COMMENT ON HUGHES ET AL.

An Early Pregnancy HbA_{1c} ≥5.9% (41 mmol/mol) Is Optimal for Detecting Diabetes and Identifies Women at Increased Risk of Adverse Pregnancy Outcomes. Diabetes Care 2014;37: 2953–2959

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We welcome the article by Hughes et al. (1) on glycosylated hemoglobin A_{1c} (HbA_{1c}) as a readily available screening tool that the authors propose be used to identify undiagnosed diabetes during the early prenatal period. However, we submit that the low subject participation rate of 23% severely limits the validity of their findings.

Data obtained from only 23% of the study participants do not allow one to have confidence that the selected 5.9% (41 mmol/mol) HbA_{1c} cutoff correlates with an abnormal oral glucose tolerance test. The authors should note that other investigators suggest study enrollments can be enhanced by improved patient rapport or patient education about their potential contribution to future care (2).

Furthermore, with such low participation in the oral glucose tolerance test, it is reasonable to suggest that the study results may have been due to selection bias that affects the validity of the authors' conclusions. It is possible, for example, that some differences in socioeconomic status allowed more time for certain women to participate in a longer doctor visit or perhaps some women had prior knowledge or family history of glucose intolerance that affected their willingness to participate.

Even though it is commonly accepted that random plasma glucose is not the most accurate measure of glucose tolerance, it would be interesting to know why the researchers chose not to report random plasma glucose in the study. Could these data have been correlated to HbA_{1c} levels and pregnancy outcomes or at least have demonstrated a pattern that has clinical interest?

Although HbA_{1c} data were stratified based on maternal age, BMI, and ethnicity, no attention was given to the prevalence of iron deficiency anemia, a condition known to directly affect the level of glycosylated hemoglobin (3). It would also have been helpful to understand if HbA_{1c} levels correlated with other factors, such as socioeconomic status, tobacco or alcohol use, and comorbidities, such as hypertension, psychiatric disease, or domestic violence.

In the era of evidence-based medicine, much of the evidence we are to rely upon may be inadequate. This may be particularly true for the detection of diabetes early in pregnancy, which could likely represent undiagnosed pregestational diabetes. Hughes et al. (1) presented useful data to begin the process of exploring a more varied use of HbA_{1c} during the early prenatal period.

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