Reviewer’s report

Title: An evaluation of methods for the isolation of nontuberculous mycobacteria from patients with cystic fibrosis, bronchiectasis and patients assessed for lung transplantation

Version: 2 Date: 19 Dec 2018

Reviewer: Maeve Smith

Reviewer's report:

Thank you for asking me to review this large study comparing culture methods for nontuberculous Mycobacteria in a varied pulmonary patient population. It is an interesting study and provides good support for RGM medium as a diagnostic tool.

Comments

1. The abbreviation RGM should be explained as the start (Rapidly Growing Mycobacteria medium)

2. The introduction should provide some explanation or background as to why the authors decided to evaluate RGM at two different temperatures; there is no rationale given for this or for why 37C was chosen; furthermore the studies referenced for RGM (Preece, Plongla and Eltringham) all used 30C.

3. Description of patients and samples (Table one) belongs in results

4. More detail regarding sample collection/storage prior to culture should be provided; for examples, if samples were transferred from specialty clinics what was the time allowed between collection and culture? How were samples stored prior to culture if any time delays- room temp/refrigerated? Was this uniform for all samples as it has the potential to affect culture?

5. Clinical inclusion/exclusion criteria should be clarified- were patients with a previous history or current known history of NTGM infection included? Were any patients already on treatment for NTM included etc? Or were all patients included those with no prior history of NTM, clinically stable and routine surveillance samples? Needs clarified.

6. The results section contains a lot of text that perhaps isn't necessary/in the correct section- for example, line 219-221 is probably more appropriate for the discussion and lines 272-274 the methods, line 314 etc.

7. The section in the discussion regarding the clinical significance of additional isolates of NTM could be expanded. Whilst obviously I appreciate that the answer to this
question is outwith the scope of this study, it is of real importance when developing and advocating a diagnostic tool. For example, would the correlation between colony count and the likelihood of detection on AFB perhaps indicate that AFB culture techniques might be more clinically relevant.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

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 am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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