Reviewer's report

Title: Latent Tuberculosis Infection and Associated Risk Indicators in Pastoral Communities in Southern Ethiopia: A Community Based Cross-sectional Study

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Reviewer: Shamim M. Islam

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This is a worthwhile (be it primarily descriptive) analysis on LTBI rates in impoverished global region. Given it utilizes the more specific IGRAs, the results are expected to be more accurate than other surveys (be them in Ethiopia or elsewhere) which may have utilized TSTs in largely BCG vaccinated communities. The QFT positive/LTBI rates of ~ 50% are particularly notable given the lower likelihood of false positive (from either BCG or environmental Mbs - which in a pastoral community, is likely to be quite relevant).

A few points to consider and potentially address:

1) The authors should report on indeterminate rates, which impact interpretation of the overall test interpretations and general study conclusions. Relatedly, the data in Figure 2, assessing test reliability between different groups - may be more relevant if it included mitogen response results, rather than those to MbTB.

2) The pattern of having somewhat lower IGRA/LTBI positive results in the oldest age group is unexpected (expect steady increase with age/potential exposure), and here where knowing if a significant proportion of Indeterminate results may have impacted results.

3) Relatedly, how were indeterminates considered in total results - were the excluded in the denominator, or included when calculating positive results/negative results? The percentages add up to 100%, suggesting indeterminates were in the negative category?

4) Respecting the data is collected/subject enrollment complete, but pediatrics data would have been noteworthy, and have definitive disease control ramifications, as younger patients with LTBI (generally) have higher rates of progressing to active TB disease (and sooner), and could target LTBI control efforts.
5) A lack of increased risk with raw milk is somewhat unexpected; the possibility of being confused/not able to be disentangled by other related factor (raw meat) consumption is possible.

6) Inclusion of the questionnaire/methods of excluding active TB disease would be ideal - such instruments would best be included, at least as supplementary material.

the high rate of IGRA positivity raises the possibility of active pulmonary and especially non-pul TB in some individuals, as well as individuals who would have lung radiologic findings (of past/contained TB) which might warrant different attention/management than conventional LTBI.

7) While the use of DOTS or universal LTBI testing would be an ideal disease control strategy in high-burden areas, limited resources truly make this unrealistic. However, these results could lead to increased TB attention/resources at the rates indicate disparity and under-appreciation. For example, more targeted screening of high risk groups, for both infection (contacts of known Tb disease) or active progression (young or older patients) is more practical next step, in this region of Ethiopia, as well as other impoverished areas.

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.

Yes

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