Reviewer's report

Title: Using real-time fluorescence quantitative PCR (RT-PCR) and multiplex PCR-based reverse line blot (mPCR/RLB) hybridization assay assist culture in the diagnosis of bacterial meningitis in neonates

Version: 1
Date: 14 June 2014

Reviewer: Tinuade Ogunlesi

Reviewer's report:

MINOR ESSENTIAL REVISIONS

1. Abstract - In the Results, the statement "...One strain of .......Also cultures identified.....PCR techniques....." is repeated.

   The last sentence in the conclusion was not shown in the results.

   Keywords - "bacterial meningitis in neonates" cannot be listed along "neonates"

2. Introduction - Paragraph 1 Lines 7 and 8: Provide a reference.

   Paragraph 2 Line 2: Signs and symptoms cannot be absent in meningitis.

   Page 2 Paragraph 1 Line 4 - 8: These already show bias as they are supposed to be what the study should find eventually. They are better expunged.

3. Results - Tables S3 and S4 should be cited before Tables 2 to 4.

   How many cases were actually positive by CSF culture? - Abstract and Tables show 5 while the text under Clinical Microbiology shows 6. These need to be harmonized.

   The crux of this study appears to be the usefulness of the PCR methods when the CSF culture is negative in the presence of clinical suspicion of meningitis. The sub-section on Clinical Microbiology needs to be re-analyzed to answer the following queries: how many of the 38 cases with prior antibiotic exposure were positive or negative by culture? How many of the cases with negative CSF culture yield were positive by RT-PCR and mPCR/RLB assays?

   Table 3: 35.7% should be 3.5%. The displayed Chi-Squared results are wrong and should be cross-checked.

4. Title should read: "Comparative study of bacteriological culture and real-time fluorescence quantitative PCR (RT-PCR) and multiplex PCR-based reverse line blot (mPCR/RLB) hybridization assay in the diagnosis of bacterial neonatal meningitis"

   Level of interest: An article whose findings are important to those with closely related research interests

   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