

Gestational Diabetes History Can Portend Diabetes

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The risk of developing diabetes after a history of gestational diabetes increased over time and reached nearly 20% by 9 years post partum, according to results from a large, population-based study involving Canadian women.

The finding confirms those from the United States and elsewhere regarding the rise in both gestational diabetes and type 2 diabetes, as well as the highly elevated risk for the development of subsequent diabetes among women who have gestational diabetes. "This estimate should be used by clinicians to assist in their counseling of pregnant women and by policy makers to target these women for screening and prevention," said Dr. Denise S. Feig of the University of Toronto and her associates (CMAJ;2008;179:229-34).

They used data from two sources: a database of hospital discharges for deliveries that occurred in Ontario from April 1, 1995, to March 31, 2002; and a database of all Ontario residents diagnosed with diabetes through March 31, 2004. Of 659,164 women aged 16-49 years without pre-existing diabetes who delivered a baby between 1995 and 2002, a total of 21,823 were diagnosed with gestational diabetes. The overall incidence of gestational diabetes in Ontario rose from 3.2% in 1995 to 3.6% in 2001.

The incidence of having gestational diabetes was higher among women with higher Charlson Comorbidity Index scores (an estimate of the risk of death from comorbid disease), those with lower incomes, and those living in urban areas, compared with rural. Women who had 10 or fewer primary care visits in the 2 years prior to the index delivery were less likely to be diagnosed with gestational diabetes than were women with more than 10 visits (2.7% vs. 3.7%), and those without a usual care provider were less likely to be diagnosed with gestational diabetes than were those who did have one (3.0% vs. 3.4%).

Following delivery, the probability of developing diabetes among the women with gestational diabetes during pregnancy rose rapidly during the first 9 months post partum, and remained more or less constant thereafter over the 9-year follow-up period of the study.

At 9 months, 3.7% of the women had been diagnosed with diabetes. Most of these women probably had pre-existing type 2 diabetes that was only discovered via screening for gestational diabetes. The database doesn't distinguish between type 1 and type 2 diabetes, but most were probably type 2, Dr. Feig and her associates noted.

The probability of developing diabetes among those with a history of gestational diabetes was 5% at the end of 15 months and 13% at 5 years. By the end of the 9-year follow-up, 19% had developed diabetes, compared with just 2% of those without gestational diabetes. The women with gestational diabetes who delivered during 1999-2001 had a higher risk of subsequent diabetes than did those who delivered during 1995-1996. Among the women in the later group, diabetes had developed in 16% by 5

years, whereas it took 9 years for the earlier group to reach a rate of 16%, they said.

Other factors increasing the risk of diabetes following gestational diabetes included Charlson index, greater age, a higher number of primary care visits pre-pregnancy, and the development of hypertension after delivery. On the other hand, living in a rural area, having a higher income, and having a prior pregnancy within 4 years of the index pregnancy decreased the risk. However, previous ges-

tational diabetes was a more significant predictive factor than all the others were, the investigators said.

In an accompanying editorial, Dr. David Simmons of the Institute of Metabolic Science, Cambridge University Hospitals NHS Foundation Trust, England, called the study "timely, allowing renewal of attention to an important condition where we could do better." Among the areas needing improvement, he said, are increased efforts to prevent progression to

diabetes in these women, particularly those who might become pregnant again, and to improve the diagnosis of type 2 diabetes prior to pregnancy.

"Even if there were no primary prevention programs in place, there should be secondary prevention programs to detect diabetes as near to its development as possible. Such programs would allow control of hyperglycemia before a subsequent pregnancy, something clearly of benefit to any future fetus," he said. ■

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