Reviewer's report

Title: Ethnic differences translate to inadequacy of high-risk screening for gestational diabetes mellitus in an Asian population: a cohort study

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Reviewer: Anthony Desmond McCarthy

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'Ethnic differences translate to inadequacy of high-risk screening for gestational diabetes mellitus in an Asian population: a cohort study'
Yap-Seng Chong et al.
Research article - BMC Pregnancy and Childbirth

This is a well-written manuscript that proposes to evaluate the adequacy of high-risk versus universal screening for GDM, in pregnant women who reside in Singapore and are of Chinese or Malay extraction. Subjects of Indian extraction were also included in the study, but as they are considered to be a high-risk group for GDM, universal screening is already recommended in their case.

The authors found that for subjects of Chinese or Malay extraction, high-risk screening would have diagnosed 33-60% of the cases of GDM that were in actual fact detected by universal screening, and conclude that “universal screening for GDM should be instituted in Asian populations, particularly for Chinese and Indian women”. These results should be of great interest for obstetricians practicing in Singapore, who would do well to take them into account when evaluating detection of GDM for their patients.

There are however some concerns that need to be addressed:

Major Compulsory Revisions:

(1) In order to evaluate whether universal screening for GDM is applicable in a given population, an OGTT must be performed in a representative (unbiased) cross-section of pregnant women from that population. At a first glance, this does not appear to be the case for the 1136 women of the present study (average age 30.7 years; 30% had family history of Diabetes; almost 20% GDM detected by universal screening). If the authors consider that their study group is unbiased, they must compare their demographic and clinical characteristics (Table 1 and prevalence of GDM) with those supplied by the Singapore Statistics Bureau (or equivalent Institution), in the Results and/or Discussion sections. However, if they conclude that their study group is biased this must be clarified in all relevant sections (Abstract, Results, Discussion and Conclusions), as well as explained (maybe the fact that subjects were recruited in Hospitals instead of Primary Health Care Centres?).
Minor Essential Revisions:

(1) Is the value given for GDM diagnosis by fasting hyperglycaemia (>7.0 mM) correct? According to 2006 WHO recommendations for hyperglycaemia first detected in pregnancy, fasting plasma glucose >7.0 mM is diagnostic for Diabetes mellitus in pregnancy. And according to the current (2013) WHO recommendations, fasting plasma glucose between 5.1 and 6.9 mM is diagnostic for GDM (this can be downloaded from http://apps.who.int/iris/bitstream/10665/85975/1/WHO_NMH_MND_13.2_eng.pdf).

(2) Given that incidence of Diabetes in general (and GDM in particular) is dependent on the lifestyle as well as on the genetic background of an individual, the statement included in the first sentence of the Conclusion seems rather far-fetched and until proven otherwise should be restricted to “…Asian populations resident in Singapore…”. The lifestyle of individuals of Chinese, Malay or Indian extraction who reside in countries such as Australia, United States, Canada and the United Kingdom, could differ importantly from those who reside in Singapore and this would limit the extrapolation of the results of this study.

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests