

One-Step Approach to Identifying Gestational Diabetes Mellitus: Association With Perinatal Outcomes

We read with interest the retrospective before-and-after study by Pocobelli et al¹ in the October 2018 issue comparing a period of testing with the two-step approach with a subsequent period of testing with the one-step approach for gestational diabetes mellitus (GDM). Pocobelli et al state that, “No randomized trial has been published comparing outcomes of the two approaches.”

Four randomized controlled trials (RCTs) comparing the one-step with the two-step approach for GDM testing have been published: two from the United States,^{2,3} one from Canada,⁴ and one from Turkey.⁵ In these RCTs, women were randomized to be screened for GDM with either the one-step or two-step approach. A meta-analysis of these four RCTs, including 2,617 women, recently reported that the incidence of GDM was not significantly increased (from 4.4% to 8.3%), mothers gained 1.3 kg less weight, and patients experienced a nonsignificant 34% decrease in preeclampsia, comparing the one-step with the two-step approach, respectively.⁶ The one-step approach was also associated with some neonatal benefits, including significantly decreased incidences of large for gestational age by 57%, hypoglycemia by 48%, and intensive care admission by 51%. Neonatal death occurred in one neonate of a mother randomized to the one-step test, and four neo-

nates of mothers randomized to the two-step test (a 74% nonsignificant decrease for the one-step test).⁶ Test of heterogeneity in the meta-analysis and of quality all pointed to better outcomes in the one-step test group.⁶ We want to make sure that readers are aware of this prospective evidence from RCTs, too.

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In Reply:

We agree with Berghella et al that it is important to consider our results in context, including considering results from their recent randomized controlled trial (RCT)¹ and meta-analysis.² We appreciate that they obtained unpublished data from a prior RCT that previously reported findings only for women who tested negative for gestational diabetes mellitus (GDM).³ However, we interpret the results from their meta-analysis somewhat differently. In their letter, they highlight some nonstatistically significant findings associated with receipt of the one-step compared with the two-step approach; specifically, lesser gestational weight gain and decreased risks of preeclampsia and neonatal death. However, the amount of uncertainty associated with those findings is worth noting. The upper bounds of the 95% CIs show that their results were also consistent with a 3.5-kg mean gestational weight gain, a 3.0-fold increased risk of preeclampsia, and a 2.3-fold increased risk of neonatal death with the one-step strategy. The data on gestational weight gain came from a single study of 47 women,⁴ and all neonatal deaths (n=5) were from unpublished data from a single study.³ Berghella et al also point to a statistically significant decreased risk of neonatal intensive care unit (NICU) admission, but

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