

To the Editors:

Gestational diabetes mellitus: the importance of adherence to diagnostic criteria in research

We read with interest the article on gestational diabetes mellitus (GDM) by Wijeyaratne and colleagues [1].

They have used a three-point oral glucose tolerance test (OGTT) while claiming to have used the World Health Organization (WHO) criteria of 1999 as the 'gold standard' for diagnosing GDM. This is incorrect, since the WHO criteria are based on only two values [2].

In another deviation from the WHO criteria, they have used this extra value to label some datasets as having a 'lag curve'. Since the WHO criteria do not include a one-hour value, it does not recognise such a pattern. In the part evaluating the fasting plasma glucose (FPG) the authors have excluded as many as 11.6% of the datasets from the final analysis on this basis. These may have included women who had GDM by the WHO criteria. This deviation is a serious deficiency in this paper.

There are 11 internationally recognised diagnostic criteria for the diagnosis of GDM, but none of these, including those that use three or four point OGTTs recognise a 'lag curve' [3]. The authors have failed to provide a rationale or evidence for the usefulness of identifying these datasets and for their exclusion.

We studied the value of the FPG in the OGTT according to the WHO criteria [2] shortly before the authors, using data from the same laboratory and an identical population [4]. Our finding was that a one-step, two-hour OGTT would miss only 0.4% of GDM (95% CI 0.1–0.7). We proposed that this approach would be cost-effective in settings with poor resources. Although the authors contend that this would produce 12% false positives, the way this was calculated has not been shown.

A two-hour value above the threshold is diagnostic of GDM by the WHO criteria and therefore false positives are impossible by this approach.

The authors also recommend that the fasting value of the OGTT be dispensed with and replaced by the one-hour value. Although the FPG in the OGTT is of limited value, there is no evidence in this paper to support its replacement by the one-hour value or to suggest that it would improve diagnostic accuracy.

It is essential to adhere to recognised diagnostic criteria in research since it is only then that comparable, useful data can be generated. Failure to do so has seriously compromised the validity of this paper.

References

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Hemantha Senanayake, Senior Lecturer, Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Colombo, **Sanjeewa Seneviratne**, Medical Officer, Blood Bank, Base Hospital, Homagama, and **Sumedha Wijeratne**, Lecturer, Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Colombo.

Correspondence: HS, e-mail: <senanayakeh@gmail.com>.