Reviewer's report

Title: High tidal volume mechanical ventilation-induced lung injury in rats is greater after acid instillation than after sepsis-induced acute lung injury, but does not increase systemic inflammation: an experimental study.

Version: 4 Date: 27 July 2011

Reviewer: Chun-Jen Huang

Reviewer's report:

Though the authors have made some revisions, however the quality of this revised version was not significantly improved. The data the authors reported in this version still raised more questions than answers.

Major comments:

1. As this reviewer commented, the data would be more complete if the effects of mechanical ventilation (i.e., low tidal volume and high tidal volume) per se on inducing lung injury were investigated in this study. The authors should justify their decision for not including proper controls in the study rather than simply stating “We therefore did not needed to study the effects of mechanical ventilation per se to draw the conclusions that the effects of mechanical ventilation on lung injury and mediator release differed between direct and indirect lung injury”. This reviewer is not convinced by the authors’ statement.

2. This reviewer appreciate that the authors agreed to include the ABG data in the revised version. However, this reviewer found it hard to believe that the pH and PaCO2 data of the acid groups were within normal ranges whereas the PaO2/FiO2 ratios of the acid groups decreased significantly? Any explanation?

3. The potential effects of frequent blood drawing should at least be acknowledged as part of the study limitation.

4. Data presentation (at least the IL-6 data) was improved in the revised version.

5. Why the authors chose to employ a tidal volume of 15 mL rather than higher volume to induce lung injury?

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests.