Reviewer's report

Title: Longitudinal monitoring of Ehrlichia ruminantium infection in lambs and kids by pCS20 PCR and MAP1-B ELISA in The Gambia

Version: 2 Date: 2 May 2007
Reviewer: Zerai Woldehiwet

Reviewer's report:

General

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

Endemic stability is an epidemiological state of a given population characterized by high levels of infection but low levels of clinical disease. The two main prerequisites for endemic stability are:

1. The infectious agent is more likely to cause severe disease in older animals than younger animals; this is a well-known feature of several tick-borne diseases of ruminants including heartwater.
2. In animals which have recovered from primary infection, the probability of secondary infections causing severe disease is reduced.

The main aim of the present paper seems to be to establish whether lambs and kids contribute to endemic stability by acquiring infection of Ehrlichia ruminantium by vertical transmission or by tick transmission during the first days and weeks of life.

The authors have made a good effort at addressing most of the main issues raised and the paper is now very much improved. However, I don’t think the major objectives of establishing the role of vertical and tick-borne transmission have been met, essentially because the design of the study was not suitable. The study design did not allow for the definitive differentiation of animals that acquired infection in utero and those that developed post-natal infection (per os by consuming milk containing infected cells or through tick bite). The study contains interesting data on the epidemiology of heartwater in lambs and kids in the Gambia but the paper needs to be rewritten to reflect the findings. I suggest that the authors amend their objectives and conclusion regarding vertical transmission to reflect their data.

Abstract: Lines 3-5 (which indicate the main objectives) and lines 24 to 27, which indicate the conclusions

Conclusion
Page19, lines 9 to 17. Although the cited papers do show evidence of vertical transmission, the data of the present study is not strong enough for the statement in lines 9 to 17 to be the main conclusion.

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

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Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.