Reviewer’s report

Title: Flow-controlled ventilation (FCV) improves regional ventilation in obese patients – a randomized controlled crossover trial

Version: 0 Date: 19 Aug 2019

Reviewer: Lucia Mirabella

Reviewer's report:

The authors presented an interesting article on the effectiveness of FVC in improving lung ventilation in obese patients, although some corrections and clarifications should be made:

Abstract:
- line 33, there is an error, the sentence ends with and
- results and conclusions of the abstract should be rewritten based on the changes required in the text

Background
- In the hypothesis of the study, the authors speak of alveolar recruitment which however cannot be demonstrated without oxygenation data, it would be better to express on distribution of the lung ventilation

Methods
Sample size calculation should be moved in the study design and patient population

Procedure
Is the value of the fixed peep decided on an internal protocol? Based on what? Please specify
Data on the type of surgical interventions are lacking, speaking of distribution of ventilation, of obese patients it is very different if the interventions are performed in open or with laparoscopic surgery.
Specify better how the EELV measurement was obtained and reduce the technical part on the tritube (lines 18-28 on page 7)
The authors talk about compliance of the respiratory system, is it a static or dynamic compliance?
The Evone does not have an inspiratory lock button so when referring to Pplat how was it measured?

Results
The results do not include data on oxygenation, not even saturation, of ETCO2 despite being monitored
In tab 2 it would be better to use conventional and universally accepted acronyms, Respiratory Rate (RR) better than VF and Systolic pressure, Diastolic pressure better than RRsyst or RR dias should be confusing
In figure 1 the dotted line covers the curves so it would be indicated to use arrows to make everything clearer.

Fig.2 indicate the three graphs with lower case letters, in the first and second graphs also add the basal values as statistically they have been compared and reported as results.

Discussion

It is more correct to speak of less reduction of EELV and MLV and not of increase (lines 9-12 on page 11).

Parlare di efficacia nel reclutamento alveolare senza dati di ossigenazione diventa arduo quindi sarebbe opportuno rimodulare alcune affermazioni riporate in discussione e nelle conclusioni. Più nello specifico nelle conclusioni si parla di ipossia e atelettasie ma nello studio non ci sono dati su necessità di supporto ventilatorio nel perioperatorio, complicanze polmonari ecc.

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.

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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