Mild Gestational Diabetes Treatment Is Beneficial

Treatment reduced macrosomia, lowered neonatal fat mass, rates of shoulder dystocia and C-section.

BY DOUG BRUNK
San Diego Bureau

SAN DIEGO — Treatment of mild gestational diabetes did not reduce the frequency of several commonly reported morbidities associated with diabetic pregnancy, results from a large multicenter randomized trial demonstrated.

However, treatment did lower birth weight and resulted in a 50% reduction in macrosomia, as well as lower neonatal fat mass, rates of shoulder dystocia, cesarean delivery, preeclampsia, and gestational hypertension.

"Identification and treatment of mild gestational diabetes is clearly associated with significant clinical benefits," principal investigator Dr. Mark B. Landon said at the annual meeting of the Society for Maternal-Fetal Medicine.

The incidence of gestational diabetes, defined as glucose intolerance with onset or first recognition during pregnancy, is rising in the United States, said Dr. Landon, professor of obstetrics and gynecology at the Ohio State University, Columbus.

More than 45 years ago researchers "first proposed criteria for the diagnosis, which were based on the subsequent development of adult onset diabetes and not on any association between carbohydrate intolerance and adverse pregnancy outcomes," he said. "Thus, the clinical significance of gestational diabetes and, in particular, mild gestational diabetes as it relates to perinatal morbidity is unclear and has been challenged for decades."

He went on to note that, based largely on results of retrospective single-center studies to date, there has been "widespread acceptance of screening and treatment of gestational diabetes by professional organizations with little evidence of demonstrable benefit."

However, in 2003 and in 2008 the U.S. Preventive Services Task Force issued statements concluding that there is insufficient evidence to determine if a health benefit to the treatment of mild gestational diabetes exists.

The controversy prompted the maternal-fetal medicine units network of the Eunice Kennedy Shriver National Institute of Child Health and Human Development to conduct a randomized trial to determine if treatment of mild gestational diabetes reduced perinatal morbidity.

For the study, 958 women with a singleton gestation and who met criteria for mild gestational diabetes (defined as a fasting value of less than 95 mg/dL on a blinded 3-hour oral glucose tolerance test) were allocated to one of two groups.

The 485 women in the treatment group received formal nutrition counseling, instruction on self-monitoring of blood glucose, and insulin administration, if necessary.

The 473 women in the control group received standard routine obstetric care, and clinicians and study participants were unaware of their glucose tolerance test results.

The rate of preeclampsia and gestational hypertension as a composite was reduced with treatment.

DR. LANDON

The primary end point was a composite outcome that consisted of perinatal mortality; neonatal hypoglycemia defined as a value less than 35 mg/dL during the first 2 hours of life without feeding; a serum bilirubin greater than 8 mg/dL between 16 and 36 hours of life, hyperinsulinemia as reflected by a cord blood C-peptide greater than the 95th percentile, or birth trauma.

Dr. Landon reported that the average age of the study participants was 29 years.

There were no differences between the groups in the frequency of composite primary neonatal outcome (32% in the treatment group vs. 37% in the control group).

Among secondary outcomes, the researchers observed a significant difference between the treatment and control groups in terms of mean birth weight (3,302 g vs. 3,408 g, respectively), fetal fat mass (427 g vs. 464 g), and the frequency of infants weighing greater than 4,000 g at birth (6% vs. 14%).

There were no differences between the two groups in terms of NICU admission, preterm delivery, respiratory distress syndrome, or need for intravenous glucose treatment.

As for maternal outcomes, induction of labor rates were similar between the two groups (about 27%), but women in the treatment group had significantly lower overall rates of cesarean delivery (27% vs. 34%) and rates of cesarean corrected for abnormal presentation and prior cesarean (13% vs. 20%).

The rate of shoulder dystocia also was reduced with treatment (2% vs. 4%) as was the rate of preeclampsia and gestational hypertension as a composite (9% vs. 14%).

