Reviewer's report

Title: Effect of Body Mass Index on pregnancy outcomes in nulliparous women delivering singleton babies

Version: 1 Date: 27 April 2007

Reviewer: Patricia M. Dietz

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Comments for the Authors

This retrospective cohort study of nulliparous women delivering singletons in Aberdeen between 1976-2005 examined the association between maternal BMI and obstetric and perinatal outcomes. Obesity was associated with increased risks of preeclampsia, emergency caesarean section rates, postpartum haemorrhage, and preterm delivery. Low BMI was associated with birthweight < 2500 grams.

Minor Essential Revisions

1. Abstract classifies morbidly obese as >35 BMI whereas methods, line 167 classifies it as > 40 BMI. These need to be consistent.

2. line 204, % is missing from 1.9

3. The authors use stillbirth in text and in table 2, but in table 3 use live birth. It would be easier for the reader to model stillbirth instead of live birth and report those findings in table 3 (see line 301).

4. line 290, use of IUGR isn't appropriate as the variable was birth weight <2500 grams, which includes IUGR and preterm infants appropriate for gestational age. I would recommend using <2500 grams consistently through out the paper.

5. There is a typo/extra word on line 331.

6. Table 3 -- why is NS used some of the time? It would be better to present all the results.

Major Compulsory Revisions

1. Methods: more detail is needed on the definitions/ICD-9 codes used to define variables. For example, was height and weight measured or was it based on self-report? This information was in the discussion but belongs in the methods. How was emergency c-section identified and defined? What was gestational age based on (e.g. LMP, ultrasound, clinician's best guess)

2. line 234, the model for predicting preterm delivery did not include adjustment for pre-eclampsia. This adjustment would give information whether the effect of obesity on preterm delivery was through the increased risk of pre-eclampsia.

3. line 280-288. The differences in findings regarding preterm may reflect differences in what was adjusted for in the models. Adding this information to the discussion would help to understand differences in
study findings.

4. line 292-294. The authors state that after adjustment, morbidly obese was not associated with macrosomia, yet on Table 3, the results show that it was, even after adjustment.

5. line 338, values measured at a prenatal visit may be less accurate than those based on recall of height and weight before pregnancy, but they are unlikely to be biased. Self-reported weight and height are more likely to have bias.

GUIDELINES

1. Is the question posed by the authors new and well defined?
The question is well defined, but it is not new.

2. Are the methods appropriate and well described, and are sufficient details provided to replicate the work?
Methods are appropriate overall but details on the measurement of outcomes was missing.

3. Are the data sound and well controlled?
Data appear to be sound and well controlled.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition? Yes

5. Are the discussion and conclusions well balanced and adequately supported by the data? Yes, but there are some inaccuracies in the discussion that need to be addressed.

6. Do the title and abstract accurately convey what has been found? The title is accurate. There is a discrepancy in the abstract on the measurement of morbidly obese that differs from what is written in the methods.

7. Is the writing acceptable? yes