COMMENT ON MCINTYRE AND MOSES

The Diagnosis and Management of Gestational Diabetes Mellitus in the Context of the COVID-19 Pandemic. Diabetes Care 2020;43:1433–1434

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We read with interest the article by McIntyre and Moses in the July issue of *Diabetes Care* (1), which prompted us to look at our data for screening for gestational diabetes mellitus (GDM) in relation to the recently published U.K. Royal College of Obstetricians and Gynaecologists (RCOG) guidelines for maternal medicine during the coronavirus pandemic that include guidance on antenatal care for women with GDM (2). The guidance recommends the use of HbA_{1c} and fasting plasma glucose (FPG) or random plasma glucose (RPG) in a two-step approach at booking and at 28 weeks' gestation with a recommendation that, at booking, an $HbA_{1c} \geq 48$ mmol/mol or an RPG ≥ 11.1 mmol/L would be managed as type 2 diabetes in pregnancy and an HbA_{1c} 41–47 mmol/mol or an RPG 9–11 mmol/L would prompt management as GDM. The thresholds for diagnosing GDM at 28 weeks are $HbA_{1c} \geq 39$ mmol/mol or FPG ≥ 5.6 mmol/L or RPG ≥ 9 mmol/L. This approach would require pregnant women who satisfy the criteria for being screened for GDM to attend on two occasions (the first as part of their booking visit) for diagnostic purposes. It would negate the need to wait for a second blood sample in a glucose tolerance test (GTT) with the rationale that this would decrease the risk of exposure to and infection with coronavirus disease 2019 (COVID-19). The college's committee responsible for producing the guidance acknowledge, in their rationale behind using the cutoff thresholds, that an $HbA_{1c} \geq 39$ mmol/mol has a specificity of 0.90 (95% CI 0.79–0.95) and a sensitivity of 0.36 (95% CI 0.23–0.52) for detecting GDM based on a diagnostic criteria of GTT FPG ≥ 5.6 mmol/L and 2-h postprandial glucose ≥ 7.8 mmol/L (National Institute for Health and Care Excellence [NICE] criteria) (3), therefore missing 64% of women. An FPG ≥ 5.6 mmol/L had a detection rate of 41% using the same diagnostic criteria, and the addition of an FPG threshold of ≥ 5.3 mmol/L only marginally improves the diagnostic sensitivity to being able to diagnose 45% of women.

We reviewed the data from our diabetes antenatal clinic at Wythenshawe Hospital, Manchester, U.K. In 2019, 205 women with GDM attended our diabetes antenatal clinic, with 152 diagnosed on the basis of oral GTT using NICE criteria (38 with an FPG ≥ 5.6 mmol/L, 93 with 2-h glucose ≥ 7.8 mmol/L, and 21 with both fasting and 2-h values being abnormal).

Applying the RCOG criteria to the same cohort, 73 out of 155 would have been diagnosed with GDM (55 by FPG ≥ 5.6 mmol/L, 7 by $HbA_{1c} \geq 39$ mmol/L, and 11 by both criteria). For 83 out of 155 women (53.5%), a diagnosis of GDM would have been missed. Of these 83 women in our cohort, 43 were managed by diet changes alone, 24 required metformin, and 16 required insulin with or without metformin. If the cutoff threshold of FPG ≥ 5.3 mmol/L was used, a further 9 women would have been diagnosed, meaning the diagnosis would still be missed in 74 women.

We believe that using these diagnostic criteria would result in an unacceptable number of women with GDM being missed, with the potential for increased rates of both maternal and fetal complications, particularly with the restricted number of antennal visits and monitoring during the COVID-19 pandemic. There is no evidence as far as we are aware that this is offset by a reduction in morbidity and mortality related to increased rates of infection with COVID-19. Continuing to use GTT for the diagnosis of GDM provided adequate safety and distancing precautions are in place would surely be the preferred option for these women and their infants.

Duality of Interest. No potential conflicts of interest relevant to this article were reported.

References

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