Author’s response to reviews

Title: Evaluation of clinical outcomes of one-stage anterior and posterior surgical treatment for atlantoaxial tuberculosis complicated with neurological damage

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Author’s response to reviews:

Dear Prof. Darren Byrne,

Thank you for informing us that our manuscript (ID: BMSD-D-18-00483) should be suitable for publication in BMC Musculoskeletal Disorders after revision. Herein we are submitting the latest version of our manuscript to your journal, which has been revised based on the comments of academic editor and reviewers. All changes have been highlighted in red color. At the bottom of this letter please find our response to the reviewers. Thank you again for considering our manuscript for publication in your journal.

We look forward to your response.

Yours sincerely,

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Response to academic editor,

1. Please move the abbreviations from the title page to after the Conclusion section and before the Declarations.

Response: Thank you very much. We have made some format modification according to the Submission Guidelines.

2. In the main text, please ensure that you have the section headings Background, Methods, Results, Discussion, Conclusion.

Response: Thank you very much for your kind remark. We have made changes accordingly.

3. Please move the figure legends to after the References.

Response: Thank you very much. We have solved this issue properly.

4. In Ethics approval and consent to participate, please clarify whether written or verbal consent was obtained from participants.

Response: Thank you very much for your kind remark. We have made accurate modification based on this point.

5. Please describe the role of the funding body in the design of the study and collection, analysis, and interpretation of data and in writing the manuscript should be declared.

Response: Thank you for pointing out this important issue. We have added "The two funds provided assistance in patient follow-up and data collection" to the funding section.

6. Please include a statement in the Authors' contributions section to the effect that all authors have read and approved the manuscript, and ensure that this is the case.

Response: Thank you very much for your kind remark. We have made changes accordingly.

7. Please reorder your Declarations section to match what is outlined in our Submission Guidelines and include all sections (https://bmcmusculoskeletaldisord.biomedcentral.com/submission-guidelines/preparing-your-manuscript/research-article#declarations).

Response: Thank you very much for your detailed instruction on the editorial revisions of the manuscript. A point-by-point correction has been made according to your instruction.

Response to reviewer #1,

Paper deals with C12 tuberculosis with neurological deficit treated by combined approach.

1. Line 24-30 --- there is no mention of the type of posterior stabilization procedure. This should be mentioned here. I assume that all patients were treated by OC fusion

Response: Thank you very much for your kind remark. You are right, all patients were treated with
occipitocervical fixation and fusion. Based on your proposal, we have made changes accordingly.

2. Since the positivity rate of tb culture is only about 40 - 60 % in spinal TB, there is no justification of having a different medical regimen for negative cases.

Response: Thank you for pointing out this important issue. The use of anti-tuberculosis drugs is a very important part in the treatment of spinal tuberculosis. In our research center, we usually give the following chemotherapy regimen to patients with spinal tuberculosis. Quadruple strengthening antituberculosis therapy with isoniazid, rifampicin, pyrazinamide and streptomycin was applied for 3 months, after which streptomycin was replaced with ethambutol for a continuous treatment for 9-15 months. It is truly the positivity rate of tuberculosis culture is only about 40 to 60 % in spinal tuberculosis, and we agree you that there is no need to give a different chemotherapy regimen for negative patients. In this study, we did not give negative patients different treatment regimen. On the contrary, we treat positive patients differently, who were treated with sensitive drugs.

Response to reviewer #2,

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?
Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?
Yes - the approach is appropriate

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?
N/A - no experiments or analyses

Statistics - Is the use of statistics in the manuscript appropriate?
N/A - there are no statistics in this study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?
Yes - the author's interpretation is reasonable

OVERALL MANUSCRIPT POTENTIAL - Is the current version of this work technically sound? If not, can revisions be made to make the work technically sound?
Yes - current version is technically sound

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: Properly evaluated retrospective study
Surgical management is well discussed
Both conservative and surgical line of management are tried for atlanto axial tuberculosis with satisfactory results even for those with neurological deficits. Though single staged anterior + posterior approach gave satisfactory results in this study, atlanto axial TB is a disease of varying spectrum and
blanket treatment protocol for everyone is not always possible.

REQUESTED REVISIONS:
More images with pre surgical and post surgical results are needed.

Response: Thank you very much for your detailed instruction on the revisions of the figures. Two new pictures have provided according to your kindly instruction, figure1 is pre-surgical and figure8 is post-surgical. Please do not hesitate to point out any inappropriate part of our manuscript, we will be happy to make further revisions.