Author's response to reviews

Title: Comparisons of clinical performance of Guardian laryngeal mask with laryngeal mask airway ProSeal.

Authors:

Ajay kumar Pajiyar Dr. (drajaypajiyar@gmail.com)
Zhiting Wen Dr. (awen0829@163.com)
Haiyun Wang Prof. (wanghy819@hotmail.com)
Lin Ma Dr. (malinhanyy@126.com)
Lumin Mao Dr. (lumin_miao@163.com)
Guolin Wang Prof. (wang_guolin@hotmail.com)

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Author's response to reviews: see over
Dear Sir,

I’m submitting a revised version of research manuscript entitled: “Comparison of clinical performance of guardian laryngeal mask airway with laryngeal mask airway ProSeal” for consideration of publication in BMC Anaesthesiology, and it isn’t under consideration at any other journal.

I attest to the fact that all authors listed on the title page have read the suggestion made by reviewer and necessary changes were done as per reviewer’s suggestions.

Reviewer 1:

Major compulsory revision:
1: The Guardian LMA has been compared to the LMA supreme in 120 female patients W. Tiefenthaler Anaesthesia. 2013 Jun;68:600-4. A randomised, non-crossover study of the Guardian CPV Laryngeal Mask versus the LMA Supreme in paralysed, anaesthetised female patients. These authors have demonstrated that The Guardian LMA was associated with higher Airways leak pressures than the LMA Supreme. The current authors should incorporate this reference into the manuscript and discuss this paper in relation to their results.

Response:
Thank you so much for your good suggestion. As per your reminder, we carefully read the reference and incorporate into the manuscript (section: Background, page no 3, line 5 to 10). We found that there are some differences between this reference and our paper: First, the airway sealing pressure was measured at predetermined cuff pressure 60 cmH2O (maximum limiting pressure at recommended). Second, we also calculate the mean volume of air for cuff inflation to 60 cmH2O. Third, size 4 for adult patients. Fourth, the intracuff pressure measurement at 30 min interval to maintain 60 cmH2O cuff pressure throughout the surgery. Fifth, fiberoptic view of larynx: (1, Clear view of vocal cord; 2, Only arytenoids visible; 3, Only epiglottis visible; 4, No laryngeal structures visible). This scoring was taken from the reference Cook T et all:
Randomized crossover comparison of the proseal with the classic laryngeal mask airway in unparalysed anaesthetized patients. *British Journal of Anaesthesia* 2002, 88(4):527-533. We discuss our results in relation to others. Thank you so much for your careful consideration and reminder, we still think we should learn the preciseness from this reference.

2: The abstract should include the primary and secondary outcomes for this study as the authors have in the introduction or a specific hypotheses being tested.

Response: Thank you for your good suggestion. As per your reminder, we should include primary as well as secondary outcome in abstract (section: method, page 2, line 12 to 16). Thank you so much for your careful consideration and reminder.

3: In randomized trials, baseline demographic data should not be subjected to statistical comparison, since it is already known that the subjects were randomly allocated and that any difference is therefore due to chance. Please confirm with journal preference.

Response: Thank you very much for your good suggestion and reminder. Yes, in randomized trials, baseline demographic data should not be subjected to statistical comparison, since it is already known that the subjects were randomly allocated and that any difference is therefore due to chance. We apologize for this confusion. We are corrected and presented our data in table 1 of this revised paper as per your great help.

4: Avoid repetition of the Results and the Tables: if presented in the Tables, please do not repeat the same information in the text.

Response: Thank you so much for your good suggestion. We should include only three tables in this revised submission manuscript. Table 1 shows demographic data presentation; table 2 shows results volume of air required to inflate cuff 60 cmH2O, airway sealing pressure, cuff pressure measurement and postoperative
pharyngolaryngeal morbidity; and table 3 shows the results of Successful insertion attempt, device insertion time, ease of insertion, manipulation, fiberoptic view of larynx, gastric tube insertion success and gastric tube insertion time.

Ease of insertion scores are included in section method (page 4, line 18-20)
Fiberoptic view scores are included in section method (page 5, line 7-8)

As per your careful suggestion we should avoid repetition of our results from the text.
Thank you so much for your great help!

