RESPONSE

ManuscriptNO:80863

Effectiveness of preoperative inspiratory muscle training after cardiac surgery: A systematic review and meta-analysis

Dear Editor and Reviewers:

We are very grateful to you for giving us an opportunity to revise our manuscript. We appreciate you very much for your positive and constructive comments and suggestions on our manuscript entitled "**Effectiveness of preoperative inspiratory muscle training after cardiac surgery: A systematic review and meta-analysis**" (**NO: 80863**).

We have studied the reviewers' comments carefully and tried our best to revise our manuscript according to the comments. The following are the responses and revisions. Thanks again for the hard work of the editor and reviewers!

Response to the Reviewer #1:

Thank you for your comments and for taking the time to read this article.

Response to the Reviewer #2

Comment 1: Introduction is too large and away from the topic.
Response: I am sorry for misleading you. Our hypothesis is that preoperative inspiratory muscle training can reduce postoperative pulmonary complications and thus reduce postoperative hospital stay, so we thought it is necessary for readers to understand this backgroud. But we have deleted some words to make the paper more clear.

Comment 2: Not all the studies are up to the inclusion criteria.
Response: I am sorry for this. We selected studies by two authors, and when the two researchers disagreed, a third researcher was consulted to reach a consensus. And we have gone through all the studies again, we find that all the studies are up to the inclusion criteria.

Comment 3: Conclusion assumptions are not correct based on the results of the outcomes.
Response: Our assumption is that preoperative inspiratory muscle training may reduce mechanical ventilation time, length of ICU stay and duration of postoperative hospitalization. Through our meta analysis of literature, we found that only the postoperative hospital stay was statistically significant, so we concluded that preoperative IMT, may decrease the duration of postoperative hospitalization, and with the shorter postoperative stay in the hospital, patients may pay less for medicines, nursing, room and board, etc. Further cost analysis studies should be conducted to confirm our hypothesis.

Comment 4: Too many outcomes and insignificant to draw a robust conclusion.
Response: I am sorry for that. Because there are few studies reporting the effects of preoperative IMT on length of mechanical ventilation, length of ICU stay, and duration of postoperative hospitalization, so we have little data. But through analysis, the data is very statistically significant,

so we draw that conclusion. However, there need more studies to enrich our research. And we will keep looking for new studies.

Comment 5: No details about the methods of the meta-analysis performed in the methods section
Response: RevMan5.4 and Stata statistical software (Release 14; StataCorp LP, College Station, TX, United States) were used to perform the statistical analyses, of note, the results obtained from each program were the same. We chose the randomized effects model to analyze the data. The principal summary measurements used were the pooled mean difference (95%CI). We provided forest plots for every outcome.

Comment 6: Too many limitations without a trial of solving any of them.
Response: Because of few studies and time expressed differently, there will be limitations inevitably. In the future, we will design more rigorous experiments and increase sample size to make the conclusion stronger.

Response to the Reviewer #3:
Thanks for the postive comments.