetes risk and control. The birth records included data about pregnancy-related comorbidities, including gestational diabetes and gestational hypertensive disorders, self-reported race and ethnicity, and sociodemographic characteristics including age, nativity, education, and insurance type or status.

Through their analysis, the Mount Sinai researchers were able to confirm prior estimates of diabetes risk attributed to gestational diabetes and build on limited existing evidence of racial and ethnic differences in the

influence of gestational diabetes. The data supports policies that both facilitate and expand access to health care after delivery, such as extending postpartum coverage under Medicaid.

"This study shows that a history of gestational diabetes is a red flag for higher risk of diabetes but also poorer control down the line, with Black and Hispanic women most affected," said senior author Teresa Janevic, Ph.D., MPH, Associate Professor of Obstetrics, Gynecology and Reproductive Science, Population Health Science and Policy, and Global Health and Health Systems Design at Icahn Mount Sinai.

"The good news is this red flag provides the opportunity for diabetes prevention, if we focus more intently on mom's health in the first year postpartum."

The Mount Sinai team will next expand on their research to study how the neighborhood environment influences longitudinal diabetes outcomes after gestational diabetes, with the goal of identifying healthful policies that reduce diabetes risk. The New York City Department of Health and Mental Hygiene contributed to this research.

More information: Katharine J. McCarthy et al, Influence of Gestational Diabetes Mellitus on Diabetes Risk and Glycemic Control in a Retrospective Population-Based Cohort, *Diabetes Care* (2023). DOI: 10.2337/dc22-1676

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