

Peer Review File

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Reviewer A:

The methods and results of this study were similar to those of Avian et al' study. However, as the authors mentioned in the discussion section, the main difference of the two study, ethnicity in study population (Caucasian and Asian), is important to choose the LMA sizes. Therefore, this study is valuable and relevant.

The introduction, methods, statistical analysis, results, and discussion in this study are relevant and satisfactory to me. Some comments should be considered.

1. P4 L68-69: please cite the reference on the TRIPOD reporting checklist.
2. Should be present the equation about model-based weight probability scores for LMA sizes for the age groups and gender (in the Supplement tables)
3. Should be present the model-based weight ranges in the LMA sizes recommendations.

The authors' answer:

Thank you so much for your detailed and helpful comments on our manuscript. We have revised the manuscript based on your comments. We will focus on this topic and conduct more researches of high-quality in the future to provide a more representative and convincing analysis. Based on your comments, we have made the following revisions to the manuscript.

Comment 1:

P4 L68-69: please cite the reference on the TRIPOD reporting checklist.

Reply 1: The editor reminded us that our submission should include a TRIPOD reporting checklist as supplementary material when we submitted our manuscript. The relevant page/line and section/paragraph number in our manuscript have been stated for each item according to the TRIPOD reporting checklist which was provided by the

editor. And a statement was included at the end of the “Introduction” and the “footnote” to indicate that our manuscript followed the TRIPOD reporting checklist.

Changes in the text: The reference on the TRIPOD reporting checklist was cited in the revised manuscript. (see Page 6, line 76)

Comment 2:

Should be present the equation about model-based weight probability scores for LMA sizes for the age groups and gender (in the Supplement tables)

Reply 2: The equation about model-based weight probability scores for LMA sizes for the age groups and gender has been listed in the Supplement table 1.

Changes in the text: We added the equation in the Supplement table 1 in the revised manuscript.

Comment 3:

Should be present the model-based weight ranges in the LMA sizes recommendations.

Reply 3:

We completely agree with you and we think the presentation of model-based weight ranges in the LMA sizes recommendations may better interpret the benefit of the regression model in the current study.

Changes in the text: We added a new table in the revised manuscript, which presented the model-based weight ranges in the LMA sizes recommendations. (see table4 in the revised manuscript).

Reviewer B:

Dear author,

This is an interesting and well written manuscript of a retrospective study with a large number of patients. The main result is that a new regression model including age, gender and weight would increase the insertion rate of LMA's in a mixed population. Unfortunately, there are some limitations that make the model doubtful.

- First of all, it is not clear which SGA were used in this period. You mention 4 different types in the discussion. Insertion rates in adults for these 4 types are in a wide range (Flexible LMA 75% vs Supreme LMA 98%), equally big difference in paediatric population for first attempt insertion is described. From your low first

attempt insertion rate, I suppose that the Flexible LMA 75% was the most used model.

The distribution of the used models for the 3 (6 with gender) groups should be included to better interpret the benefit of the regression model.

- Unfortunately, as I understood it was not noted or not possible to include the size of the patients. The size of the patients probably has a big influence on the size of LMA. Could you calculate the height of the patients using BMI and weight?

At least it should be underlined in the limitations as this is an important limitation.

- I suppose that most of your patients were from your region (Asia). There are reports focusing oropharyngeal anatomic differences between Asian and Caucasian people with influence on performance of SGA. Can you discuss this?

The authors' answer:

Thank you so much for your detailed and helpful comments on our manuscript. We have revised the manuscript based on your comments. We will focus on this topic and conduct more researches of high-quality in the future to provide a more representative and convincing analysis. Based on your comments, we have made the following revisions to the manuscript.

Comment 1:

First of all, it is not clear which SGA were used in this period. You mention 4 different types in the discussion. Insertion rates in adults for these 4 types are in a wide range (Flexible LMA 75% vs Supreme LMA 98%), equally big difference in paediatric population for first attempt insertion is described. From your low first attempt insertion rate, I suppose that the Flexible LMA 75% was the most used model.

The distribution of the used models for the 3 (6 with gender) groups should be included to better interpret the benefit of the regression model.

Reply 1:

We are very sorry that we didn't describe the type of SGA in the original manuscript. We used Flexible LMA in our research. We have added relevant content to the "Methods" section of the revised manuscript.

To better interpret the benefit of the regression model in this study, we added a new table that presents the model-based weight ranges in the LMA sizes recommendations.

Changes in the text:

We have modified our text as advised (see Page 6, Line 86). Besides, we present the distribution of the used models for the 6 groups in Table 4 in the revised manuscript.

Comment 2:

Unfortunately, as I understood it was not noted or not possible to include the size of the patients. The size of the patients probably has a big influence on the size of LMA. Could you calculate the height of the patients using BMI and weight?
At least it should be underlined in the limitations as this is an important limitation.

Reply 2:

In our study, logistic regression analysis was performed based on the actual LMA size used in clinical practice to explore the choice of LMA size for patients of different gender, weight, and age. The height and BMI of patients, which may also have a big influence on the choice of LMA size, were not available in the medical records of every patients and thus, were not included in the analysis. We have discussed this as a limitation in the discussion section. Further exploration will be performed to determine the correlation between LMA size and height or BMI of patients.

Changes in the text: We discussed this limitation in the revised manuscript (see Page 12-13, line 225-228).

Comment 3:

I suppose that most of your patients were from your region (Asia). There are reports focusing oropharyngeal anatomic differences between Asian and Caucasian people with influence on performance of SGA. Can you discuss this?

Reply 3: Yes, all the patients in current research are from Asia. Due to the different craniofacial anatomy between Asians and Caucasians, the corresponding usage of SAD and performance may be different, which we have not fully elaborated or discussed in the original manuscript. We searched the relevant literature and

information and added relevant content to the discussion section of the revised manuscript.

Changes in the text: We discussed the differences in the performance of SGA between Asians and Caucasians due to the differences in their oropharyngeal anatomy. (see Page 11-12, line 204-210).