Peer Review File
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Reviewer A

I thank the reviewer for the detailed answer provided.

Comment 1: First of all, it is true that the pandemic led to more ARDS but this article is not specific to Prone position in COVID -19 patient but to PP in ARDS. Which it's still great but consider changinging the title or adding more references of PP in COVID-19 ARDS specifically.

Reply 1: we added some data about PP in COVID-19 ARDS.
Changes in the text: page 2 from line 71 to line 80, page 4 line 137 and 138, page 4 from line 159 to line 161

Comment 2: You should add some illustrations for at least each part of the manuscript. It will ease the reader to follow.
Reply 2: It is very complicated to translate the concepts of pathophysiology through images. Nevertheless, I have tried to explain these concepts as simple as possible.
Changes in the text: //

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Comment 3: You could add also a comparison table of the major studies in PP and ARDS with the major elements such as :

a. Type of study ( prospective/retrospective)
b. Procedure ( PaO2/FiO2 ratio for PP, duration of PP, number of PP sessions)
c. Number of patient
d. Main outcome
e. Main result
f. COVID-19 patients or other

Reply 3: This review is not intended to review the main published papers on pronation but to attempt to explain the pathophysiological mechanisms of pronation.
Changes in the text: //

Comment 4: In your discussion you should cite awake PP in ARDs patient as it improves oxygenation and could have a trend in improving mortality in COVID-19 patient with hypoxemic respiratory failure who do not need mechanical ventilation.
Reply 4: we added some data about awake PP in COVID-19 ARDS.
Changes in the text: page 5 from line 202 to 204.

MINOR COMMENTS:

Comment a.: Line 104: you should precise that the description of lung physiology by West is issued from patient without ARDS and not lying on their back
Reply a.: ok, accepted
Changes in the text: page 3 line 117 and 118

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Comment b.: Line 252: You have to talk in you manuscript about the best PEEP and the different maneuvres to reach it ( plateau pressure, driving pressure, recruitability, oesophagal pressure,

impedancemetrie, etc) and you have to say that the best PEEP in the supine and the prone position is not the same.
Reply b.: The best peep does not necessarily change between the prone and supine position. What occurs is an increase in the elastance values of the chest wall and a better redistribution of the stress (transpulmonary pressure) within the lung parenchyma with a progressive desirable reduction in the lung elastance values. Therefore, the best peep values between prone and supine may or may not change according to the increase in the chest wall elastance values with respect to the reduction in lung elastance values. It is therefore essential to always measure esophageal pressure whenever possible.
Changes in the text: //

Comment c.: Line 282-283: in the PROSEVA study, patient had to be placed prone until the PAO2/FIO2 ratio was under 150 and independently of their response to the maneuver. I think that is very important and we teach it to our students to continue PP even if the patient do not respond but are still with a P/F < 150
Reply c.: The fact of continuing pronation even though there is no response (see the appropriate section on how to evaluate) is questionable as the risks associated with the maneuver must always be taken into account. It is also a maneuver with an impact on the nursing staff in a period, that of covid-19, where resources are minimal due to the overflow of patients in the ICU.
Changes in the text://

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Reviewer B

Comment 1: Suggest to elaborate on the "sponge lung" model mentioned at the end of the background section.
Reply 1: The sponge model accounts for density distribution in prone position, for which the unloaded dorsal regions are recruited, while the loaded ventral region, collapses.
Changes in the text: page 2 from line 43 to 45.

Comment 2: Suggest to further the meaning of "sloping lung areas" for reader understanding.
Reply 2: Sloping lung areas means the lower area of the lung (the dorsal ones in the supine position and the ventral ones in the prone position).
Changes in the text: page 2 line 66 and 67.

Comment 3: Suggest commenting on the effect of inclines (example Trendelenburg or Reverse trendelenburg), as well as effectiveness of sleep vs. wake proning.
Reply 3: Pathophysiologically, there is no strong rationale for ventilating a patient with covid-19 ARDS in Trendelemburg or reverse Trendelemburg. For the awake prone position, I have added some references in the text.
Changes in the text: page 5 from line 202 to 204.

Comment 4: To compliment the adverse effections mentioned, suggest commenting on any prophylactic measures that can be taken to minimize adverse effects such as pressure ulcer prevention, eye care or oral care…etc
Reply 4: ok, I have specified some details in the text.
Changes in the text: page 5 from line 219 to 221.

Comment 5: In the outcomes section of the manuscript, how soon can “responders” versus “non-responders” be typically identified? In other words, if proning does not seem to be working, how long is it trialed before being deeming a patient a “non-responder”?
Reply 5: Responding to pronation means that there is a reduction in driving pressure, an improvement in paO2 / fiO2 and a reduction in paCO2 values because alveolar recruitment is optimized and areas of overdistension are reduced.
Changes in the text://

6. Attention to the flow is recommended as a few word choices could be optimized for improved flow. For example "obstacle to" at the end of the first sentence in the "contraindications and complications" section could be replaced with "obstruction of" for better flow.
Reply 6: Ok, i modified.
Changes in the text: page 5, line 209.

Reviewer C

Comment 1: Title would read better as Pronation in ARDS secondary to COVID-19.
Reply 1: ok I modified the title
Changes in the text: page 1, line 1.

Comment 2: P3L127- It must be mentioned that there is a small proportion of patients who do not respond to proning ( in the range of 20%), which should be added within this section.
Reply 2: ok I included this concept in the text
Changes in the text: page 4, line 158.

Comment 3: P4 L137- Not clear what is meant by "ventilable"?
Reply 3: ok, I removed the term from the text
Changes in the text: page 4, line 151.

Comment 4: P4 L 164- Decrease VAP is not always true. Although some proponents state that it decreases VAP, a post hoc analysis of the PROSEVA trial showed an increase in VAP, so this statement would need to be revised.
Reply 4: ok, I removed this concept from the text
Changes in the text: page 5, line 181 and 182.

Comment 5: P6 L 253 - How much time is necessary to improve compliance- this should be mentioned as it gives an idea to the reader to assess how long they should wait, when to get an ABG etc to assess recruitment.
Reply 5: ok I included this concept in the text
Changes in the text: page 7, line 282 and 283.

Comment 6: P6 L 265-266- Not clear what is meant by " well-ventilated".
Reply 6: The expression” these do not need to be well ventilated” refers to the fact that these areas of the lung can be overstretched.
Changes in the text: page 7, line 291.

Comment 7: P7 L 287- Within conclusion, " thanks to" sounds very layman and should be revised. It would be better to avoid " thanks to" and terms such as these.
Reply 7: ok, I removed this expression from the text
Changes in the text: page 8, line 312.