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OPEN PEER REVIEW

Comparative Evaluation of Difficult Intubation Predictors in Children Under Two Years of Ages

Sedighe Shahhosseini, Mohammad Montasery, Mohammadali Saadati, Amir Shafa

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About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

More about open peer review: brieflands.com/knowledgebase/opr

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1 Original submission

4 comments · 1 Sep 2021 – 13 Sep 2021

Referee 1 Reviewer

MAJOR REVISION 1 Sep 2021

Dear AE,
The authors should answer a few questions.
1. What is the novelty of the current study, and what differentiates it from the others?
2. Please clearly state who intubated the patients and whether that person knew the initial measurements.
3. How was the MO parameter measured in sedated children?
4. It appears that the analysis is incomplete or has not been fully described. An ROC curve must be presented in the article. It would be better to calculate the sen, spe, PPV, and NPV of each variable.
5. Table 1 was not well developed.
6. In the discussion section, it is stated that wt<5.9 kg, ... are predictors of DI, but they have not been mentioned in the results section.
7. In the discussion section, the authors wrote that NC and SMD were not strong predictors. How did they reach that conclusion?
8. The authors wrote " Other variables MO, AASI, NC, and sex were not reliable predictors for difficult intubation" in the abstract. However, in Table 2, the p-value is less than 0.05!
9. Please use figures and different curves in the results section.
10. I suggest the following six references:
Javaherforooshzadeh F, Gharacheh L. The Comparison of Direct Laryngoscopy and Video Laryngoscopy in Pediatric Airways Management for Congenital Heart Surgery: A Randomized Clinical Trial. Anesth Pain Med. 2020;10(3):e99827.
Seyedhejazi M, Sheikhzade D, Aliakbari Sharabiani B, Abri R, Sadeghian M. Evaluating the Effects of Post-Intubation Endotracheal Suctioning Before Surgery on Respiratory Parameters in Children with Airway Secretion. Anesth Pain Med. 2019;9(3):e86486.
Onal O, Gumus I, Sari M, Zora ME, Acar MA. The Obv-Eas Method: An Easy Way to Facilitate Fiberoptic Intubation in Pediatric Patients: Case of an Infant with Freeman-Sheldon Syndrome. Anesth Pain Med. 2018;8(5):e81451.
Sirimontakan T, Artprom N, Anantasit N. Efficacy and Safety of Pediatric Procedural Sedation Outside the Operating Room. Anesth Pain Med. 2020;10(4):e106493.
Rahmani F, Mahmoodpoor A, Salmasi S, Ebrahimi Bakhtavar H. Safety of Healthcare Workers During the Airway Management in Adult and Pediatric Patients with COVID-19. Anesth Pain Med. 2021;11(2):e112508.
Ahmed SA, Omara AF. The Effect of Glossopharyngeal Nerve Block on Post-Tonsillectomy Pain of Children; Randomized Controlled Trial. Anesth Pain Med. 2019;9(2):e90854.
Sincerely

Referee 2 Reviewer

MAJOR REVISION 3 Sep 2021

Dear AE,
My comments are as follows.
- The title should be written more fluently, i.e., Predictors of difficult intubation in ….
- Table 1 is duplicated in the text. It should be eliminated.
It is not clear whether the variables in Table 2 each independently predict difficult intubation. For example, could height and weight predict difficult intubation independently of age? A logistic regression analysis with

the inclusion of variables with significant results in the preliminary analysis will resolve the issue and is highly recommended.
- It is highly recommended to analyze the results in two age subgroups separately. A suggested cut-off value could be six months of age.
- The ROCs for cut-off values of significant predictors should be provided.
- Finally, providing a model including the predictor variables is highly warranted.
- The Discussion should be improved with more comparable studies.
- Finally, a thorough revision for numerous typographical and grammatical mistakes is required.
Thanks.

Associate Editor MAJOR REVISION 3 Sep 2021

Dear EIC,
I was pleased to have the opportunity to review this manuscript. The topic is interesting. However, the data analysis and presentation of the results require a Major Revision, and the authors need to consider the suggested references. I would be pleased if the authors could respond to the queries meticulously.
Best regards

Editor-in-Chief MAJOR REVISION 13 Sep 2021

Dear Author,
The reviewers' comments are provided. Please carefully correct the details mentioned above according to the reviewers' requests.
Thanks.

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Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Greetings, and thanks for the attention and precision of the journal's respected reviewer

I present to you below the answers to the questions that the first reviewer had about our article.

Q1: The title should be written more fluently. i.e., Predictors of … difficult intubation in

R1: The title of the article was chosen in this form because of the comparative examination of the difficult intubation items of adults with children. In children under two years of age, an examination of the statistical population in this form was not found, and since this research was being conducted as the first work, we first had to find out whether or not these items also have an effect in children?

.Q2: *Table 1 is duplicated in the text. It should be eliminated*

R2: The extra table was removed .

Q3: It is not clear whether the variables in Table 2 each independently predict difficult intubation.

