Reviewer's report

Title: Significantly elevated foetal haemoglobin levels in individuals with Glucose 6-phosphate dehydrogenase disease and/or sickle cell trait: a cross-sectional study in Cape Coast, Ghana

Version: 0 Date: 19 Apr 2017

Reviewer: Ademola Adewoyin

Reviewer's report:

REVIEW COMMENTS

Title: In the title, 'elevated % Hb F', should pass for foetal haemoglobin levels or Haemoglobin F levels (so as to avoid use of abbreviations in the title). Again, I think the location of study should also be captured in the title, something like: Significantly elevated foetal haemoglobin levels in individuals with …………… In Cape Coast, Ghana.

ABSTRACT: Line 4: severer should be replaced with 'more severe'. Result section (line 6/7): the statements lack continuity, grammatical construction should be revised.

BACKGROUND: Should include a stronger review of established data on foetal Hb proportions in G6PD and sickle cell disorders. However, in paragraph 2: ROS ?? does not fit in to the listed agents. Moreover, in paragraph 3, the word (ref) in bracket is out of place and proper citation should be done. The meaning of ROS should be spelt out at first use.

METHODS: study site: I do not really see the place of those demographic details in the design of this study. Participants: the sampling technique described does not fit for simple random sampling. It is a convenience sampling technique (consecutive participants were recruited). How did you randomize? Did you use any table of random numbers?? Please revise. G6PD screening assay: ….as previously described. Where is the description????. Haemoglobin estimation: …..following manufacturers protocol: what reference??? Haemoglobin electrophoresis: …..in accordance with previously published protocols. ??? where? What reference???. Statistical analysis: No statement was made to capture inferential statistics performed, no mention of the statistical tools used in comparative analysis and how inferences where drawn. The second to last statement in this section is tautology.

RESULT/DISCUSSION: not well presented. The presentation style is very clumsy and lack clarity. This should be seriously revised please. Table 1: stratification based on gender portends that gender has some influence on Hb F levels in G6PD and sickle cell trait. I think that G6PD Status should just simply be presented as defect or no defect. I believe that would give a clearer/stronger level of evidence. FIGURE 2D: this figure is not really useful in my assessment.
It is an established fact that Hb levels are higher in males due to androgen effect in haemopoiesis. The interest should be why haem F levels are higher in men with G6PD/SCT versus those without. What plausible explanations? How do this findings compare with other studies

CONCLUSION: This is no conclusion but rather a representation of results. Conclusion should be rewritten

REFERENCES: please ensure conformity with Vancouver style, supposed number of authors before etal should be written, other non-conformities should be addressed.

Are the methods appropriate and well described?  
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?  
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?  
If not, please explain in your comments to the authors.

Unable to assess

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?  
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

Quality of written English  
Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited
**Declaration of competing interests**

Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

**i declare that i have no competing interests**

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license ([http://creativecommons.org/licenses/by/4.0/](http://creativecommons.org/licenses/by/4.0/)). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal