Reviewer's report

Title: The Effect of Sedation and/or Analgesia as Rescue Treatment during Noninvasive Positive Pressure Ventilation in the Patients with Interface Intolerance after Extubation

Version: 1 Date: 15 Apr 2017

Reviewer: Franco Laghi

Reviewer's report:

I thank the investigators for answering most of my questions. Some points, however, still need to be addressed.

1-The investigators wrote to one of my questions that "all the patients used NIPPV directly after extubation". This statement seems to imply that ALL extubated patients undergo NIPPV. In the appendix, however, the investigators list the indications to start NIPPV. Please: (a) clarify whether ALL patients who are extubated receive NIPPV or whether only those fulfilling the characteristics listed in the list under the heading "Inclusion criteria for patients used NIPPV directly after extubation". (b) If the indications to start NIPPV are those under the heading "Inclusion criteria for patients used NIPPV directly after extubation", please move that list to the body of the manuscript and make it very clear in the methods section that those were the indications for NIPPV.

2-In the methods section make it very clear what was the RASS goal for sedation during NIPPV.

3-The response to my question regarding the fact "That a confounder was associated with a p<0.10 on univariate analysis is not a sufficient reason to generalize the results of this study to other ICUs" is insufficient. That other investigators have used the same strategy does not automatically make that strategy correct. A robust biological justification of the statistical strategy must be provided. Without it, the investigators must recognize that the generalization of their results to future cohort of patients becomes less convincing.
4-Please provide the units for the numbers in the following sentences:

a- Moreover, NIPPV duration was also shorter in the group of sedoanalgesia (46.5 vs. 70, p=0.041).
b- ICU LOS was shorter in patients who received sedation and/or analgesia vs. those who did not receive drugs (5 vs. 8, p=0.030).
c- In our study, we found that sedation and/or analgesia would not influence the oxygenation, and the OI of patients in the sedation and/or analgesia remained unchanged (218.22 ± 65.87 vs. 211.13 ± 44.88, p=0.402).
d- On the contrary, the extraction of CO2 can be facilitated in the patients received sedoanalgesia, which can be seen from the lower PaCO2 after the administration of the drug (51.33 ± 13.49 vs. 48.53 ± 13.54, p=0.019)

5-In the sentence "Our study showed that sedation and/or analgesia could decline the rate of NIPPV failure and NIPPV duration" change the word "decline" to "reduce"

APPENDIX

Please, specify the level of pressure support used during weaning from mechanical ventilation

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.

No

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

Yes
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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

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