Data Suggest Rigorous Postpartum Testing in GDM

BY MIRIAM E. TUCKER
Senior Writer

TORONTO — Postpartum testing in women who had gestational diabetes during pregnancy should include both an oral glucose-tolerance test and a lipid profile, Genevieve Dubé and her colleagues advised in a poster presented at the joint annual meeting of the Canadian Diabetes Association and the Canadian Society of Endocrinology and Metabolism.

Data from a retrospective analysis of 223 women who had gestational diabetes mellitus (GDM) during pregnancy revealed that postpartum glucose-tolerance abnormalities were common, affecting one-fourth of all women. Moreover, "Isolated fasting glucose testing would have failed to identify most cases of postpartum dysglycemia," noted Ms. Dubé and her colleagues at the Centre Régional du Diabète de Laval (Que.).

The data also suggested that a lipid profile should be part of the assessment, because many of the women with previous GDM—including those with normal postpartum oral glucose-tolerance test (OGTT) results—have altered lipids suggestive of features of the cardiometabolic syndrome, they said.

The 223 women had received prenatal care between June 2004 and April 2005 at Laval's diabetic pregnancy clinic, which has had a program of routine postnatal GDM follow-up since 2002. The group had a mean age of 31 years and a mean body mass index (kg/m^2) of 28.3. Two-thirds of the women were white. Insulin treatment was used by 34% during pregnancy.

All were told to return at 2 months—whether or not they were still breast-feeding—for postpartum lab testing, which included a 12-hour fasting glucose, a 75-g OGTT, a lipid profile, and a thyroid-stimulating hormone test. A total of 74% (165 patients) showed up, at a mean of 3 months following delivery.

Of the 164 who underwent the OGTT, some form of impaired glucose tolerance was detected in 25% (41 patients), including frank type 2 diabetes in 4% (7 patients), isolated impaired glucose tolerance in 16% (26 patients), isolated impaired fasting glucose in 2% (3 patients), and both impaired glucose tolerance and impaired fasting glucose in 3% (5 patients).

No matter what fasting blood glucose (FBG) cutoff was used, more than half of all dysglycemic women would have been missed if postpartum lab screening included only FBG instead of OGTT. Among the 41 women with abnormal 2-hour OGTT results, 49% had FBG values at or above 5.6 mmol/L, 41.5% had FBG levels at or above 5.8 mmol/L, and 32% had FBG levels at or above 6.1 mmol/L.

The need for insulin therapy and a first-trimester FBG above 6.1 mmol/L were the only risk factors analyzed that significantly predicted postpartum abnormal OGTT, with odds ratios of 1.89 and 3.41, respectively. Maternal age, BMI, parity, macrosomia, and nonwhite race were not predictive of postpartum glucose status, they said.

Among the 165 women who had postpartum lipid tests, 70% had at least one abnormality, defined as a triglyceride level of 1.7 mmol/L or higher, HDL cholesterol level at or lower than 1.3 mmol/L, or a total cholesterol/HDL cholesterol ratio of 5.0 or greater.

Cardiometabolic risk factors were not limited to women with abnormal OGTT results and diabetes. Indeed, two-thirds of the 123 women with normal postpartum glucose tolerance had at least one lipid abnormality; 23% had triglyceride levels of 1.7 mmol/L or higher, and 23% had HDL cholesterol of 1.3 mmol/L or lower. In fact, only when those two abnormalities were combined was there a significant correlation with OGTT results: The proportion of women with normal glucose tolerance who had both high triglycerides and low HDL cholesterol was 13%, compared with 24% of those with abnormal OGTT.

Among 129 of the women whose breast-feeding status was known, 63% were breast-feeding at the time of the postpartum visit. Breast-feeding was associated with significantly lower triglyceride level, higher HDL cholesterol, lower total cholesterol/HDL ratio, lower mean fasting glucose at the OGTT, and lower prevalence of any postpartum abnormality of glucose tolerance, including diabetes. Although these differences did not seem to be attributable to different maternal characteristics, there was a trend toward a lower prevalence of obesity (defined as a BMI of 27 or higher) among the breast-feeding women (49% vs. 62.5%). ■