

Gestational Diabetes Flags Hypertension Risk

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FROM THE ANNUAL MEETING OF THE SOCIETY FOR PEDIATRIC AND PERINATAL EPIDEMIOLOGIC RESEARCH

SEATTLE — Women who have had gestational diabetes may be at elevated risk for hypertension even after established risk factors are taken into account, a nested cohort study has shown.

Using data from the Nurses' Health Study II, researchers followed more than 26,000 women from an index pregnancy for up to 14 years. Those who had gestational diabetes during that pregnancy were 41% more likely to develop hypertension even after adjustment for potential confounders such as body mass index, diet, and a family history of hypertension.

"These women may represent a target group for intervention to prevent or delay the onset of hypertension, which is a public health concern in the United States," lead investigator Deirdre K. Tobias said at the meeting.

"The mechanism by which gestational diabetes mellitus could lead to an increased risk of hypertension and other metabolic complications is not yet established," said Ms. Tobias, a doctoral student at Harvard School of Public Health in Boston.

One possibility is that these conditions have shared risk factors, she noted. Another is that gestational diabetes itself increases the risk of hypertension, for example, by causing vascular damage that manifests later in time.

The Nurses' Health Study II is a prospective cohort study of women 25-44 years old at baseline that began in 1989.

Women in the study complete extensive questionnaires at baseline and biennially, which include questions about physician-diagnosed gestational diabetes and hypertension.

Ms. Tobias and her colleagues included in their sample the 26,384 women who reported having at least one singleton pregnancy between 1991 (the first year in which dietary data were collected) and 2005, did not have type 2 diabetes or hypertension, had not had gestational diabetes in a previous pregnancy, and had not had previous cardiovascular disease.

Study results showed that 6% of the women had gestational diabetes during their index pregnancy. Both the women with and without gestational diabetes had a mean age of 32 years at baseline, and 7% in each group were current smokers.

However, those with gestational diabetes had a higher body mass index (25 vs. 23 kg/m²), and were more likely to have a family history of hypertension (51% vs. 46%) and diabetes (21% vs. 11%). They also were more likely to have a personal history of toxemia, preeclampsia, or hypertension during pregnancy (16% vs. 8%).

Overall, 9% of the women developed hypertension during follow-up, and the cumulative incidence was higher among those who had had gestational diabetes.

After adjustment for a dozen potential confounders, women who had gestational diabetes still had a 41% higher risk of

VITALS

Major Finding: Compared with women who had not had gestational diabetes, women who had the condition were 41% more likely to develop hypertension during a period of up to 14 years.

Data Source: A nested prospective cohort study of 26,384 women initially aged 25-44 years who had at least one singleton pregnancy.

Disclosures: Ms. Tobias reported that she had no relevant conflicts of interest.

developing hypertension (hazard ratio, 1.41).

Moreover, compared with women who had neither gestational diabetes nor type 2 diabetes, those who had both had a near tripling of the risk of developing hypertension (HR, 2.95).

"It is possible that there was residual or unmeasured confounding," acknowledged Ms.

Tobias. "For example, in our cohort, we were unable to capture pregnancy-related characteristics, such as weight gain or severity of gestational diabetes."

In addition, she noted, the generalizability of the study's findings may be limited, given the women's somewhat higher age at baseline and the fact that most were white. ■

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