

Peer Review File

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Reviewer A

Comment: This manuscript looks at a consecutive series of AIS and PAIS (not really defined but seems to mean it looks like AIS but has a syrinx) patients who underwent single stage PSF over a 10-year period. The title suggests that they looked closely at neurologic issues and outcomes but that does not appear to be the case so I would suggest changing the title to something like - "Radiographic and clinical outcomes are similar between AIS and PAIS patients and spinal canal length changes are smaller than previously thought"

Reply: For the Title of this paper, I think that the title "Radiographic and clinical outcomes are similar between AIS and PAIS patients and spinal canal length changes are smaller than previously thought" provided by the reviewers is too redundant, and I still consider that the original title "Preceded neurosurgery is not needed for presumed adolescent idiopathic scoliosis with syringomyelia: a 10-year longitudinal comparative study" would be better.

Comment: The manuscript needs a good English editor.

Reply: This manuscript will be revised by an English editor.

Comment: Line 82: "The change in spinal canal length after scoliosis correction surgery is critical for surgical safety". This is unreferenced and confusing.

Reply: This is based on our previous research, and we have cited this article.

Comment: Line 95: "The purpose of this study was to investigate the safety and efficacy..." Wasn't that the purpose of your other study? Are these patients different? Not sure why longer follow-up matters so much if that's the question

Reply: These patients are different, long-term follow-up is important for scoliosis patients.

Comment: In methods, the first inclusion criteria is pts who underwent a single stage PSF. Were there similar patients who did not and if so, why?

Reply: We have removed this.

Comment: Also, why were all curves right thoracic?

Reply: We think the direction of curves may impact the outcomes.

Comment: Later the authors mention that not everyone had a pre-op MRI, what was your indication for that?

Reply: It is based on the economic status of patients.

Comment: I don't think we need to define Cobb angle but that's just me

Reply: Therefore, we decided to preserve this.

Comment: Did you collect height on patients pre and post, would be interesting to see how that correlated with spinal canal length and changes - why do you think the regular ais patients had longer canals?

Reply: Sorry, we did not collect height on patients pre and post. The opinion of “the regular ais patients had longer canals” is based on our work experience.

Comment: Line 138 - why did they all jet occipital-jaw belt traction and what is that and why 2 weeks?

Reply: It is a routine treatment, it is also called skin traction. The purpose is to reduce the Cobb angle.

Comment: Line 141-2: Everyone had an intra-op wake-up test? Neuromonitoring is never mentioned again, were there any changes seen (I would expect at least something with curves of this magnitude.

Reply: There were no changes in Somatosensory evoked potentials (SSEP) and motor evoked potentials (MEP).

Comment: The model data analysis portion is too long and poorly written making it confusing. What is staining and staining leakage?

Reply: It is two functions of this software.

Comment: Line 294 - "And PAIS patients received at least 2 surgeries and suffered a lot of pain" This is a) not a sentence and b) a non-sequitur and c) unreferenced

Reply: We have revised this sentence, and add reference.

Comment: Line 299: "However, there are still some clinical studies had different conclusions". Hunh and See above

Reply: We have added reference.

Comment: Line 307 - not sure what feasible means there

Reply: We have revised this.

Comment: Line 314: Quasi-accuracy?

Reply: We have revised this.

Comment: I think the most interesting part of this article was the distribution of curve sizes. I can't remember the last AIS article with an average curve of 83! (the minimum Cobb was 61 which is usually about the max in most studies). Please comment on why these curves got so big when we know (as stated earlier in the article) that curves over 50 (perhaps even 45) should be operated on? Was the 120-degree curve really corrected to 36? I would like to see those images.

Reply: It is based on the national status. In our country, people do not understand clearly of scoliosis. When they hope to be treated, the curve is commonly severe.

Reviewer B

Comments on Figures

- It is suggested to keep only the useful part in Figures 1 and 3.

Reply: The Figures 1 and 3 have been revised.

- Please indicate what the red dots represent in Figure 3.

Reply: The red dots indicate the line that resliced CT followed.

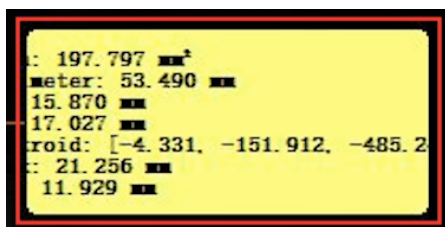
- The citation of Figure 4 is missing in the text, please check and revise.

Reply: The citation of Figure 4 has been added.

- Please explain the meaning of the red circle in Figure 4.

Reply: The red circle means the area of the spinal cord of the plane.

- The data in Figure 4 is incomplete and not clear enough.



Reply: The clear version of data in Figure 4 has been provided.

Comments on Tables

- Please indicate how data are presented in **each** table. Mean (range), for example.

Reply: How data are presented has been indicated in each table.

- Please double-check the below data in the text as it is not matched with Table 1.

The average age of the patients was 15.6 (11–18) years old, and the male ratio was 30.1% (Table 1)

Age (years)↵	16.2 (11-18)↵	15.4 (12-18)↵	0.31↵
Percentage of males (%) ↵	26.4↵	29.8↵	0.17↵

Reply: The data has been checked and revised.

- We failed to find “*” in Table 2 while you explain it in the legend. Please check and revise.

Reply: As no statistical difference was detected in parameters in table 2, we decided to remove “*” in this table.

- Please add a table head for the first column in Tables 1-4.

Table 1. Comparison of preoperative clinical and imaging data in AI

syringomyelia.↵

↵	AIS↵	PAIS↵
total number ↵	318↵	47↵

Reply: The table head for the first column in Tables 1-4 has been added.

Comment: Please check if the units are duplicates and unnecessary.

mm preoperatively to 449.4 mm (393.4–465.1) mm postoperatively, an increase of 5.6 mm.

Reply: The duplicate units have been removed.