Reviewer's report

Title: Comparison of Microbiological Culture and Real-time PCR for the Detection of Invasive Salmonella serovars in Blood and Bone Marrow Specimens from Enteric fever Patients

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Reviewer: Nora Cardona-Castro

Reviewer's report:

When assessing the work, please consider the following points:

1. Is the question posed by the authors well defined? Yes

2. Are the methods appropriate and well described?
   
   There are methods to test a test. Please refer to these methods to clarify the procedures performed. You have to use at least three groups of patients to test the test for clinical use:
   
   1. True positive Typhi and Paratyphi patients: you use this group
   2. False positive enteric fever by Typhi and Paratyphi patients: you could use other salmonella enteric fever patients.
   3. True negative Typhi and Paratyphi patients: you could use a group of patients with other cause of fever: leptospirosis, brucellosis, malaria, etc.

   PCR test:
   
   1. The primers designed are not located in any place of the Salmonella chromosome. Please give the target gene that you are looking for. Also, there are polymorphisms found in the genes used for Salmonella detection that can help to identify specific serovars. This work lacks of information of Salmonella genes used as targets and the characteristics that the authors used to design a specific primers and probes.
   2. The Ct of negative internal control is the same for positive internal control, it is confusing.
   3. The positive internal control is a very complicated plasmid obtained by recombination. This plasmid could be difficult to have available by other laboratories that can repeat the PCR. You can use a specific gene for Salmonella genus as internal positive control.

3. Are the data sound?
   
   The authors have a very good number of positive patients, however the methodology used for test a test is not clear.

   Results are reporting in confusing way.

4. Does the manuscript adhere to the relevant standards for reporting and data
deposition?
No

5. Are the discussion and conclusions well balanced and adequately supported by the data?
No.

6. Are limitations of the work clearly stated?
As the methodology used was not appropriate for the objective proposed, this work has big limitations.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
The authors cited several works about the specific topic, however the authors need to review the specific genes of Salmonella with the aim to develop a well funded PCR test for clinical diagnosis. Also there are many publications about detection of specific Salmonella serovars that are not included.

8. Do the title and abstract accurately convey what has been found?
No

9. Is the writing acceptable?
Yes

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**
I declare that I have no competing interests below