Reviewer’s report

Title: The predictive value of diaphragm ultrasound for weaning outcomes in critically ill children

Version: 1 Date: 11 Oct 2019

Reviewer: Chrissie Astell

Reviewer's report:

I have reviewed the revisions to the manuscript titled "The predictive value of diaphragm ultrasound for weaning outcomes in critically ill children". I appreciate the authors revisions and comments. However, the grammatical issues mentioned in my first review need to be addressed. Overall, the English in the present manuscript requires further editing. Please see below for specific comments.

Abstract:

1. Pg 2 line 14 - 17: Aim of the study should be written in past tense.

2. Pg 2 line 45 - 51: Please specify that the relationship between DTF and PImax was positive.

Introduction:

1. Pg 4: The abbreviations ICU-AW, VIDD, RSBI, P0.1 aren't used in the manuscript and don't need to be defined here.

2. Pg 4 line 12 - 17: Grammatical issue needs to be addressed.

Methods:

1. Pg 6 line 39 - 45: This should be written in past tense and "were classified as weaning failed groups" needs re-wordings. Please write this as an individual sentence, rather than in brackets.

2. Pg 7 line 15 - 20. Grammatical issue needs to be addressed.

3. Pg 7 line 17 "body weight(BW)" - please include a space between the word "weight" and the opening bracket. Can the same be done in all other instances?
4. Statistical analysis: The authors have normalised their data to BW and used t-tests. I was wondering whether this is the most appropriate way of analysing their data, or whether an ANCOVA would be more suitable?

Results:

1. I can't seem to find table 1 in the revised manuscript

2. Pg 9 line 34 - 39: "Three cases passed away occurred after 48 hours of successful extubation in the failure group, the in-hospital mortality was 27.3% (3/11), and there was one died in the success group". Grammatical issue.

3. Diaphragmatic parameters and PImax predict the value of weaning success: This section may flow better if the authors explained all of the DTF data before moving on to PImax, rather than switching between the two.

4. Supplementary table 1 isn't necessary when the r and p values are presented in text.

Discussion:

1. Pg 11, lines 1-9: "consistent with results from previous study", please change to "studies" as there are multiple studies referenced.

2. The abbreviation DD isn't necessary since it is only used once in the manuscript, could you delete the abbreviation and write diaphragmatic dysfunction in full?

3. Pg 11 lines 31 - 37: I wonder whether it's appropriate to compare the rates of weaning success of this study, to that of previous studies, given the relatively small sample size?

4. Pg 12: Could you please provide evidence to further support the statement that there is an increase in DTF in COPD?

5. Pg 12 line 56: Please avoid starting a sentence with "And"

6. Pg 12 line 59 - Pg 13 line 1: Grammatical issues

7. Pg 13 lines 1 - 6: The authors state that the cooperation of children during PImax measurements in their study was significantly lower than that of adults in previous studies? I was wondering how this was determined. Alternatively, if this is a hypothesis, can the sentence be rephased to better reflect this? Were children less cooperative during measurements because they were more sedated?
Please note that the numbering system on the left-hand side of the page doesn't match the text properly. Could this please be amended so that it is easier to make comments during the revision process?

**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?**
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:

Needs some language corrections before being published
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