Reviewer's report

Title: Clinical Diagnostic Value of Simultaneous Amplification and Testing for the Diagnosis of Sputum-scarce Pulmonary Tuberculosis

Version: 0 Date: 14 Jan 2017

Reviewer: Max Salfinger

Reviewer's report:

This manuscript describes the comparison between a NAAT and AFB smear and culture from BAL collected from 764 patients suspected with pulmonary TB.

L85-'nontuberculous' mycobacteria (NTM)

L90-Is SAT-TB really a point-of-care molecular test?

111-sputum-scarce PTB individuals; did the authors try sputum induction in patients not able to expectorate a sputum?

L157-What was the final concentration of NaOH used for decontamination of the BAL? How long were the samples exposed to NaOH-15, 20, 25 or 30 minutes? Did the authors used NALC as well?

L166-Please explain in more detail how the samples were processed for conventional smear and culture and for SAT-TB. Was SAT-TB performed on a processed sediment obtained by the conventional work-up? Please provide more details about SAT-TB. Is there an amplification control for detecting amplification inhibitors built in? What was the concentration used and exposure time for the SAT-TB work-up?

L190-764 patients were analyzed and 70% were diagnosed with TB; however, only 116 out of 536 (22%) patients with TB were confirmed by microbiology. This is a low figure. Can you explain further in the DISCUSSION section?

L197-120 PTB patients (96 were only culture positive and 20 smear positive) - what happened to the missing 4?

L235-A GeneXpert cartridge costs $100 - Is China not eligible for a discounted price of $10?

L239-Was SAT-TB assay performed 7 days a week?
L245-How does the SAT-TB control for amplification inhibitors?

L259-Only 2 patients were diagnosed with NTM - any explanations? Smears can be AFB positive in NTM disease; therefore, one should not call them false-positive.

References- This author suggests deleting reference 8 and 9. They are not relevant for this study. The Roche TB assay is no longer on the market.

Table 1

Were 764 SAT-TB assays performed? How do you explain in the Non-TB patients 12 positive SAT-TB (false positives?), 4 positive culture (false positives?), and 4 positive smear (false positives or NTM?)

Table 2

Please provide the actual figures and not just the % value.

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.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review
Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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