Author’s response to reviews

Title: Association of Mallampati Scoring on Airway Outcomes in Women Undergoing General Anesthesia with SupremeTM Laryngeal Mask Airway in Cesarean Section

Authors:

Hon Sen TAN (honsen.tan@mohh.com.sg)
Shi Yang LI (fen7679@sina.com)
Wei Yu YAO (ywyzyx@sina.com)
Yong Jing YUAN (yyjywy@sina.com)
Rehena SULTANA (Rehena.sultana@duke-nus.edu.sg)
Nian-Lin R HAN (han.nianlin@kkh.com.sg)
Alex Tiong Heng SIA (alex.sia.t.h@singhealth.com.sg)
Ban Leong SNG (sng.ban.leong@singhealth.com.sg)

Version: 1 Date: 21 May 2019

Author’s response to reviews:

21 May 2019
To: Dr Guangde Tu
The Editor
BMC Anesthesiology

Dear Dr Tu,

RE: “Association of Mallampati Scoring on Airway Outcomes in Women Undergoing General Anesthesia with SupremeTM Laryngeal Mask Airway in Cesarean Section” (Submission ID: BANE-D-19-00125)
Thank you very much for the review of our manuscript entitled "Association of Mallampati Scoring on Airway Outcomes in Women Undergoing General Anesthesia with SupremeTM Laryngeal Mask Airway in Cesarean Section" (Submission ID: BANE-D-19-00125).

We appreciate your comments and kind help to improve on the manuscript.

Please find below point-by-point responses to each of the comments (in Italic red font).

Reviewer reports:

RASHMI SALHOTRA, M.D. (Reviewer 1): It is a well planned and executed study. However, I have a few observations.

-------- Thank you very much for your time and effort to review our manuscript.

In materials and methods section, it has been mentioned that this study is a secondary analysis of data collected from a previously published cohort study. Further, the discussion section states that the results are comparable to a previous study, quoting this same published text (Reference no. 14). The results are bound to be comparable to the original study.

--------Thank you for pointing this out. We have adjusted our reference in the Discussion to quote an observational study in 700 parturients (Reference No. 12) that is separate different study, from the study from which this manuscript is based upon (Reference No.14).

Limitations of the study state that fiberoptic assessment would have taken additional time, causing more anaesthetic exposure to the fetus. Actually fiberoptic examination through the airway tube hardly takes 10 sec, without posing much harm to the fetus.

--------Thank you for your observation. We agree that fibreoptic assessment would provide additional information on SLMA placement. However, our routine practice does not include fibreoptic assessment. Furthermore, our study was meant to be a pragmatic evaluation of the SLMA in the role of an airway device in clinical practice, hence, our focus was on the ability to achieve adequate ventilation. This has been added in Discussion, page 16.
The conclusion states that "MP score III/IV did not adversely affect the efficacy of supreme LMA in parturients....", but the outcome measure of the study was not efficacy of SLMA but an association of MP score on airway outcomes. So, the conclusion statement may be reframed.

-------Thank you. We have modified our article to state that higher Mallampati score is not associated with longer time to effective ventilation in Conclusion, page 17.

Jia Yan, ph.D., M.D. (Reviewer 2): Tan and colleagues report association of Mallampati scoring on airway outcomes in women undergoing general anaesthesia with SupremeTM laryngeal mask airway in caesarean section. They found that high MP was not associated with reduced efficacy of SLMA in obstetric caesarean section under general anaesthesia but might increase the risk of blood found on SLMA upon removal. This is a topic that is of great importance to anesthetists and the prospective study is well designed. However, a few of issues should be addressed.

------- Thank you very much for your time and effort to review our manuscript.

1. There was a huge gap in the number of patients in two groups which might lead to bias.

------- As this is a cohort study (instead of a randomized controlled trial) and a secondary analysis of our previous study (Reference No. 14), we anticipated that the number of subjects will not be equal in both groups. We used regression approach to account for potential confounders, as below.

2. This study was a prospective cohort study which required a large sample size. So how did the author calculate the sample size in this study?

------- Thank you for the comment. This is a secondary analysis of a prospective cohort study (our previous study, Reference No. 14) which was adequately powered for main objective. However, we also calculated sample size based on the primary outcome of this secondary analysis. We have included this in the Methods, statistical analysis in page 11.

3. It was clearly showed in the Table 2 that there was a difference in the baseline of BMI between the two groups. The propensity score analysis should be used to match the baseline.
Thank you for the comment. Although there was significant difference in BMI between two groups, neither the univariate nor the multivariable linear regressions showed any significant association with the time to effective ventilation.

4. The logistic analysis should be used to analyze the association of Mallampati scoring on airway outcomes.

------ Our primary hypothesis was time to effective ventilation which was continuous data. Hence we used linear regression to find the association of time to effective ventilation with other factors. We have updated the result section of the manuscript.

5. The measurement of the size of tongue base should have a further discussion which has been mentioned in the article.

------ Thank you for your comment. We cited two articles (Reference 15 and 18) which postulated that a large tongue might result in difficult laryngoscopy, but did not further expound on it as no further corroboration or quantitative measurement of tongue base size was performed in other studies relating it to increased Mallampati scores.

6. The possible reason why high MP would increase the risk of blood found on SLMA upon removal should be discussed.

------ We have revised the statement in the Discussion, page 14: “However, higher Mallampati scores were could be associated with more difficult insertions and placement associated increased risk of blood found on the SLMA, which may indicate increased risk of oropharyngeal trauma on insertion, but without corresponding change in sore throat, voice hoarseness, or maternal satisfaction.”

7. The manuscript contains several grammatically mistake. The author should check the manuscript more carefully.

------ Thank you. We have edited the manuscript. Please refer to the revised manuscript with track changes.

8. The manuscript needs edition suitable for publication. For example, "Caesarean" should be "caesarean" in line 2. "[4,8],." should be "[4,8]." In line 36.
-------- Thank you for pointing that out. Correction done.