2014

The Year Book of ENDOCRINOLOGY®

Editor-in-Chief

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2014 Year Book of Endocrinology

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- Pediatric Endocrinology

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An association between gestational diabetes mellitus and long-term maternal cardiovascular morbidity


Heart 99:1118-1121, 2013

Objective.—To investigate whether a diagnosis of gestational diabetes mellitus (GDM) is a risk factor for subsequent long-term cardiovascular morbidity.

Design.—A population-based study.

Setting.—Soroka University Medical Center, a tertiary centre in the southern region of Israel.

Patients.—A cohort of women with and without a diagnosis of GDM who delivered during the years 1988–1999 with a follow-up period until 2010.

Interventions.—A comparison of the incidence of cardiovascular morbidity.

Results.—Of 47,909 deliveries that met the inclusion criteria, 4,928 (10.3%) occurred in patients who were diagnosed with GDM. During a follow-up period of more than 10 years, compared with women who gave birth at the same time period, after adjustment for age and ethnicity, patients with GDM had higher rates of cardiovascular morbidity including non-invasive cardiac diagnostic procedures (OR = 1.8; 95% CI 1.4 to 2.2), simple cardiovascular events (OR = 2.7; 95% CI 2.4 to 3.1) and total cardiovascular hospitalisations (OR = 2.3; 95% CI 2.0 to 2.5). In a Cox proportional hazards model, adjusted for comorbidities such as pre-eclampsia and obesity, GDM was independently associated with cardiovascular hospitalisations (adjusted HR 2.6, 95% CI 2.3 to 3).

Conclusions.—GDM is an independent risk factor for long-term cardiovascular morbidity in a follow-up period of more than a decade.

Gestational diabetes mellitus is defined as glucose intolerance that begins with or is often first recognized during pregnancy. It is often reversible but predisposes to gestational diabetes in later pregnancies and the development of the metabolic syndrome and diabetes type 2 in later years. It can be assumed that gestational diabetes is a risk factor for cardiovascular diseases as well. This is not well documented. The authors of this population-based 1-center study remedy this and show that gestational diabetes is independently associated with hospitalizations for cardiovascular events. The study was undertaken in 1 medical center; in terms of follow-up, this is a strength because this study site is the only hospital in that large area; however, it might be a disadvantage as well, because only a selected population visits this hospital. Never the less, the finding is quite interesting and puts gestational diabetes, the most frequently occurring complication in pregnancy, into the focus.

E. Oetjen, MD
Prevention and Reversal of Diabetes

Achievement of Goals in U.S. Diabetes Care, 1999–2010
Ali MK, Bullard KM, Saaddine JB, et al (Emory Univ, Atlanta, GA; et al)

**Background.**—Tracking national progress in diabetes care may aid in the evaluation of past efforts and identify residual gaps in care.

**Methods.**—We analyzed data for adults with self-reported diabetes from the National Health and Nutrition Examination Survey and the Behavioral Risk Factor Surveillance System to examine risk-factor control, preventive practices, and risk scores for coronary heart disease over the 1999–2010 period.

**Results.**—From 1999 through 2010, the weighted proportion of survey participants who met recommended goals for diabetes care increased, by 7.9 percentage points (95% confidence interval [CI], 0.8 to 15.0) for glycemic control (glycated hemoglobin level <7.0%), 9.4 percentage points (95% CI, 3.0 to 15.8) for individualized glycemic targets, 11.7 percentage points (95% CI, 5.7 to 17.7) for blood pressure (target, <130/80 mm Hg), and 20.8 percentage points (95% CI, 11.6 to 30.0) for lipid levels (target level of low-density lipoprotein [LDL] cholesterol, <100 mg per deciliter [2.6 mmol per liter]). Tobacco use did not change significantly, but the 10-year probability of coronary heart disease decreased by 2.8 to 3.7 percentage points. However, 33.4 to 48.7% of persons with diabetes still did not meet the targets for glycemic control, blood pressure, or LDL cholesterol level. Only 14.3% met the targets for all three of these measures and for tobacco use. Adherence to the recommendations for annual eye and dental examinations was unchanged, but annual lipid-level measurement and foot examination increased by 5.5 percentage points (95% CI, 1.6 to 9.4) and 6.8 percentage points (95% CI, 4.8 to 8.8), respectively. Annual vaccination for influenza and receipt of pneumococcal vaccination for participants 65 years of age or older rose by 4.5 percentage points (95% CI, 0.8 to 8.2) and 6.9 percentage points (95% CI, 3.4 to 10.4), respectively, and daily glucose monitoring increased by 12.7 percentage points (95% CI, 10.3 to 15.1).

**Conclusions.**—Although there were improvements in risk-factor control and adherence to preventive practices from 1999 to 2010, tobacco use remained high, and almost half of U.S. adults with diabetes did not meet the recommended goals for diabetes care.

► Obesity and diabetes are among the diseases showing the greatest increase worldwide and are reaching close to epidemic dimensions. Thus, the search for new antidiabetic therapies and efforts to improve antidiabetic therapy are important areas of research. The question remains of whether the goal of improved diabetes care is being achieved. These authors from the United States investigated this concern in a retrospective study, and the results are not encouraging. Despite a slight reduction in the 10-year probability of coronary...
heart disease, almost half of the adults with self-reported diabetes do not meet the recommended goals for diabetes care. Particularly, tobacco use remains high, and improvement of glycemic (measured as HbA1c) is low. This study highlights the importance of diabetes care, putting the individual with diabetes into focus, and argues for improved individual diabetes care, control, and education.

E. Oetjen, MD