R3: The factors presented in Table 2 have all been evaluated and presented independently of age, and in the re-analysis the same results were obtained.

Q4: *It is highly recommended to analyze the results in two age subgroups separately.*

R4: In the initial pilot examination, since we had the most problems at ages under two years (compared with over two years), we decided to choose the statistical population under two years. And dividing this target population into above and below six months of age was not our intention. This age division (the 6-month cut-off) can be used in future studies.

Q5: *The ROCs for cut-off values of significant predictors should be provided.*

R5: The analysis and calculations of sensitivity, specify were performed again by an experienced statistical consultant, and results similar to the previous results submitted in the text of the article were obtained. The ROC curve for the significant values whose area under the curve is considerable (statistically significant) was added to the text.

Q6: *Discussion should be improved with more comparable studies*

R6: The references used in the discussion were revised, and more relevant references were used

Q7: *Finally, a thorough revision for numerous typo-grammatical .mistakes is required*

R7: Thank you for your precision and kind attention; grammatical and spelling corrections were made in the text.

Response to the second reviewer :

.Q1: *.what is novelty in current study and what is differentiate your study from the others*

R1: The new idea in this study is obtaining specific items of difficult intubation for children under two years of age, which has not been comprehensively examined so far. It can be said that in children, unlike adults, we do not have a specific and clear predictor that has a specific cut of point. In a few studies of children, only age under three months and low weight have been mentioned sporadically, and the other adult criteria have not been examined in children; in this respect our idea was new.

Q2: *please clearly note that who intubated patients and whether .the person knew the initial measurements or not*

R2: Intubation was performed by a pediatric anesthesia attending with at least 5 years of work experience in the

pediatric surgery center, who had no knowledge of the measurements and their values.

?Q3: *How did you measure the MO parameter in sedated child*

R3: Measurement of MO in the sedated child: while the child's mouth was held open by an assistant without much pressure, the distance between the two edges of the upper and lower gums at the midline was measured with a fixed graduated instrument .

Q4: *ROC curve must be presented in the article*

R4: The analysis and calculations of sensitivity , specifity, Pval,ROC were performed again by an experienced statistical consultant, and results similar to the previous results submitted in the text of the article were obtained. The ROC curve for the significant values whose area under the curve is considerable (statistically significant) was added to the text. To reduce waste of time and the volume of material, we included in the text of the article only the significant tables and graphs with a high (strong) area under the curve.

Q5: *able 1 was not well-developed*

R5: The information in Table 1 serves as documentation for the explanations in the text preceding it, and it had been presented in this form to avoid repeating the explanations, which were mentioned in the Discussion section, and to reduce the reader's waste of time. The relevant explanations were added to the text

Q6: *discussion part, It have been written that wt<5.9 kg ,..... are predictor of DI but they have not been mentioned in the result .part*

R6 : The relevant explanations were added to the Results section .

Q7: *.In discussion part,you wrote that NC, SMD were not strong ?predictor ,How did you get that conclusion*

R7: Based on the statistical analysis and the mean+_ sd and the pval values presented in the text of the article, in the table and

the discussion. And the small area under the curve for these two variables, which were therefore omitted in drawing the ROC curve; only the values with a large area under the curve were presented in the ROC curve

Q8: *.You wrote " Other variables MO, AASI, NC and sex were not reliable predictors for difficult intubation" in abstract ,This is while in table 2, the p value is less than 0.05!*

R8: Based on the information in Table 2, the MO,NC values had close mean+_ sd in both groups, and they did not have a clear difference from each other that would be noteworthy. In addition, we pointed out in the abstract that these values cannot be reliable in differentiating difficult and problematic intubation, and these results were also similar to other studies.

:Q9: Suggest below Six references

R9: We read your suggested references for enriching the text of the article, and we are very grateful for your kind attention and intention in this regard. In collecting the initial literature for writing the proposal, we came across two of these articles, but the content of these articles was not consistent with our research, and therefore they were not used. These articles were recorded in our reference archive and will certainly be used in future research.

2 Revision 1

2 comments · 6 Oct 2021 – 6 Oct 2021

Associate Editor

MAJOR REVISION 6 Oct 2021

Dear EIC,
Unfortunately, the author has strangely answered the reviewers' questions in Persian.
Also, I suggest considering ALL references.
Thanks.

Editor-in-Chief

MAJOR REVISION 6 Oct 2021

Dear Author,
Your article has been reviewed carefully by the reviewers. According to their comments, this document needs major revision. Please follow their comments as requested.
Thanks.

3

Revision 2

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Hi

Thanks for your attention.

The answer of the respected reviewers is as follows:

First reviewer:

Q1: The title should be written more fluently. i.e., Predictors of difficult intubation in …

R1: In children under two years of age, there is no comprehensive study on the application of adult difficult intubation criteria in children. This title was chosen because it was the first study to examine the effectiveness of these criteria in children.

Q2: *Table 1 is duplicated in the text. It should be eliminated.*

R2: Extra table removed.

Q3: It is not clear whether the variables in Table 2 each independently predict difficult intubation.

