Reviewer’s report

Title: The QuantiFERON-TB Gold test in the diagnosis and treatment of latent tuberculosis in patients from a Norwegian outpatient clinic

Version: 1 Date: 13 November 2009

Reviewer: Jannik Helweg-Larsen

Reviewer’s report:

"The QuantiFERON-TB Gold test in the diagnosis and treatment of latent tuberculosis in patients from a Norwegian outpatient clinic", presents the diagnostic experience of using the quantiferon assay (QFT-TB) in a low-endemic outpatient setting.

Although the findings are hardly novel, overall this report is of general interest as it is a rather large study and adds to several papers reporting on the use of interferon based assays.

However, currently the manuscript appears quite unfinished, too long and needs language revision.

The major findings of interest seem to be 1) The performance of QFT-TB compared to TST and 2) the continued positive QFT-TB after treatment for presumed LTBI. These findings are not presented in a clear way, too much space are used for discussion of “risk factors” for positive QFT-TB, none of which are surprising- these findings are described in much too long (Norwegian) detail.

Major Compulsory Revisions

The title of the paper is misleading and needs revision: A mixture of patients with active TB and possible latent TB were assessed including contact investigation.

The abstract should be improved

The text needs shortening, specifically the discussion is too long, particularly on risk factors for positive QFT-TB.

Minor Essential Revisions

Abstract:

Numbers with active TB, LTBI are not clearly reported. In results, all actual numbers together with percentages must be reported, e.g “the QFT-TB was positive in X/X (30.8%)”.

Introduction, p.3 quote: “There is also no solid data concerning the usefulness of the IGRA tests to identify those individuals with LTBI who are at most risk for developing active disease and therefore most likely to benefit from preventive therapy [19].”
Comment: This statement needs modification. Diel and coworkers(1) among others have examined this question and should be referenced.

Introduction: The current (or previous?) BCG vaccination strategy/policy is unclear: please define “high coverage” and at which age BCG is given in Norway.

Introduction page 4, line 5-9: please delete “have” from all sentences.

Methods:

“Most of the TST test were performed at least 3 months prior.”: Why this delay? Please provide range of delay between TST and admission.

Unclear if all participants underwent X-ray, clinical examination and induced sputum: If not all were investigated this way- please provide numbers. In most other similar settings it would be unusual to do a “induced” sputum- in most other countries ordinary sputum samples would be sufficient- is this the actual Norwegian policy?

Statistics:

This section is poorly written. Please delete the Stata specificic command( xi:) and delete “we did not use stepwise removal of factors” suffice to say that multivariate logistic analysis were used. According to table 5, legend there were missing data, how where these handled in the multivariate analysis?

Results, p 6:

Please provide actual numbers together with percentages for all findings.

The number of patients with active TB and suspected LTBI needs to be stated clear and early in the results.

According to the text 54 had TB suspect thoracic X-ray findings, however according to table 2, only 19 had thoracic X-ray findings + possible 8 (previous TB disease)- please clarify.

It is surprising that only one patient was HIV-tested and that routine HIV-test was not performed- this need a comment in the discussion as it is contradicts most international guidelines.

Results, p.7:

-The sentence on the “index person” is confusing- who and why is this needed?

-The sentence on BCG vaccine status by questionnaire should be moved to the Method section.

- the word “whereas” is used extremely often in the text, consider using another word.

Results, Active tuberculosis, page 8:
“Induced sputum was obtained from all the participants and twelve had positive culture of M. tuberculosis and one of M. fortuitum. Two additional patients were regarded as active TB disease based on X-ray findings and one patient was diagnosed with glandular TB”

This adds to 15 (2+2+1; excluding the patient with M.fortuitum), however the text refers to 16 patients with active TB?

Results, QFT-gold results, page 8 and table 4:

Suggest that the authors produce a scatterplot of TST induration according to positive/negative QFT-TB.

Results, QFT-gold results, page 9, line 10: “moods”= modes?

Page 9, Predictive factors for a positive QuantiFERON-TB Gold test: This section can be shortened or perhaps omitted.

Page 10, Results, QuantiFERON-TB Gold responses during prophylactic therapy

Was prophylactic therapy only given to persons with positive QFT-TB tests?

“Altogether 44 of the patients receiving prophylactic therapy were followed with repetitive QFT-TB tests. After three months 87.5% were still QFT-TB positive (35/40 tested) whereas after 15 months, one year after the end of therapy, 84.6% remained positive (22/26 tested).” Comment: Perhaps a bit unclear if the dropout rate from testing did affect these findings- please provide numbers for how many which reverted from positive to negative between 3 and 15 months.

Discussion:

Page 11: The risk factors for LTBI section needs shortening, particularly the discussion on Norwegian asylum seekers is irrelevant here and should be deleted, cannot see that the reported findings as such supports screening.

Table 5:

The result section does not provide adequate information to gauge the number of missing variables and how this affects the total multivariate analysis, it would be useful to know the number of total persons included in the final multivariable model either in the footnote or in the result section.

Please provide definition for duration of stay and recent stay( months or years?) directly in column 1 or in the footnote.

The 95%CI for previous TB, yes, multivariate must be wrong (213-91.98), please correct.

Discretionary Revisions

The authors need a critical revision of the text, there are several spelling mistakes.

**Level of interest:** An article of importance in its field

**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.