Reviewer’s report

Title: A clinical prediction rule to identify difficult intubation in children with Robin sequence requiring mandibular distraction osteogenesis based on craniofacial CT measures

Version: 1 Date: 09 Sep 2019

Reviewer: Alexander Schmidt

Reviewer's report:

Dear Editor

Thank you for the possibility to review this very interesting manuscript. I think this novel idea will add important information to the airway management practice in RS patients.

I have two major and some minor concerns:

Major:

- In general the English language used needs to be revised by a professional language editing service. A few examples can be found below. Thank you.

- P6L29: "Therefore, it is necessary to find new method to predict whether RS patients have difficulty intubation before MDO."

I think the number of laryngoscopies and intubation attempts would be of interest too. Difficult intubation is not only about grading the view.

In addition, the experience and level (resident, fellow or attending resp. consultant) should be noted and would be important. Please add this information.

Based on this information recalculate the statistics and adapt the results.
Introduction:

P4L11: "However, the patients have severe TBAO who suffered severe upper airway obstruction necessitates..."

I think this sentence needs to be rephrased: "However, the patients who have severe TBAO often suffer from severe upper airway obstruction which necessitates..."

Is that what is meant?

P4L33: "... can increase the upper airway size and relieve the airway obstruction safely and effectively, tracheal intubation is necessary before MDO."

This statement is not correct. It might require tracheal intubation for MDO surgery. Patients already having a Tracheostoma will not need intubation. Please correct this sentence. I would suggest 2 sentences.

P5L5: "However, some of those prediction methods lack of standard data for children while others are can't cooperated by little babies, so that they are not well applied to RS patients."

Please correct this sentence

P5L12: "Therefore, it is necessary to find new method to predict whether RS patients have difficulty intubation before MDO."

I would say it would be helpful or of benefit. Especially since the newly developed parameter requires a CT and this might need sedation of the child. Risk and benefits have to be considered.

P5L17: This paragraph already includes parts of the methods. Please strictly separate introduction (current problems and solutions, aim and goal) and method (how and what this study investigated).

In general I think the introduction needs to be shortened.
Methods:

P6L39: Displayed results of n for the groups belong in the method section.

P8L15: "According to the test results, a clinical prediction rule was established."

"a"

Results:

Please add 95% CI for all values where appropriate. Thank you.

Discussion

P9L53: "We characterized differences in upper respiratory tract morphology between patients with difficult intubation and without difficult intubation RS using clinically available objective measurements using standard CT scans."

The first sentence of the discussion is very important and needs to contain what was done and what was found:

"This study investigated various computer-tomographic measured airway dimension and their correlation with prediction of a difficult airway in patients with RS. The main findings were….

The next chapter of the discussion should list what is known

The third chapter what the present study found and the clinical impact

P11L46: "… this is the first study tries to predicting difficult intubation in RS patients before MDO …

Either "that tries to predict" or "trying to predict…"
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:

Not suitable for publication unless extensively edited

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