Author’s response to reviews

Title: Risk factors for pulmonary complications after posterior spinal instrumentation and fusion in the treatment of congenital scoliosis: A case-control study

Authors:

Lei Wu (wulei1021@163.com)

Xi-nuo Zhang (xiaohui-109@163.com)

Yun-sheng Wang (coolman20082009@sina.com)

Yu-zeng Liu (fancymoon2008@sina.com)

Yong Hai (haiyongccmu@163.com)

Version: 1 Date: 13 Jun 2019

Author’s response to reviews:

Dear Editors and Reviewers,

We were pleased to have an opportunity to revise our paper now entitled, “Risk factors for pulmonary complications after posterior spinal instrumentation and fusion in the treatment of congenital scoliosis” (BMSD-D-19-00573). We very much appreciated your encouraging and insightful comments. We have endeavored to respond to all suggestions and comments to further improve the understanding and potential impact of our manuscript. All amendments are highlighted in red in the revised manuscript. Detailed point-by-point responses are given below.

In case of further queries, we are happy to clarify any details and look forward to your reply.

Sincerely,

Yong Hai, on behalf of all co-authors

Beijing Chaoyang Hospital, Capital Medical University, No. 8 Gongti South Rd, Beijing, 100020, China

E-mail: haiyongccmu@163.com
Responses to the comments:

Reviewer 1

This manuscript "Risk factors for pulmonary complications after posterior spinal instrumentation and fusion in the treatment of congenital scoliosis" appears to be well written reporting on a sophisticated methodology and an appropriate follow-up. I have however a few, but important flaws:

1. How many different surgeons were involved in this study? Furthermore, in my opinion the experience of the surgeon plays an essential role in the outcome of such operations. The authors should include this point in the manuscript.

Response: Thank you for your insightful suggestion. We agree with you that the experience of the surgeon plays an essential role in the outcomes of the operation. In this study, all the operations included were performed by one surgeon Dr. Yong Hai. We added this in the Participants Section of Method Section as follow:

All the operations included in this study were performed by one surgeon (see Participants Section, page 4 line 22).

2. Furthermore, are there differences regarding the surgery time between the two groups? In my opinion the surgery time also plays a role regarding complications. The authors should also include this point in the manuscript.

Response: Yes, the surgery time was significantly longer in the patients with postoperative pulmonary complications than the patients without postoperative pulmonary complications in the univariate analysis (see Univariate analysis Section of the Results Section, page 9 line 5, and Table 1). However, in the multivariate analysis, surgery time was not the independent risk factor of postoperative pulmonary complications.

3. Table 2: Some patients have more than one pulmonary complication. Could the authors add the number of complications for these 45 patients in the manuscript?

Response: Thank you for your insightful suggestion. In response to this comment, we added the number of complications for these 45 patients in the Summary of postoperative pulmonary complications Section of the Results Section:

Twenty-four patients had one pulmonary complication, and twenty-one had more than one complication (14 patients with 2 pulmonary complications, 6 patients with 3 pulmonary complications, and 1 patient with 4 pulmonary complications) (see the Summary of postoperative pulmonary complications Section of the Results Section, page 8 line 12-14).
4. Why was the anterior approach an exclusion criteria? Could the authors explain this?

Response: There were two reasons why was the anterior approach an exclusion criteria:

1) The anterior approach destroys the normal anatomy of the chest and easily leads to the pulmonary complications;
2) Posterior approach is the main way of the spinal instrumentation and fusion in the CS patients. Most of the operations of the CS patients in our department were performed through the posterior approach.

Reviewer 2

John P Albright (Reviewer 2): this is a well done article that describes the occurrence of pulmonary complications of a series of congenital scoliosis surgeries.

The statistics are well done and valid. the conclusions are well supported I have no questions/corrections that require attention

Response: Thank you so much for your positive assessment.