Guest Editorial

Routine Screening for Gestational Diabetes Reconsidered

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Recent papers by Swinker[1] and Reed[2] in *The Journal of Family Practice* have strongly recommended the routine screening of pregnant women for gestational diabetes. Swinker reported a study based upon the method of O'Sullivan et al,[3] using 50 g of oral glucose and a one-hour plasma glucose measurement at 28 weeks' gestation. Reed reported a cost-effectiveness analysis of this same screening method and advocated its use in all pregnant women aged over 25 years. On the surface their reports appear sound, and this screening method is becoming a standard of care. Our analysis of what is known about gestational diabetes and the problems associated with application of this screening test, however, lead us to believe that routine screening by this method is not justifiable at this time.

There is no question that overt diabetes mellitus during pregnancy is associated with many increased perinatal risks. Gestational diabetes is not defined uniformly in the literature, however. Gestational diabetes may include women first diagnosed as diabetic during pregnancy, some of whom may be insulin dependent; the category may be equivalent to White's class A diabetic: chemical diabetes found prior to or during pregnancy[4]; or it may be defined as only those women who are hyperglycemic when pregnant and revert to normal after pregnancy. The studies indicating increased risk of gestational diabetics have failed to separate these groups. As stated by Schwartz and Brenner,[5] "the range of definitions of gestational diabetes, all of which are in current use, makes rational discourse almost impossible." Mestman,[6] who found that the perinatal mortality in uncomplicated class A diabetic women as low as the general population, recommended that the term *gestational diabetes* be abandoned. The excess risks to infants and to those women who are mildly

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hyperglycemic in pregnancy are unclear.

In evaluating the "costs" of this screening test, Reed failed to discuss the impact such screening will have on prenatal care. In the study by Swinker, nearly one third of prenatal patients would be labeled as "possibly diabetic" and would undergo a three-hour glucose tolerance test. O'Sullivan reported that 15 percent of screening tests were positive, with a predictive value of only 14 percent, that is, six of seven women with a positive screening test will not have significant hyperglycemia.

We feel the false-positive rate of this screening is unacceptable and will interfere with normal prenatal care. A recent patient illustrates the problem: A 28-year-old, gravida 2 para 1, woman came for prenatal care for her second child. She reported that two years earlier during her first pregnancy she had had a screening test (O'Sullivan method) positive for gestational diabetes. She had had no family history of diabetes or other risk factors. Her subsequent oral glucose tolerance test had been "borderline." She had continued her already appropriate diet. She expressed dismay at having been labeled "possibly diabetic," which had required that she have weekly stress tests from 34 weeks' gestation, and her labor induced at term. She reported having had a difficult labor, with internal monitoring and oxytocin induction, and was delivered of a healthy 7-pound infant. She expressed a desire for a more natural course the second time. For this pregnancy, her weight gain was again less than 35 pounds. A fasting glucose at 28 weeks' gestation was 70 mg/dL, and she was delivered of a healthy 7-pound infant after a four-hour spontaneous labor at 41 weeks.

Diabetic women should be well controlled from conception to delivery and their prenatal course managed appropriately. Traditional history and urine dipstick screening will miss a high proportion of women who develop hyperglycemia during pregnancy. Nevertheless, for the following reasons, it is not yet clear that all pregnant women should be screened with a 50-g glucose load: (1) the variable definitions of gestational diabetes leave our knowledge of the natural history of mild hyperglycemia in pregnancy uncertain; (2) without clear studies of the natural histories of all the different subgroups of gestational diabetes, the value of early intervention for mild hyperglycemic women is unknown; and (3) the low predictive value of this test results in an unacceptably high proportion of false-positive tests, resulting in the cost of further testing, labeling, and interference with otherwise normal prenatal care.

Addendum

Since the preparation of this editorial, the Proceedings of the Second International Workshop-Conference on Gestational Diabetes Mellitus have been published.[7] This invitational conference was sponsored by the American Diabetes Association in conjunction with the American College of Obstetricians and Gynecologists, the American Academy of Pediatrics, and a group from Europe. The series of papers reiterates the variation of patients under the category of gestational diabetes. The natural history of untreated mild glucose intolerance remains unknown. However, the group recommends that all pregnant women be screened between 24-28 weeks with a 50g glucose load, with a one-hour plasma glucose $\geq$140 ml/dL as the threshold for a full glucose tolerance test. We continue to feel that it is premature to recommend screening of all pregnant women for glucose intolerance because of the reasons stated above.

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