Author’s response to reviews

Title: Associations between intraoperative ventilator settings during one-lung ventilation and postoperative pulmonary complications: a prospective observational study

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Version: 1 Date: 24 Nov 2017

Author’s response to reviews:

Dear Editor and Reviewer,

Thanks for your kind considerations for our manuscript.

Following your suggestions, we hope we revised the manuscript adequately.

We believe that our manuscript has been improved significantly, and we are looking forward to hearing from you in due course.

Sincerely

Page 7 line 13, hospitals should be plural

Thank you for your suggestion, actually we wanted to suggest that “Participating hospitals included an academic tertiary care hospital and a community hospital”. We revised correctly.

Page 8, line 23: was delta p calculated as peak pressure minus PEEP, or plateau pressure minus PEEP for the 8% of patients on volume control ventilation?

I’m sorry, our description was not enough. We calculate ΔP as peak pressure minus PEEP on both pressure control and volume control ventilation. We added the following information.
driving pressure (ΔP) (peak inspiratory pressure minus PEEP on both pressure control and volume control ventilation)

Page 9, line 16: pneumothorax was not included as a PPC? i.e. need for insertion of a new chest tube after surgery?

Thank you for your suggestion. As a matter of fact, in our definitions, prolonged air leakage included not only requiring ≥ 7 days of chest tube drainage but also need for insertion of a new chest tube. We correctly revised the definition in table 1.

Table 1

Prolonged air leakage [20] Air leak requiring insertion of new chest tube or ≥ 7 days of postoperative chest tube drainage

Page 10, line 20: since you are looking at several variables, would it be appropriate to use a Bonferroni correction?

Thank you for your suggestion, we now deleted several variables from outcome measures and clarified that PPCs was primary outcome. In our analysis model, we only performed a regression analysis for PPCs. Thus, we consider this approach prevents our analysis from inflating of the type I error rate.

Additionally, in multivariate analysis, the number of independent variables did not exceed the allowable number according to the 10 event-per-variable rules. We actually applied 5 variables because there were 51 patients with PPCs in our survey.

And we moved descriptions about ventilator settings to “Quantitative variables and bias”.

Page 14, line 53: remove the word "the" before "high FiO2"

Thank you, we revised correctly.

Page 14, line 60: I don't think this 6 year-old textbook chapter should be described as "the latest recommendation"

Thank you for your suggestion, that’s right. We changed “the latest” to “recent”.

Page 15, line 41: remove the last sentence in this paragraph, it makes assumption about the motivation of the providers, which is not supported by these data

Thank you for your suggestion, we deleted the sentence.
Only a few studies investigated the effect of intraoperative FIO2 on clinical outcomes in thoracic surgery with OLV. Yang et al. reported a lower incidence of postoperative lung dysfunction and satisfactory gas exchange by the lung protective strategy using FIO2 of 0.5 compared to the conventional strategy using FIO2 of 1.0 during OLV [40]. However, FIO2 was one of components in this lung protective strategy, because VT, PEEP, and mode of mechanical ventilation were also different between the groups. Thus, it remains uncertain whether a conservative approach to oxygen therapy during OLV is beneficial or not. To our knowledge, this is the first study to demonstrate an association between high FIO2 during OLV and the occurrence of PPCs. To confirm and dissect these findings, additional studies should be performed in different settings. Moreover, our findings support the need for randomized control trials to evaluate the safety and feasibility of conservative oxygen therapy during OLV.

Page 17, line 41: consider replacing "majorly" with "heavily"

Thank you, we corrected this part following your suggestion.

Page 17, line 41: don't say "their" definition. It is your definition.

I’m sorry, we revised correctly.

Page 18, line 22: by your own admission, you did not establish causality with this observational study. I recommend changing the wording of this sentence to "high FiO2 was associated with an increased incidence of PPCs…"

Thank you for your suggestion, we agree with your comment. Therefore, we revised conclusion according to your comment.

Perhaps add a comment that there was low compliance with recommended standards to maintain a SpO2 92-94%

Thank you for your advice, we added your sentence at interpretation part in our discussion.