Reviewer's report

Title:Sero-prevalence of Leishmania donovani in Labour Migrants and Entomological Risk Factors in Extra-domestic Habitats of Kafta-Humera Lowlands - Kala-azar Endemic Areas in the Northwest Ethiopia

Version:2 Date:5 January 2015

Reviewer:Luigi Gradoni

Reviewer's report:

MINOR ESSENTIAL REVISIONS

General

- Kala-azar is the name of a clinical disease resulting from the infection by Leishmania donovani. Because serological data collected were not associated with disease, the definition of “kala-azar infection” is not appropriate and should be replaced by “L.donovani infections” or “seropositivity to L.donovani” throughout the text.

- For the non-specialist readers, introductory notes should include some concepts about the prevalence of asymptomatic L.donovani infections, the reciprocal value of serology versus leishmanin skin test to detect active/past infections, and the incubation period for full-blown disease.

Specific

Line 31: unless otherwise proven, the VL entity of this area should be defined as “anthroponotic” and not “zoonotic”.

Line 34: “which may affect”

Line 35: “Methods and Results” (actually, they are mostly results)

Line 44: the figure of 116 seroreactive individuals is not shown later in the main body text.

Lines 57-62: that the cause of kala-azar in the study area is L.donovani, should at least be mentioned in this paragraph.

Line 69: please check on the appropriateness of ref 14 (WHO 1981) in relation with LST and seroconversion rates.

Line 72: no data on “seroreaction” were available (one needs to calculate them)

Line 106, Population dynamics: the periodicity of collections during a year should be reported

Line 117: jugular OR forearm veins? I guess that “jugular” is a mistake.
Line 123, DAT paragraph: the calculation of the cut-off dilution for L. donovani infection/reactivity should be reported, or relevant references provided.

Line 127: Royal Tropical Institute… of which country?

Line 177, Seroprevalence: seroprevalence results are not presented clearly. Once the cut-off for infection was defined in Methods, simply report number and percentage of individuals showing a DAT titer of: <100 (negative?); 100-799 (reactors but probably not infected?); 800-1599 (also reactors?); 1600-6400 (infected?); >6400 (12800) (infected at risk of kala-azar?)

Line 179-180: this sentence should be moved to Methods. What is the meaning of “boarder”?

Line 182: were these high-titer positives followed-up for clinical signs of VL?

Line 209: this information should be given in Methods – Study area and population.

Lines 234-236: this sentence is unclear, please re-phrase

DISCRETIONARY REVISIONS

Lines 36-41: the general trend from November through May, as compared with the June-July trend, should be reported first, then the March-April peaks can be mentioned. No need to write “+/− standard deviation” in the abstract.

Line 71: if labor migrants were diagnosed with VL in Humera hospitals, it means that they have been infected early in the labor season as the disease developed before their return home. Are data available from VL diagnosed in Amhara health centers after their return?

Line 145, Population dynamics: a graph showing the monthly density of P. orientalis could be helpful.

Line 170-171: please repeat here the month range for the weeding (June-July) and harvest seasons (September-October).

Level of interest: An article whose findings are important to those with closely related research interests

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