Reviewer’s report

Title: Application of intraoperative lung-protective ventilation varies in accordance with the knowledge of anaesthesiologists: A single-centre questionnaire study and a retrospective observational study

Version: 0 Date: 20 Dec 2017

Reviewer: Stefan Schumann

Reviewer’s report:

In their manuscript, Seung et al. describe the combination of a questionnaire and a retrospective study. Although this is unusual, it appears interesting in the given context.

However, I have several comments and suggestions for the manuscript.

General comments

It appears unclear which part of the results are related to the questionnaire and which to the retrospective study. I was not aware that the questionnaire included questions on how the participants would set ventilation in specific conditions as it became obvious when the discussion referred to an 'obesity patient in our questionnaire' and a 'patient in non-laparoscopic surgery in our questionnaire'. This must be clarified in the Methods section and clearly separated in the description of the results.

In this context, please show the questionnaire. It would be relevant for the reader to see the questions and the respective options.

Abstract

Line 45: It might be helpful for the reader if the correct choice (body height) would be stated within the abstract.

Background

Line 17: I would like to suggest to state that however, so far there is no generally accepted strategy for setting appropriate PEEP.

Methods
Page 4, Line 33: 'Also, respondents…' Please clarify that respondents who chose the wrong answer but replied "Yes" were considered as having knowledge on LPV. Furthermore, please state, how respondents were classified if they answered correctly 'height' to the first(?) question but declared not to know about the concept of LPV.

Definition of obesity-group is not stated.

Please describe in detail the propensity score matching procedure

Please state how 'Usage of PEEP' was defined. Was it PEEP >0? Please provide data on the level of PEEP that was set.

Results

The authors mix labelings for the investigated group. Sometimes they use 'conceptual'- and 'non-conceptual'-, sometimes 'correct answer'- and 'incorrect answer'-group, sometimes 'Anesthesiologists with knowledge' and 'Anesthesiologists without knowledge'. Please standardize.

Page 7. Line 32 and Line 41: 'The two groups also differed' and 'There was a statistical significant difference…'. It would be helpful for the reader to state which value was larger or smaller for a certain group instead of stating that there was a statistically significant difference.

Page 9. Line 23: 'Figure 2 presents …' Please omit describing what a figure/table shows, rather state the finding and substantiate it with the figure.

Page 9 lines 42 to 45: Please specify in the text how Vt was related to the factors.

Discussion

Page 11 Line 53: 'Obesity patient…' I could not get this sentence in context to the study. Please clarify what the 'Obesity patient in our questionnaire' is.

Page 12 Line 5: Please clarify what the 'patient in non-laparoscopic surgery in our questionnaire' is.

It is not declared in the Methods section nor apparent from the Results section that the questionnaire included questions on how one would set ventilation.

Page 13 lines 47ff: Repetition of values already presented in the Results section redundant and therefore not necessary.

Minor comments
Page 1 line 25: 'ventilaiton' - please correct

Tables: Asterisk markings are not required if p-values are stated within the Tables.

Table 1 R^2 values >1 are given, please correct (should probably be 0.477 and 0.621)

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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