Reviewer’s report

Title: Effects of lung protective mechanical ventilation associated with permissive respiratory acidosis on regional extra-pulmonary blood flow in experimental ARDS

Version: 0 Date: 06 Sep 2017

Reviewer: Shahzad Shaefi

Reviewer's report:

Thank you for the opportunity to review this well designed and succinctly written porcine study examining the cardiac output and regional perfusion aspects of low tidal volume ventilation alongside hypercarbia.

Comments as follows:

1. please address in limitations the concept of the order and carry over effect of the crossover design regarding high vs low and lung injury.

2. please discuss in limitations why you didn't separate low/high Vt from hypercapnia/normocapnia, perhaps using HCO3 and/or HCl

3. please at all halve the discussion - much of it is irrelevant to the primary results

4. there is a good deal of repetition of themes within the manuscript - please address

5. please elaborate on hypothesis

6. must acknowledge that PCV in the setting of changing compliance is a limited model

7. individual porcine data important given n of only 9

8. ALI is a marginally redundant term since Berlin definition - would amend manuscript according

Overall, the question of the physiological variables of LTV, CO, pCO2 and in time outcome are significant in nature. With these major revisions, this reviewer will look forward to re-reviewing this manuscript.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

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:

Acceptable

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