R3: The factors presented in Table 2 were all evaluated and tabulated independently of age, and similar results were obtained in the re-analysis.

Q4: *It is highly recommended to analyze the results in two age subgroups separately.*

R4: We had the most problems in the initial experimental study in children under two years of age, so we decided to select the statistical population in this range, and we did not intend to divide this target population above and below the six months. This age division (6 months) can be used in future studies.

Q5: *The ROCs for cut-off values of significant predictors should be provided.*

R5: Statistical analysis was performed by an experienced statistical consultant with similar results. The curves of the rock correspond to significant values when the surface of a significant (statistically significant) curve was added to the text.

Q6: *Discussion should be improved with more comparable studies*

R6: The sources used in the discussion were reviewed and more relevant sources were used.

Q7: *Finally, a thorough revision for numerous typo-grammatical mistakes is required.*

R7: Grammatical and spelling corrections were made in the text.

Second reviewer:

Q1: .what is novelty in current study and what is differentiate your study from the others.

R1: *In children, unlike adults, we do not have a specific criterion for diagnosing difficult intubation. In previous studies, age and low weight have been reported sporadically. The novelty of this study is to obtain new and helpful criteria for diagnosing difficult intubation in children.*

Q2: *please clearly note that who intubated patients and whether the person knew the initial measurements or not.*

R2: an experienced anesthesiologist blinded to the study intubated the patients in sniffing position.

Q3: *How did you measure the MO parameter in sedated child?*

R3: In the sedated child, the distance between the upper and lower gingival edges in the midline was measured with a fixed calibrated instrument while the child's mouth was held without much pressure by an assistant.

Q4: *ROC curve must be presented in the article*

R4: Statistical analysis was performed by an experienced statistical consultant with similar results. The curves of the rock correspond to significant values when the surface of a significant (statistically significant) curve was added to the text.

Q5: *able 1 was not well-developed*

R5: The information in Table 1 is used as a document to explain the text before that. This was done in order to avoid duplication of the explanations mentioned in the discussion section and to reduce the reader’s waste of time. Relevant description was added to the text.

Q6: *discussion part, It have been written that wt<5.9 kg ,..... are predictor of DI but they have not been mentioned in the result part.*

R6: Necessary explanations were added to the results section.

Q7: *.In discussion part,you wrote that NC, SMD were not strong predictor ,How did you get that conclusion?*

R7: Based on statistical analysis and mean + _ sd and pval values in the text of the articl, Table and discussion are given. The small

area under the curve corresponds to these two variables, which were omitted in the drawing of the rock curve, and only values with a large curved area were given in the rock curve.

Q8: *.You wrote " Other variables MO, AASI, NC and sex were not reliable predictors for difficult intubation" in abstract ,This is while in table 2, the p value is less than 0.05!*

R8: According to the data in Table 2, the values of MO and NC in both mean + _ sd groups were close to each other and there was no clear and significant difference. We also noted in the abstract that these values could not be reliable in distinguishing between difficult and difficult intubation, which were similar to the results of other studies.

Q9: Suggest below Six references:

R9: We have read your suggested sources to make our text more fruitful, and we thank you very much for your good attention and intention. In collecting the initial texts for writing the proposal, we came across two of these articles, but the contents of these articles did not match our research and therefore they were not used. These articles were recorded in our resources archive and will definitely be used in future research.

Have a good time

3 Revision 2

3 comments · 4 Nov 2021 – 4 Nov 2021

Referee 3 Reviewer

MINOR REVISION 4 Nov 2021

Dear AE,
The author could try to correct the majority of the requested items, but I suggest considering all recommended references.
Sincerely

Associate Editor

MINOR REVISION 4 Nov 2021

Dear EIC,
Based on the reviewers' comments, this revised format needs some corrections.
Final decision: Minor revision
Regards\

Editor-in-Chief

MINOR REVISION 4 Nov 2021

Dear Author,
Your article has been carefully reviewed by the reviewers. According to their comments, this document needs minor revision. Please follow their comments as requested.
Thanks.

4

Revision 3

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Hi

Thank you for the kind attention of the esteemed officials of the magazine.

2021-11-04 10:27:26

Reviewer 1:
Dear Editor in Chief
Author could try to correct the majority of requested items, but suggest to consider all recommended references.
Sincerely

In response to the reviewer's latest comment, suggested references were added to the text.

4 Revision 3

3 comments · 14 Nov 2021 – 14 Nov 2021

Referee 3 Reviewer

ACCEPT 14 Nov 2021

Dear AE,
This revised manuscript was reviewed, and necessary corrections were made.
Sincerely

Associate Editor

ACCEPT 14 Nov 2021

Dear EIC,
The author was able to correct all requested items, and based on the reviewers' comments, this revised version is acceptable for publication.
Final decision: Acceptance
Regards

Editor-in-Chief

ACCEPT 14 Nov 2021

Dear Author,
The document has been reviewed carefully by the reviewers. Based on their comments and the revisions you made as requested, this manuscript is accepted.
Thanks.