Reviewer’s report

Title: Diagnosis and Antibiotic Treatment of Group A Streptococcal Pharyngitis in Children in a Primary Care Setting: Impact of Point-of-Care Polymerase Chain Reaction

Version: 1 Date: 18 Nov 2018

Reviewer: Abraham Alabi

Reviewer’s report:

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This was an open labelled prospective study carried out between September 2016 and January 2017 at a single large primary pediatric care clinic in Texas, USA, to evaluate the feasibility of replacing the current standard of care (SOC) algorithm [the 2-step rapid antigen detection test (RADT) with confirmatory culture] with point-of care (POC) PCR testing of the COBAS Liat Strep A test. The results were that sensitivities (95% CI) for POC PCR, RADT, and culture were 95.5%, 85.5%, and 71.8% (62.4%-80.0%), respectively. Specificities (95% CI) for POC PCR, RADT, and culture were 99.3%, 93.7%, and 100%, respectively. In addition, POC PCR resulted in significantly greater appropriate antibiotic use (97.1% vs 87.5%; P = .0065) when compared with RADT.

Authors used appropriate standard methods and the sample size was adequate. Their conclusions were appropriate based on this singular study, however additional studies at other centres will be needed before such could be generalised. Use of POC PCR could also be a challenge in resource-limited settings in terms of costs and effective implementation. Also, as a result of the high sensitivity of POC PCR, it may not be able to adequately different asymptomatic colonisation from acute infection.

Being a revised manuscript, the authors adequately addressed issues raised by the initial reviewers thus enhancing the standard in the current format of the manuscript.

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

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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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