Reviewer's report

Title: Long term outcome in relationship to neonatal transfusion volume in extremely premature infants: a comparative cohort study

Version: 2 Date: 15 October 2010

Reviewer: Robin Whyte

Reviewer's report:


A. Major Compulsory Revisions

Please:

1. Report the primary outcome as stated (composite of death, severe hearing or visual impairment, or severe neuromotor developmental delay) as odds ratio with confidence intervals in the results and in the summary.

2. Choose corrected or chronological age for your chosen outcome measurement, which should have been done a priori. Do not report both interpretations. The use of corrected age is most consistent with current literature.

3. Report the whole regression analysis results.

4. As, using corrected age, the finding is one of 'no effect', make that the major report in the abstract, preferably expressed as odds ratio with confidence intervals.

B. Minor Essential Revisions

1. Please consider omitting the figures and replacing them with more detailed statistical description of results in the text.

2. Please separate results from discussion with headings.

3. Please limit the discussion to mechanisms explaining your findings in terms of the intervention (i.e limit or exclude the discussion of chronological vs corrected assessment).

4. Although the meaning is usually clear, there are multiple small syntactical errors in writing: the whole manuscript could be reviewed by an independent writer. For example, in the first paragraph of the introduction is written: "Chen and Kirplani, on the other hand, found no statistical difference in the occurrence of (severe) intracranial pathology [8,11]."

This suggests that Chen and Kirpalani wrote the same paper (they didn't) and spells Kirpalani wrongly. Furthermore "statistical difference" should be written "statistically significant difference"
Therefore his should be written: "Neither Chen et al.[8] nor Kirpalani et al.[11], on the other hand, found a statistically significant difference in the occurrence of (severe) intracranial pathology." There are multiple other issues which will not be exhaustively described here.

C. Answers to preformatted reviewer questions:

1. Is the question posed by the authors well defined?
Yes

2. Are the methods appropriate and well described?
Reasonably.

3. Are the data sound?
Yes, but the primary outcome is missing. See methods, last paragraph, first line: "Our primary outcome was the composite of death, severe hearing or visual impairment, or severe neuromotor developmental delay at 18-27 months of uncorrected age." Death, which should be measured from admission (not discharge) has not been combined with the developmental outcomes.

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

5. Are the discussion and conclusions well balanced and adequately supported by the data?
No. The discussion is confusing. Outcome should be limited to corrected gestational age only. Correlation statistics and details of regression analysis are not reported.

6. Are limitations of the work clearly stated?
They are clearly apparent (not a randomized trial, an interinstitutional comparison with multiple opportunities for confounding) but underexplored.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
Yes, reference to publication in Transfusion Medicine, 2009, 19 195.

8. Do the title and abstract accurately convey what has been found?
No. Title is fine and clear, but abstract lacks numeric or statistical summary of findings. The findings are of no difference; the writing suggests otherwise.

9. Is the writing acceptable?
Not quite. A small amount of tidying up of punctuation and syntax is required but essential. If the authors really want to report 'correlation' then they need to report the whole of the regression analysis.

Level of interest: An article of limited interest

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:**
I declare that I have no competing interests