Reviewer's report

Title: Iron absorption and oxidant stress during erythropoietin therapy in very low birth weight premature infants: a cohort study

Version: Date: 4 May 2005

Reviewer: Robin Ohls

Reviewer's report:

General

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. The number of infants studied is small, despite three separate evaluations for each infant. A clear explanation of the power analysis performed to determine sample size would strengthen the manuscript. For example, what was the primary outcome variable upon which the power analysis was based? What was the expected difference?

2. Iron intake of 4 mg/kg/day is considered a standard supplemental dose in preterm infants at discharge. Perhaps the authors might consider referring to the iron as early iron supplementation associated with Epo administration. Clinicians would not consider 4 mg/kg an elevated dose.

3. The data do not provide "...evidence on which to base clear guidelines regarding the use of Epo... in preterm infants. Rather, the data presented are observations upon which to base further studies on iron supplementation in preterm infants. The use of Epo does not appear to be the focus of the study. The section of the discussion (page 12) should be revised. Further, the use of Epo for anemia of prematurity has successfully decreased transfusion requirements in preterm infants, and may have non-hematopoietic effects on neurodevelopmental outcome that are just beginning to be evaluated.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. Some of the references cited do not seem to apply to the text they reference. For example, Dr. Widness' reference (8) refers to changes in transfusion practices, and does not address iron supplementation. Dr. Pollak's study might be a better reference.

2. Correct the spelling of Pollak throughout the paper/references.

3. Please distinguish (preferably in the introduction) the difference between absorption of iron in the GI tract and incorporation of iron in RBCs and how they are related.

4. Shorten the methods section. Details of the formula preparation and laboratory methods on isotopic analyses can be summarized.

Discretionary Revisions (which the author can choose to ignore)

Move the control values for adults and healthy preterm infants to Table 2.
What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

Quality of written English: Acceptable

Statistical review: Yes

Declaration of competing interests:

I declare that I have no competing interests