Reviewer's report

Title: Tuberculosis Lymphadenitis Diagnosis in children Using Fine Needle Aspiration in Bangui

Version: 1 Date: 7 September 2012

Reviewer: David Alexander

Reviewer's report:

Major Compulsory Revisions:
Line 108: How many cases had 1 node sampled and how many had 2? Were both nodes sampled with a single needle, or were separate FNAs performed, stained and cultured for each node? If separate FNAs were performed for each node, were more than 131 samples assessed? Among cases with 2 FNAs, how many were discordant (e.g. 1 node TB positive, 1 node negative).

Line 109: Was the positivity rate equivalent for both groups – or did sampling 2 lymph nodes improve detection?

Minor Essential Revisions:
Title/Authors Affiliations: Define ‘RCA’. Similarly, both RCA and CAR are used in the manuscript. For consistency, pick one for use throughout the paper.

In Line 120, the authors correctly state that ‘culture is the gold standard method for detection of tubercle bacilli’. However, in line 124, they suggest that ‘The gold standard test for a definitive diagnosis is certainly a lymph node biopsy’. Although biopsy may be the recommended or preferred method for obtaining a sample for testing, it is not a gold standard for diagnosis of TB.

Lines 146-147: ‘This can be explained by a lower bacillary load in lymph nodes of immune-compromised patients (Table 4).’ Table 4 does not provide counts for bacillary loads, just the proportions of culture positive/negative and HIV positive/negative cases. Also, it seems counterintuitive that patients with intact immune systems would have higher bacillary loads than the immunocompromised. Please explain and/or provide references.

Lines 150-153: Include references (e.g. 19 & 20) describing the efficacy of NAAT with FNA.

Lines 159-160: In ref 19, the sensitivity of the Xpert MTB/RIF assay was 64% (89/138) for smear-negative cases. In the current manuscript, Table 2 indicates that the sensitivity of culture was 67% (49/73) for smear-negative cases. Although NAAT may be effective with AFB positive samples, it may not ‘improve the overall diagnostic sensitivity of FNA.’

Discretionary Revisions
Lines 133-134: Could the AFB positive/culture negative samples from untreated patients represent infections with non-tuberculous mycobacteria (NTM) that do not grow on the media and/or incubation temperatures used in this study? In Bangui, how common are NTM infections?

Lines 148-165: Consider removing, or at least shortening, the discussion of NAAT and the GeneXpert MTB/RIF assay. The technique is not used in the current manuscript and it seems incongruous to promote NAAT in a manuscript where the stated objective is to evaluate the efficacy of FNA.

Tables 2 and 4: Consider combining these into a single table that includes data for culture, microscopy and HIV serology results. Alternatively, eliminate Table 4 and discuss the statistics in the text.

In general, the manuscript reads well. However, the current draft includes numerous grammatical errors and some unusual expressions. These should be corrected. Some examples include:

Title: Fine Needle Aspiration for the Diagnosis of Tuberculosis Lymphadenitis in Children from Bangui

Line 46: replace ‘tribute’ with ‘price’ or ‘toll’

Line 79: replace ‘research’ with ‘detection’ or ‘visualization’

Line 86: replace ‘indirect method of proportions’ with ‘indirect proportion method’

Line 116: replace ‘not exploitable due to contaminations.’ with ‘excluded due to contamination.’

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

After considering all of the preceding questions, I declare that I have no competing interests.