Reviewer's report

Title: Respective effects of blood spoliation and erythropoietin treatment on the need for blood transfusion in very premature infants

Version: 2 Date: 2 July 2013

Reviewer: Ian J Griffin

Reviewer's report:

The authors have carried out a before-after cohort study spanning a period when their unit stop using EPO. Their results show that that decision did not affect the number of blood transfusions (after d15) infants received. This finding is consistent with the RCT of EPO showing that, once moderately strict transfusion guidelines are instituted, EPO has little effect on blood transfusions in preterm infants.

The study is well carried out and the manuscript is well written. The study addresses an important issue.

Major Compulsory Revisions

1. The small sample size (n=48 total). Can the authors provide at least a post hoc power calculation to show what magnitude of change in transfusions would have been identifiable with this sample size?
2. I have never heard the word "spoliation" and I'm not sure what in means in this context & I suspect many readers will have the same problem.
3. Why was stepwise regression used? This is a problematic method & I am unsure about using it to screen for variables to use in the final model, especially as there are difficulties interpreting p-values from stepwise regression. Why not just go straight to nominal logistic regression, or a more standard general linear model? That way the factors that are different "before" and "after" (gender and IUGR status) can be retained in the model.

Minor Essential Revisions

Introduction:
None

Methods:
1. Was delayed cord clamping used? Did this change over the study period?
2. Was the high iron dose used after EPO use was discontinued?
3. What is the schedule for "routine" blood draws?

Results:
1. Doesn't gender also differ between the before/after groups?
2. Could the authors also include something about the total volume of blood transfused after d15 and from birth to discharge? Perhaps the results would be even stronger once the higher number of transfusions in the "before" group prior to d15 were accounted for. Can the authors say anything about the total amount of blood transfused during the entire hospitalization?

Discussion:

No concerns

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

**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