Reviewer's report

Title: Maternal obesity and postpartum haemorrhage after vaginal and caesarean delivery among nulliparous women at term: a retrospective cohort study

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Reviewer: John Morrison

Reviewer's report:

I think this is an interesting manuscript on a complex problem. The current data available in the literature are conflicting in relation to the true association between maternal BMI and the risk of postpartum haemorrhage. This study however is focused entirely on nulliparous women. I have outlined below some issues to be addressed in relation to this manuscript.

1. The introduction does not adequately deal with previously published reports pertaining specifically to PPH risk and BMI. The introduction deals with obesity, and PPH separately, but simply states at the end of the first paragraph that BMI has not been considered much as a risk factor for PPH, and that the data are inconsistent, citing 3 references. This is the central point of the paper, and should be adequately addressed in the introduction, including recent references e.g. Arrowsmith et al 2011, Bloomberg 2011, some of which are cited later in the paper.

2. I think the comment speculating that obese women who give birth vaginally are likely to have normal myometrial contractility, presumably in comparison to those who have a caesarean delivery, is rather simplistic and not well founded. The causes of caesarean section in obese women are poorly understood and often multifactorial.

3. The main issue I have with this study is that the rates of PPH > 1000mls are extraordinarily high - 16.2% overall in women having a caesarean section, and 24.2% in obese women having a caesarean section. These are much higher rates than those published in other papers, and in relation to general hospital statistics. I find them hard to accept, but also appreciate that this is what was observed. It may require a comment or explanation on how the volume of PPH was assessed. The authors argue in the discussion that this high rate was is consistent with one other study when parity is taken into account.

4. It is my view that PPH with retained placenta should be analyzed separately. It represents a definite cause and is different to the concept that atonic PPH may be more prevalent in obese women due to some type of dysfunctional contractile performance. It would be interesting to see if this has any bearing on the results, i.e. if cases of PPH for this reason are analyzed separately.
Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests