Reviewer's report

Title: Effectiveness of different strategies to treat anemia in Mexican children: a randomized clinical trial

Version: 1 Date: 18 November 2009

Reviewer: Teresa M Kemmer

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Adds important information to the body of literature on anemia treatment in a rural international setting with limited resources.

Major Compulsory Revisions

1. Major grammar revisions are required throughout the abstract and manuscript to improve understanding and readability. As written, the writing is not acceptable or suitable for a scientific peer reviewed journal. Information presented is difficult to interpret due to poor and excessive wording. I have specific suggested editing comments and will be glad to forward to the authors if requested; however, I will not list all of them in detail within this review. Author needs to avoid writing in the first person throughout.

Abstract:

2. Within results section, include the major significance values rather than providing only generalities.

3. The objective stated throughout the abstract and manuscript should be consistent throughout the paper. Ie abstract pg 2 line 5 and background pg4 line 12.

Methods:

4. this section needs considerable help in organization to ensure that the correct methodology is all contained within the appropriate subheading sections. Currently there is significant overlap and the methods are mixed among sections.

5. pg 5 consistently use for Hb g/dl (units need to be consistent and correct throughout). Talk about cut off levels of Hb in section where you are talking about blood collection. In subject selection section just refer to those that were anemic vs not anemic. Explain what you mean by “10 blocks” in line 21.

6. Clarify on pg 5 line 23 that siblings with anemia were treated the same unless you actually treated all children in the household even if they were not anemic. Also need to clarify if only one or multiple children from within a household were included in the study. If more than one child was included from a single household, need to adjust for this in data analysis.

7. Pg 7 line 4&5. Move the discussion about iron and ferritin to biochemical measurements section.

8. Pg 7 line 5&6. Move the height weight statement down to the evaluation of
weight and ht section. Line 8 is a repeat of line 5&6.

9. Line 13: specify age cut offs for use of supine length (WHO anthro standards use age 2 as the cut off). The way it currently reads implies that only children that could not stand were measured lying down. If this is so and it was not based on age then data interpretation based on WHO anthro would not be correct.

10. Pg 7 line 21: suggestion- blood samples to determine iron and ferritin were collected....

11. Pg 8 line one should be moved to the end of the paragraph since all info on iron should be kept together and all info on Hb kept together. Methods for iron, ferritin and Hb should all be described separately and not mixed throughout methods section

12. Pg 8 line 8 C-reative protein cut-off values used need to be included.

13. Pg 9 line 6-8 should be moved to biochemical analysis section within methods

14. Pg 9 line 14 verify how treatment rejection was computed. “Percentage of weeks” is not clear and is not a typical way to compute percentage.

15. Pg 9 line 17 is where the analysis section should actually begin. Previous information is appropriate for the methods

Results:

16. Need to add statement as to whether the groups were the same or significantly different at baseline for the main variables. If that is what was being verbalized in pg 10 line 13, it is not worded correctly since that is stating that treatments were not significantly different.

17. Pg 10 line 17 states that data is not shown. The data should be included since within the methodology pg 10 line 8&9 it states that the children were stratified by age (cut-off of 24 points) and by gender. Line 17 states that the data is remarkable- define remarkable based on whether it is statistically significant or not.

18. Pg 11 line 1. Remove the statement (data not shown).

19. Pg 11 line 10: for viral diseases do you mean viral infections? Also is this sentence fact based on actual medical diagnosis or was it information reported by parents or your inference?- this sentence needs to be clarified.

Discussion:

20. Pg 12 line 7. “Even at the same dose of iron”. This is not correct since you previously explained that the various treatments tested did not have the same amount of iron.

21. Pg 13 line 17 need to add reference number for Sachdev et al at the end of the sentence.

22. Pg 14 line 1. “due to the…” I would suggest rewording since you did not actually evaluate the why to be able to state definitively that it was a result of the high concentrations of minerals.
Conclusion:
23. pg 14 line 20 #3 needs rewording to improve clarity. Within the conclusion need a sentence to state what this research has contributed to science. Add a suggestion for the next step. Include a statement on how to best apply this knowledge.

List of abbreviations:
24. add IDA, WHO and UNICEF

Tables and Figures
25. Table 2. need to add Hb <11.7 and elevated C-reactive protein based on cut off used. Also point out any statistically significant differences between groups. Again utilize consistent units ie Hb g/dl.
26. Figure 2. spell out percentage along left hand of table vs using % sign. Need to reword title- it is not clear. Are end of treatment data presented? Use of a&b is not clear.

Minor Essential Revisions
1. Abstract: Suggest continuing with acronyms within the abstract conclusion for consistency and clarity.
2. Background: Line 13. Requires reference following the word population.
3. Also ensure capitalization is used correctly throughout. Ie. Anemia in line 16.
4. UNICEF needs to be spelled out the first time used.
5. Do not begin sentences with acronyms.
6. If you have previously spelled out an acronym then it should be used consistently rather than reverting back and forth (except spell out at the beginning of a sentence). Ie hemoglobin vs Hb pg 11 line 22

Discretionary Revisions:
1. Figure 2. Since the prevalence of anemia is of interest, I suggest that the anemia prevalence be at the bottom of the column along with the Percentage value listed rather than having the not anemic prevalence listed.

Level of interest: An article of importance in its field

Quality of written English: Not suitable for publication unless extensively edited

Declaration of competing interests:
'I declare that I have no competing interests'