5: first paragraph talk about the main findings of their study. The remaining paragraphs should talk about what has been shown and how the results are similar and/or different to other investigations on this topic.
Response: Thank you for your great consideration. As per your reminder, we carefully read the discussion part and we include our main finding in the first paragraph of discussion part in these submission manuscripts (page 7, line 2-14). We also present the remaining finding according to your suggestion (page 7 and 8). Thank you so much for your great help!

6: There are excessive amounts of figures please choose one figure that accurately represents the goal of the study.
Response: Thank you for your good suggestion. As per your reminder, we should choose only one figure which represents the goal of our study i.e. airway sealing pressure (figure Legend 3). Thank you for your great help!

Minor Essential Revisions
Thank you for your great suggestion. As per your reminder, we have gone through our manuscript time to time for spell check. If not appropriate, please don’t hesitate to infirm us.

Reviewer 2
1: Thank you for your good suggestion. As per your reminder, we have kept the image of Guardian laryngeal mask airway in this revised submission manuscript (figure Legend 1).

2: W. Tiefenthaler et al Over 120 randomized subjects included the authors could not find any relevant difference between Guardian and Supreme. Assuming that ProSeal is supposed to be even better than Supreme, the findings presented by Pajiyar et al. is compelling.
Response:
W. Tiefenthaler et al, found that increase in cuff volume (10ml increment) increases OLP of Guardian LMA. A similar result was obtained from a study comparing the LMA Supreme and LMA ProSeal, suggesting that the leak pressure for Guardian is similar to that of ProSeal (Eschertzhuber et al. Anaesthesia 2009; 64: 79-83). They relate cuff volume with leak pressure. Our study was different from the W. Tiefenthaler et.al study. In our study, airway sealing pressure was measured at 60 cmH₂O cuff pressure and found to be higher in Guardian LMA as compared to ProSeal. Other studies comparing ProSeal with Supreme, airway sealing pressure at cuff pressure 60 cmH₂O found to be identical (Verghese C et al. BJA 2008, 101(3):405-410 and Hosten T et al. Acta anaesthesiologica Scandinavica 2009, 53(7):852-857) assuming Guardian LMA is even better than ProSeal. Our study related with sealing pressure at 60 cmH₂O cuff pressure. Our study was not compelling the assumption of previous study. Thank you so much for your careful consideration and reminder, we still think we should learn the preciseness from W .Tiefenthaler et al study.

3: The introduction, background and aims are delineated clearly, however the study fails to provide a reason (other than a Product testing) on the novelty and gap of knowledge filling for the investigation.
Response:
Thank you for your good suggestion. We include that the Guardian LMA was different from Proseal in cuff design and airway tube which may affect the sealing pressure (section background, page 2, line 16, 17). Thank you for your great help!

4: The authors claim that the power was conducted assuming ProSeal leak pressures of X and Guardian leak pressures of Y, so I assume the power was based on the respective devices performance of leak pressure. Considering the mean and SD it seems that the two devices are simply performing the same, so the justification, clinical would be to find no difference.
In fact the devices are similar in most of features, as far I can depict from the description (no pictures are shown) and based on the experience of the reviewer (however every anesthesiologist around the world should be able to know and assess the features of the Guardian "visually").
Response: Thank you for your good suggestion. Yes, we agree that the both devices performing the same. We found differences in airway sealing pressure, insertion time, insertion time of gastric tube placement and volume of air for cuff inflation 60 cmH2O. Most of the findings have no difference. Thank you for your great help!

5: The manuscript is for the rest solid but redundant with tables and graphics which can certainly be reduced or consolidated.
Response:
Thank you for your good suggestion. We have reduced the number of table and graphs as per your consideration.

6: conclusion
Response:
Thank you for your great suggestion.
Conclusion (page 8, line 22 -26)
Thank you for your great help!
Once again, thank you for consideration. We look forward for your suggestion. Please address all correspondence concerning about this revised manuscript to our Corresponding author: Professor Haiyun Wang and feel free to correspond with e-mail. Email address: wanghy819@hotmail.com

Yours Sincerely,

Haiyun Wang M.D., Ph. D.
Department of Anesthesia,
Tianjin Medical University General Hospital