Dr. Landon concluded that the study findings "should complement the ongoing analysis of the recent Hyperglycemia and Adverse Pregnancy Outcome study as experts develop a consensus for the diagnosis and treatment of carbohydrate intolerance during pregnancy."

Dr. Landon had no conflicts to disclose. ■

Two Non-Doctor Approaches Help Ease Postnatal Depression

BY DENISE NAPOLI
Elsevier Global Medical News

Two forms of postnatal intervention—one with trained nurses or midwives, and another with a peer—significantly reduced the likelihood of postnatal depression, according to recent research.

The studies "add to the growing evidence that postnatal depression can be effectively treated and possibly prevented," Dr. Cindy-Lee Dennis of the department of psychiatry at the University of Toronto and one of the lead investigators, wrote in an accompanying editorial (BMJ 2009:338:a3045 [doi:10.1136/bmj.a3064]).

The first study assessed the impact of a postnatal intervention conducted by trained "health visitors." In the United Kingdom, health visitors are registered nurses or midwives who postnatally work with mothers on feeding, safety, physical and emotional development, and other aspects of health and child care, according to the National Health Service Web site.

In the first study, the health visitors provided weekly 1-hour counseling sessions in the mother's home for up to 8 weeks, starting at 8 weeks postnatally.

The health visitors were "trained to identify depressive symptoms using the Edinburgh postnatal depression scale (EPDS) and to use clinical assessment skills to assess a mother's mood, including suicidal thoughts," wrote Dr. C. Jane Morrell of the University of Huddersfield (England) and her colleagues (BMJ 2009;338:a3045 [doi:10.1136/bmj.a3045]).

The health visitors provided weekly 1-hour counseling sessions in the mother's home for up to 8 weeks, starting at 8 weeks postnatally. A control group was given usual care, without the in-home psychological sessions.

A total of 4,084 eligible women consented to participate, and 595 had a 6-week EPDS score greater than or equal to 12, which indicates the possibility of depression. The maximum score is 30.

Ultimately, 418 women who participated in the program had follow-up EPDS scores at 6 months and were analyzed.

At 6 months, the authors reported that the 271 women in the intervention group whose 6-week score had been greater than or equal to 12 were 40% less likely to have a score greater than or equal to 12, compared with the 147 women in the control group.

Furthermore, wrote Dr. Morrell and her associates, "the differences in the mean EPDS scores at 6 months … were sustained at 12 months."

The trial "provides new evidence of the effectiveness of a package of training for health visitors to identify symptoms of depression postnatally and to provide psychologically informed sessions," wrote the authors. They declared no competing interests and wrote that the study was funded entirely by the NHS.

The second randomized, controlled trial looked at the impact of a telephone-based intervention with nonmedical professional peers for postnatal women with an EPDS greater than 12.

A total of 315 women received usual care with follow-up information available at 12 weeks. Usual care "could have included, if available, the mother proactively seeking the services from public health nurses, physicians, other providers, and various community resources."

In contrast, the 297 women who were randomized to the intervention group and had follow-up data at 12 weeks received usual care plus telephone access to a peer volunteer—a mother who had personally experienced postnatal depression.

The volunteers were trained in providing telephone-based support and made referrals to health care professionals, if necessary, and in role playing.

A minimum of four contacts between the mother and peer volunteer were made.

"Women in the intervention group were significantly less likely to have symptoms of postnatal depression at the 12-week assessment than [were] those in the control group (odds ratio 2.1)," wrote the authors, led by Dr. Dennis.

"Specifically, 14% (40/297) of women in the intervention group had a score greater than 12, compared with 25% (78/315) in the control group."

More than 80% of the 221 women who received peer counseling and evaluated their experience said that they would recommend the support to a friend and that they were satisfied with the experience.

Dr. Dennis disclosed having no individual competing interests.

Her study was supported by the Canadian Institutes of Health. ■