Reviewer's report

**Title:** Uterine rupture in a Teaching hospital in Mbarara, western Uganda, unmatched case-control study

**Version:** 1  **Date:** 30 December 2012

**Reviewer:** Thomas van den Akker

**Reviewer's report:**

Major compulsory revisions:

The abstract needs major adjustments:

1. There are several typing errors (e.g. ‘of’ missing as the fifth word in the first sentence) and the authors need to proofread (this comment goes for the whole document).

2. The background section of the abstract does not make it clear whether uterine rupture should get particular attention in Uganda. The (no doubt major) relevance of this study is not expressed. Also, no study objective is given in this section

3. The abstract's methods section is too limited.

4. Some ORs in the results section are below 1 and make it seem as if ‘predisposing factors’ are rather ‘protective factors’. It is not clear how many maternal deaths were due to uterine rupture, and the final figures give no comparison with the control group. It also appears as if monitoring the partograph makes no difference in preventing uterine rupture.

5. Some of the statements in the conclusion do not follow logically from the rest of the abstract. Since no mention is made of other causes of maternal and newborn mortality it is not clear that uterine rupture is really ‘one of the major causes’. From the results section I gather much more specific/important recommendations than the ones given (e.g. family planning to prevent grand multiparity, reducing the use of local herbs, preventing unnecessary c-sections etc.). Which ‘timely interventions’ are meant?

6. Keywords could be expanded, but I am in doubt as to how many keywords the journal allows.

**Background:**

1. The statement on the incidence of severe maternal morbidity in the first paragraph is questionable and depends on definitions used (ref Say et al. Reprod Health 2004).

2. It is doubtful that deaths due to uterine rupture are (only) included in PPH figures.

3. The role of obstructed labour in uterine rupture as one of the most important risk factors in low resource settings (versus previous c-sections in high-resource
settings) is mentioned relatively late in the section and therefore the previous mention of VVF and ‘foot drop’ as associated with RU (which are actually complications of obstructed labour) is confusing to the reader.

4. Impacting negatively on MDG 4 and 5 is not at all a ‘unique potential’

5. The other ‘important’ risk factors are not all equally important, and perhaps attention should be given to the fact that these factors are setting-/context-dependent and their (relative) importance unclear in many settings (e.g. abnormal placentation is rarely a contributing factor, and certainly not very important in a context of frequent obstructed labour; the statement regarding the ‘injudicious use of oxytocics’ is dangerous since correct use of oxytocics only gives a moderate increase in risk and is important in the prevention of prolonged labour – the term ‘injudicious’ needs more careful explanation and to be embedded in a context).

Materials and methods:
This whole section is too limited and needs considerable attention: e.g. were cases retrospectively collected? By whom: who was providing oversight over the midwives? What was the exact study period? What was done to prevent underreporting? Etc. etc.

Results:
1. Some of the information in the text is a duplication of the Table and therefore unnecessary.
2. Some of the ORs are not clear to me, as stated before.
3. Here the importance of the partograph is expressed much more clearly than in the abstract! At least the OR is explanatory. The sentence ‘Only 15%... partograph’ is not clear to me, and I do not see it in the Table.

Discussion:
1. This section is very long compared to other sections; limitations and implications should be included, and the whole section should be shortened. There are many vague and general statements that could be omitted. Emphasis must be put on those recommendations that are directly relevant for the clinic, such as improved partograph use. Could there be bias among collectors with regard to herbs being mentioned as a major risk factor? In this way, the health worker could remain blame-free.
2. Was any type of audit done? Could be mentioned as a tool.
3. I miss references to several studies of RU in similar settings (e.g. van den Akker et al. Using audit to reduce the incidence of uterine rupture in a Malawian District Hospital, Int J Gynaecol Obstet 2009)
4. Management differed quite markedly in this study from for instance the study above: more hysterectomies, fewer repairs. Any explanation for this?
5. Family planning is only marginally mentioned.
6. The limitations section needs to be expanded: how about underreporting? Etc.
Minor essential revisions:
Please do proofread before resubmitting this document.

Discretionary revisions: not addressed at this time.

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

**Quality of written English:** Needs some language corrections before being published

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

**Declaration of competing interests:**

Non-financial competing interest: the last author has been a co-researcher of mine several times during the past years.