Reviewer’s report

Title: Predictors of 1-year mortality in patients on prolonged mechanical ventilation after surgery in intensive care unit: a multicenter, retrospective cohort study

Version: 0 Date: 11 Nov 2019

Reviewer: Alessandro Belletti

Reviewer's report:

In this manuscript, dr. Li and colleagues present results of a retrospective study investigating predictors of 1-year outcome in post-surgery patients receiving prolonged MV, defined as MV at 21st day after ICU admission.

The manuscript is overall well written, and deals with a potentially important topic given the current increasing interest towards long-term outcome of critical illness and resource optimization. I nevertheless have some comments for the Authors

1. The main comment I have, is that it is not entirely clear to me why this manuscript should be superior to the ProVent score. In particular, the ProVent score is very simple to calculate, has been validated in multicenter cohorts (see Leroy et al, Crit Care. 2014; 18(4): R155 - cited by the Authors) including surgical patients (see Udeh et al, Ann Am Thorac Soc 2015; 12(12):1845-1851). In the Authors opinion, why is ProVent score not widely used? Why should their work be superior?

2. As a related point, did the Authors attempt to calculate ProVent score for their patients, or to develop their own score? This might be interesting

3. Did the Author consider to analyze predictors of 1-year mortality at earlier time-point (e.g. 14 days - see Udeh et al, Ann Am Thorac Soc 2015; 12(12):1845-1851)? If their database allows that, it might be interesting

4. The definition of surgical patients is unclear to me. Were all type of surgery included (e.g. cardiac surgery?)

5. As a related point, I believe that the Authors should report whether patients underwent elective or non-elective surgery, whether ICU admission was a planned or unplanned postoperative admission, and whether patients were admitted to ICU directly after surgery, or from the ward after developing complications. I think that time from surgery to ICU admission could be useful (direct postoperative admission is different from admission on postop day 7 and may have prognostic implication)

6. Do the Authors have information on SOFA score at 21 days or only at admission?

7. How did the Authors define "feeding intolerance"?

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?
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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.

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