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COMMENTS AND RESPONSES

Comment on: Zhu et al. Fasting Plasma Glucose at 24–28 Weeks to Screen for Gestational Diabetes Mellitus: New Evidence From China. Diabetes Care 2013;36:2038–2040

The article by Zhu et al. (1) published in *Diabetes Care* concludes that a fasting plasma glucose (FPG) at 24–28 weeks' gestation can be used in low-resource regions as a screening test to identify gestational diabetes mellitus (GDM) in Chinese patients. However, in their experience, a screening protocol using FPG cutoff points of ≥4.4 and ≤5.0 mmol/L would fail to identify about 12% of the GDM cases and require a formal oral glucose tolerance test (OGTT) to be performed in about half of the pregnant population (1). These observations contrast with our findings in a circum-Mediterranean population (2). In our population, a comparative FPG screening protocol followed by an OGTT in those women whose FPG level was 4.4–5.0 mmol/L will fail to identify 10.1% of the GDM population as defined by the American Diabetes Association criteria but would require a formal OGTT in 31.1% of the pregnant population.

In our experience, a further reduction in the number of OGTT tests can be obtained by using a composite risk criteria whereby women with an FPG ≥5.1 mmol/L are considered as suffering from GDM in line with the International Association of the Diabetes and Pregnancy Study Groups criteria of diagnosis (accounting for 73.9% of GDM cases and 9.8% of normal glucose tolerance [NGT] women); women with an FPG ≤4.4 mmol/L are considered as normal (accounting for 10.1% of GDM cases, 57.7% of NGT cases); and women with FPG values of 4.4–5.0 mmol/L are considered as suffering from GDM if they are adipose (defined as a prepregnancy BMI <25 kg/m^2 or a third trimester BMI <30 kg/m^2) accounting for 5.9% of the GDM cases and 14.2% of the NGT women. An OGTT would then only be required in lean women whose FPG screening test was 4.4–5.0 mmol/L who account for only 17.6% of the population. This composite screening protocol using an FPG, maternal adiposity, and targeted OGTT has a sensitivity and specificity of 89.9 and 76.1%, and positive and negative predictive values of 26.4 and 1.2%. This composite screening is similarly useful should one prefer to adopt the International Association of the Diabetes and Pregnancy Study Groups criteria for diagnosis. In this situation, the protocol had a sensitivity and specificity of 84.1 and 86.3%, and positive and negative predictive values of 68.9 and 6.3%.

It does appear therefore that in the Mediterranean population, it is reasonable to adopt a composite screening protocol to identify GDM women, especially when one considers that the adipose pregnant NGT woman carried similar risks and should receive similar lifestyle and nutritional advice as the GDM woman.

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