Coronal T2-weighted imaging improves the measurement accuracy of the subarachnoid space in infants: a descriptive study

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1st Editorial decision
08-Sept-2022

Ref.: Ms. No. JCTRes-D-22-00115
Coronal T2-weighted Imaging Improves the Measurement Accuracy of the Subarachnoid Space in Infants: A Descriptive Study
Journal of Clinical and Translational Research

Dear author(s),

Reviewers have submitted their critical appraisal of your paper. The reviewers' comments are appended below. Based on their comments and evaluation by the editorial board, your work was FOUND SUITABLE FOR PUBLICATION AFTER MINOR REVISION.

If you decide to revise the work, please itemize the reviewers' comments and provide a point-by-point response to every comment. An exemplary rebuttal letter can be found on at http://www.jctres.com/en/author-guidelines/ under "Manuscript preparation." Also, please use the track changes function in the original document so that the reviewers can easily verify your responses.

Your revision is due by Oct 08, 2022.

To submit a revision, go to https://www.editorialmanager.com/jctres/ and log in as an Author. You will see a menu item call Submission Needing Revision. You will find your submission record there.

Yours sincerely,

Michal Heger
Editor-in-Chief
Journal of Clinical and Translational Research

Reviewers' comments:

Reviewer #1: This paper compared the accuracy of subarachnoid space width (SASw) which has been measured from axial and coronal T2-weighted imaging(T2WI) in 63 infants (31 males and 32 females). Statistical analysis was applied to the measured results to evaluate the accuracy of SASw. The authors concluded that coronal T2WI performs better than the axial one when measuring the SASw. The manuscript was well presented with thorough analysis and comparisons. I only have several minor comments to potentially improve it.
Comments:
1. Page 4, line 51. The author listed CT, ultrasound, and MRI can measure subarachnoid space. Maybe talk a bit more about why CT and ultrasound are not as good as MRI.
2. Page 4, line 57. "the best modality", I feel "best" is a bit too extreme. I guess we probably don't need to sedate the baby for ultrasound.
3. Page 7, line 15. Can you explain why you need to reformat the slice thickness to 0.5mm? Why didn't you directly acquire 0.5mm slice thickness?
4. Page 7, line 26. Please explain what is "single experienced".
5. Page 8, line 31 and line 40. In line 31, you mentioned "The intra- and interobserver reliability…", later in line 40, you mentioned "The level of agreement between and within observers…". Nothing was wrong here, but probably switch the order for one of the phrases, so they're corresponding to each other (intra- = within observers, inter = between observers).
6. Table 3. Why the CCW in each model are not consistency? It looks like in model 2 and model 4, the lfCCW was listed, while rfCCW was listed for model 1 and model 3. Maybe explain this.

Authors' response

Reviewer #1:

1. Page 4, line 51. The author listed CT, ultrasound, and MRI can measure subarachnoid

space. Maybe talk a bit more about why CT and ultrasound are not as good as MRI.

[Response]: Thank you for your comments. We have added relevant explanation in

introduction section of revised manuscript in regard to this. (marked as R1.1)

2. Page 4, line 57. "the best modality", I feel "best" is a bit too extreme. I guess we probably

don't need to sedate the baby for ultrasound.

[Response]: Thank you for the suggestion, We used "more appropriate" instead of "best".

(marked as R1.2)

3. Page 7, line 15. Can you explain why you need to reformat the slice thickness to 0.5mm? Why didn't you directly acquire 0.5mm slice thickness?

[Response]: Thank you for your comments. In order to reduce the scanning time, 3D CUBE T2WI was acquired in sagittal plane. The axial and coronal T2WI images were then reconstructed using Advantage Workstation. "Reformatted slice thickness = 0.5 mm" was automatically generated by the software and was met the needs of measurement. (marked as R1.3)

4. Page 7, line 26. Please explain what is "single experienced".

[Response]: Thank you for your comments. "Single experienced", this phrase is intended to highlight that the doctor has experience in this kind of measurement, which could easily be misunderstood, so this phrase is deleted. (marked as R1.4)

5. Page 8, line 31 and line 40. In line 31, you mentioned "The intra- and interobserver reliability…", later in line 40, you mentioned " The level of agreement between and within observers…". Nothing was wrong here, but probably switch the order for one of the phrases, so they're corresponding to each other (intra- = within observers, inter = between observers).

[Response]: Thank you for the suggestion, we have switched the order for one of the phrases. (marked as R1.5)

6. Table 3. Why the CCW in each model are not consistency? It looks like in model 2 and model 4, the lfCCW was listed, while rfCCW was listed for model 1 and model 3. Maybe explain this.

[Response]: Thank you for your comments. In fact, the bilateral frontal cranio-cortical width (lfCCW and rfCCW) were included in each "Multivariate Linear Stepwise Regression", because the bilateral frontal cranio-cortical width was correlated, one side was excluded from the model according to the Akaike's information criterion (AIC) minimum criterion when using stepwise regression analysis, while only one side was retained.

2nd Editorial decision
13-Oct-2022

Ref.: Ms. No. JCTRes-D-22-00115R1
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Dear authors,

I am pleased to inform you that your manuscript has been accepted for publication in the Journal of Clinical and Translational Research.

You will receive the proofs of your article shortly, which we kindly ask you to thoroughly review for any errors.

Thank you for submitting your work to JCTR.

Kindest regards,

Michal Heger
Editor-in-Chief
Journal of Clinical and Translational Research

Comments from the editors and reviewers: