Reviewer's report

Title: Intra-umbilical injection of misoprostol versus normal saline in the management of retained placenta: A randomized controlled trial

Version: 3 Date: 31 July 2013

Reviewer: Andrew Weeks

Reviewer's report:

The authors are to be congratulated on conducting this intrapartum placebo-controlled trial. It is rare to see a trial being conducted in areas where the retained placenta morbidity is potentially very high and where the techniques would be most useful. Their results are therefore potentially highly relevant to the end users.

Major Compulsory Revisions

1. The authors need to be completely clear about whether their study is randomised or not. The abstract calls it a 'randomised' clinical trial, but the manuscript talks of 'alternate allocation'. The crucial factor is whether the researcher knew what group the woman would be allocated to when she was being recruited, or whether she was allocated according to chance (e.g. by choosing allocation papers from a bag, or rolling a dice). The text and abstract needs to make this clear.

2. There is one woman excluded from the misoprostol group, but the analysis should include her under the 'intention to treat' rule. It is not clear what the authors mean by 'the cord was slipped' (did it detach from the placenta?), but once she has been included into the study and the study treatment given she need to be included. After all, the 'slipping' could be as a result of the injection. This means a re-analysis of all the data for the misoprostol group unfortunately.

Minor Essential Revisions

1. In the abstract the authors should report just the results relating to the main objectives of the study.

2. In the background the authors should give the Herman 1993 reference.

3. A sample size calculation should be added to the methods section.

4. The measurement of blood loss section should clarify that the blood collection only started after administration of the drug (if that is true) and did not include the blood loss from the time of delivery.

5. The gestational age was significantly different between the groups and this needs to be mentioned.

6. Blood loss is not usually normally distributed and so the median blood loss (and Mann-Whitney test) is the better technique for analysis.

7. In the references it would be better to use the Cochrane review (or the WHO
Reproductive Health Library) instead of the unpublished thesis for the systematic review.

8. The demographic data is best reported all in the same table - i would therefore combine tables 1 and 2 (and remove the range values)

9. The outcomes are also best reported together - i would shorten table 3 to just 'need for manual removal i.e. 1 vs 6 (or probably 2 vs 6 with the 'slipped cord' included) and add the outcomes for blood loss and time to separation beneath (but see 10 below).

10. In tables 4 and 5, there are 95% CIs presented, but it is unclear what the 95% CIs are around. It would be easier if there is a continuous outcome (with statistical test) and then a single categorisation (with Relative risk and 95% CI).

Discretionary Revisions

1. In the intraumbilical uterotonics section, the authors should include the Release trial (Lancet 2010), the Cochrane reviews and the WHO recommendations on postpartum haemorrhage and retained placenta from 2012. These all show that intraumbilical oxytocin is not used because it is probably ineffective.

2. The number of women in the study should only be written in the results and not in the methods section.

3. Blood loss and time to separation are reported as means in the text but are categorised in the tables. It is more conventional (and easier to understand) if the data is summarised as means or medians and then a single categorical outcome used for each (for example over 250ml blood loss, and time over 15 minutes for example).

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Not suitable for publication unless extensively edited

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

**Declaration of competing interests:**

I have no competing interests.