Reviewer's report

Title: Maternal adverse effects of different antenatal magnesium sulphate regimens for improving maternal and infant outcomes: a systematic review

Version: 1 Date: 5 September 2013

Reviewer: Elaine Kidney

Reviewer's report:

1. The authors’ question is clearly defined

2. The authors have used standard systematic review methods but there are potential biases within the stated methods:
   a. A wider range of bibliographic databases (e.g., Lilacs, Popline) may have generated a wider range of potential studies
   b. Limiting studies to those written in English or with available English translations may have limited available studies
   c. Included studies reported maternal adverse effects. Given the possibility that adverse effects may simply have not have occurred in studies not mentioning them, there is a possible bias favouring selection of studies with adverse effects.
   d. It is not clear that the authors intended to include iatrogenic overdose from the onset – it is not clear if they have been systematically searched for.
   e. The search criteria for evidence from patient safety organisations are not clearly stated within the methods section.

Methods for assessment of quality and bias of observational studies are not explicit (“based on” the recommendations of the Cochrane Handbook and the Newcastle-Ottawa Scale). Study selection and data extraction could have been more rigorous:
   a. Inclusions/exclusions were done by just one author only, with a random 10% being checked by a second author
   b. Data extraction was carried out by just one author, with the second author independently assessing a random 10%
   c. There is limited information about the methods used for categorising women’s blogs into emerging themes.

3. Included data appear sound

4. The PRISMA checklist requirements are clearly set out

5. Discussions and conclusion are well balanced and adequately supported by the data, although factors contributing to iatrogenic overdoses were given in the conclusion could only be found in Suppl7.
6. Limitations are explicit. Some mention of how their findings relate to possible harms for the baby would be useful, as any harms as well as benefits for both mother and baby need to be taken into consideration.

7. The authors have also undertaken previous relevant research with magnesium sulphate, including Cochrane reviews of magnesium sulphate in pregnancy.

8. Do the title and abstract accurately convey what has been found? Yes.

9. Is the writing acceptable? Yes

Discretionary Revisions

1. Clarify whether iatrogenic overdoses were intended to be included in the review, and if so, what searches were used.
2. Clarify methods for searching for patient safety data.
3. Acknowledge potentially missed studies from searches and limits imposed.
4. Consider a fuller description of methods for data extraction of observational studies and for collating themes of women's experiences.

Minor Essential Revisions

Amend flowchart to account for removal of duplicate studies as set out in method section.

Major Compulsory Revisions - none

Level of interest: An article of importance in its field

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