



Does treatment of mild gestational diabetes improve pregnancy outcome?

Yes This randomized, controlled trial of 958 women who had mild gestational diabetes (GDM) found that dietary intervention, self-monitoring of blood glucose, and (when necessary) insulin therapy reduced the risk of fetal overgrowth, shoulder dystocia, cesarean delivery, and hypertensive disorders, compared with customary obstetric care.

Intervention did not, however, significantly reduce the frequency of a composite outcome that included stillbirth or perinatal death and several neonatal complications.

Landon MB, Spong CY, Thom E, et al, for the Eunice Kennedy Shriver National Institute of Child Health and Human Development Maternal-Fetal Medicine Units Network. A multicenter, randomized trial of treatment for mild gestational diabetes. N Engl J Med. 2009;361:1339-1348.

► EXPERT COMMENTARY

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Whether testing for GDM is justified has been a source of contention for more than 20 years. The identification of people who are afflicted with any disease is most useful when treatment is known to produce a benefit. Until recently, evidence that treatment of GDM provides maternal, fetal, or neonatal benefit has been observational. This lack of definitive data has been particularly striking in cases involving glucose intolerance not severe enough to require initial treatment with anything more than diet.

Two blinded, randomized, controlled trials published within the past 5 years—one from Australia (the Australian Carbohydrate Intolerance Study in Pregnant Women [ACHOIS study]!) and the other from the Maternal-Fetal Medicine Units (MFMU) Network (cited above)—provide evidence that

treatment of less severe GDM does reduce the incidence of adverse maternal and perinatal outcomes.

Details of the trials

Both studies randomized women who had mild GDM to a treatment group and a group that received only routine prenatal care. Treatment consisted of changes in diet, with the addition of insulin if certain maternal glycemic thresholds were met during the course of pregnancy.

Although sample size and results of the 50-g 1-hour glucose screening test and fasting glucose tolerance test were similar in both studies, comparison between the trials

WHAT THIS EVIDENCE MEANS FOR PRACTICE

In these studies, positive outcomes were achieved for most subjects using a simple and inexpensive intervention: diet change. Because the majority of large babies are born to women who are overweight and obese and who do not have GDM, it seems reasonable to speculate that the application of diet change and weight monitoring to this growing subset of the obstetric population may achieve positive short- and long-term outcomes for both mother and baby. Confirmation of this speculation awaits the execution of well-designed, adequately powered randomized trials. Until then, it seems reasonable for you to advocate weight loss and balanced nutrition for your patients who are planning to conceive or who are already pregnant, with an eye toward reduced rates of macrosomia, shoulder dystocia, cesarean delivery, and hypertensive disorders.

» DAVID A. SACKS, MD

FAST TRACK

Dietary intervention with self-monitoring of blood glucose and insulin therapy, when necessary, reduces the risk of macrosomia, shoulder dystocia, cesarean delivery, and hypertensive disorders



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Examining the EVIDENCE

is difficult because of differences in:

- maternal prepregnancy body mass indices
- selection of candidates for glucose tolerance testing
- glucose loads during the glucose tolerance test (75 and 100 g in the ACHOIS and MFMU studies, respectively)
- glycemic thresholds and number of exceeded thresholds needed to define GDM
- percentage of patients requiring insulin in addition to diet treatment (20% and 8% in the ACHOIS and MFMU studies, respectively).

Absent from both studies is reporting of daily blood glucose values, which would have facilitated analysis of the nature of the relationship between maternal glucose concentrations and clinical outcomes.

Nonetheless, after adjusting for confounders, both studies found a reduction in the rate of macrosomia, preeclampsia, and maternal weight gain among women in the study group, compared with the control group. ❌

Reference

1. Crowther CA, Hiller JE, Moss JR, McPhee AJ, Jeffries WS, Robinson JS. Effect of treatment of gestational diabetes mellitus on pregnancy outcomes. *N Engl J Med.* 2005;352:2477-2486.

Did you know?

Complications and costs of obesity surgery are declining

Complications from bariatric surgery dropped 21% overall from 2002 to 2006—a finding that comes out of a new study from USHHS's Agency for Healthcare Research and Quality (AHRQ) and the University of Maryland, Baltimore (in the May 2009 issue of *Medical Care*). Postsurgical infection rates declined 58%. Complications ranging from hernias to respiratory failure and pneumonia also fell substantially.

See the article on bariatric surgery and the care of women who undergo this treatment, on page 36 of this issue of OBG Management.