Reviewer’s report

Title: Regulating Autonomic Nervous System Homeostasis improves Pulmonary Function in rabbits with Acute Lung Injury

Version: 1 Date: 24 Feb 2017

Reviewer: Tobias Piegeler

Reviewer’s report:

The revised manuscript "Regulating Autonomic Nervous System Homeostasis improves Pulmonary Function in rabbits with Acute Lung Injury", in which the authors are evaluating the effect of vagus nerve stimulation, intravenous tetrahydroaminocridine or stellate ganglion blockade on measures of lung injury after tracheal instillation of HCl in rabbits, has improved after the incorporation of (several of) the reviewers' comments.

However, unfortunately there are still several major issues, which in my opinion haven't been addressed properly by the authors or haven't been addressed at all.

Major:

1. The editor suggested adding a completed ARRIVE checklist in order to adhere to journal and internationally accepted policies regarding animal welfare and research. The checklist and also several important points mentioned in these guidelines have still not been provided by the authors.

2. Unfortunately, I cannot fully appreciate the authors' changes in the manuscript, as they haven't been marked (neither in the pdf provided by the journal, nor in the downloadable Word-doc).

3. The Methods section has improved by the revision, however I still have some questions regarding the model and the treatment:

   a. Why did the authors choose a FiO2 of 1.0?

   b. A bolus of 5 ml bupivacaine 0.25% seems rather high to me, due the fact that the maximum dose for humans should not exceed 2 mg/kg and the rabbits in the current study received doses of 4.6 - 3.9 mg/kg. What's the rationale for this high dose? How do the doses in rabbits compare with humans? Have any adverse events been noted (see also ARRIVE checklist)?


   a. I completely disagree with the authors that "SEM and SD can be mutual converted" as they state in their response to the reviewers' comments. SD is a measure of variability and allows
the reader to appreciate the data better. The concern raised by the authors that the figures would be "very disordered" is inappropriate for a scientific publication. Please see also BMJ. 2005 Oct 15; 331(7521): 903. or Br J Anaesth (2003) 90 (4): 514-516 for further information regarding this important issue.

b. The information about how normal distribution has been assessed is still missing.

5. Results, overall: In my initial comment I suggested to report "the exact p-values for ALL reported results, also the non-significant ones". The authors now have incorporated the t statistics for all comparisons, but still do not report any exact p-value, although they say otherwise in the response to the reviewers' comments.

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.

No

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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