Reviewer’s report

Title: Effect of Ascaris Lumbricoides specific IgE on tuberculin skin test responses in children in a high-burden setting: a cross-sectional community-based study

Version: 2 Date: 19 April 2012

Reviewer: linda petrone

Reviewer’s report:

Major Compulsory Revisions

This manuscript attempts to assess whether Ascaris specific-IgE positive status affects the tuberculin skin test (TST) responses in children in a setting with a high burden of tuberculosis. The authors demonstrate that an increase in age, a high TB exposure score, previous IPT and TB treatment are associated with having a positive TST. Differently a negative TST is associated with a scar indicating previous BCG-vaccination. In addition, a possible inverse association between being Ascaris-specific IgE and TST positivity was identified, mainly among younger children.

This study may be useful in the interpretation of immunological tests of M.tb infection in helminths endemic areas. However there are several issues that should be addressed before recommending this manuscript to be published.

1. The manuscript is hard to be followed, thus the text should be revised to make it more understandable. In addition, I suggest to subdivide the Material and Methods section, as well as the Results section, into paragraphs. Page numbers are missing.

2. ABSTRACT, some abbreviations are not defined in the text (e.g. IPT). In addition, the aim is missing in the background section.

3. INTRODUCTION, information regarding T.trichiura seems to me confounding and unhelpful to the interpretation of the study findings. I strongly suggest to eliminate all the sentences concerning this parasite or to introduce, whether available, data on T.trichiura. This could make more understandable the rationale of the work.

4. MATERIAL AND METHODS, the study population is well defined; however the number of enrolled children should be reported in this section.

5. RESULTS, regarding Ascaris-specific IgE evaluation, I suggest to postpone RAST classification data and to declare first the number of Ascaris positive subjects. In addition, in my view, it is interesting to investigate how many Ascaris-positive subjects are also TST positive. Thus, Table 3 should be revised to make it more consistent with these data request.

6. DISCUSSION, as in the Introduction section, please eliminate information on T.trichiura. It is more important to focus the reader attention only on Ascaris
lumbricoides diagnosis.

7. DISCUSSION, the conclusion seems too rushed. As authors declared, Ascaris-specific IgE cannot differentiate the new infections from the previous ones, thus Ascaris positive status definition has some limitations. Clinical evaluation of different parameters, as peripheral blood eosinophilia, could address better this issue. I would recommend reviewing the manuscript and including the eosinophil counts, whether possible.

8. TABLE, as reported in RESULTS comments, I suggest to revise Table 3, including data on Ascaris-TST positive subjects.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I do not have any competing interests in relation to the reviewed paper.