Reviewer's report

Title: Plasmodium vivax associated severe malaria complications among children in some malaria endemic regions of Ethiopia

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Reviewer: Toby Leslie

Reviewer's report:

This paper covers an important topic in vivax malaria at the moment - that of severe malaria. The paper described a number of cases of severe disease that could be attributed to vivax malaria. While I believe that severe vivax malaria is more of a problem than realised and the disease is often dismissed as "benign" I do have some reservations about this study which I lay out below.

Major compulsory revisions:

1) There were a high number/proportion of patients not included in the analysis (183/322 with vivax malaria). We need to know why these were excluded.

2) Because of the above point, and because of the science and importance of the topic, the subject of severe vivax malaria is as much about the denominator as the numerator. It is hard to conclude that the prevalence was X or Y unless the denominator is absolutely watertight.

3) For this reason it is necessary to state clearly the reasons for exclusion of those 183 patients. Their exclusion significantly changes the measurement of prevalence of severe symptoms.

4) Throughout the results section it is important to include the number evaluated (denominator) rather than just the percentage in each group.

5) The authors should conduct some form of multivariate analysis for the different outcomes (for example anaemia).

Minor essential revisions:

1) It would be useful to state how many of the children had more than one of the symptoms of severe malaria.

2) In the conclusions of the abstract it is stated: "incidence of severe malaria complications in areas where there is highest treatment failure of first line drug could have significant impact on national malaria prevention and control activities", but I don't see where this is measured or how.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published
Statistical review: Yes, and I have assessed the statistics in my report.

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