

Response to reviewers-----Round 1

Reviewer # 1 Comments:

Reviewer Comment: The two-phased format, 1) mannequin trial, followed by 2) retrospective analysis is incorrect, and should be two separate manuscripts.

Response: The mannequin trial was aiming to test the reproducibility of the technique by different users other than the authors while the retrospective analysis in clinical practice was aiming to evaluate the technique in vivo. We agree that this is not ideal and it was mentioned as a limitation Page 10; as such:

“Another limitation is that the clinical portion of our study was not prospective, which would have allowed for comparison of the pre-formed and conventional endotracheal tube during VL. The underlying reason for this was that we considered an ethical obligation to apply the best practice of intubation to patients, without subjecting them to randomization.”

Reviewer Comment: The authors conclude that their novel technique is more successful for intubation with VL in clinical practice, the conclusion is not supported by the data and needs to be corrected. A prospective clinical trial should be performed comparing preformed vs conventional ETT in VL, before any conclusions about the clinical benefit of this technique to be made.

Response: We agree regarding the importance of the prospective study. However, we didn't perform a prospective study comparing pre-formed and conventional ETT during VL. The reason is that we thought ethical obligation to perform the best practice of intubation to patients without subjecting to randomization. This was added in the discussion section, limitations, Page # 10; as such:

“A limitation of our study is that it was neither randomized nor blinded. The airway management decision was made at the anesthesia providers' discretion, except in patients with expected difficulty, for whom VL was planned for safety reasons. However, the personnel collecting the data were not involved in the procedure.”

Reviewer Comment: The mannequin trial methodology is not well described. Were the subjects randomized to two different ETT? In what sequence were the two techniques used? How were the subjects trained in the new and old technique? What is the skill/experience of performers? Randomized cross-over design would be appropriate. Was this done?

Response: In the mannequin trial, there was no randomization to two different ETT. Each participant performed three intubations with VL using a regular tube and three intubations with the pre-formed tube. Participant with variable backgrounds and experience in the field of airway

management were included. The new technique explained to them by the 1st author (AS) followed by hands on. These details were added in the methods page 5 and under *Trials on a mannequin* section; page 6; as such:

“Twenty providers with varying experience levels and backgrounds in airway management (*i.e.* anesthesiologist, intensivist, and anesthesia technician) practiced the technique. The intubation method was explained and demonstrated by the 1st author (Shorrab AA), followed by hands-on practice by the participants. Then, for the study purpose, each participant performed three intubations with VL using a regular tube and three intubations with the pre-formed tube.”

Reviewer Comment: The photos do not adequately represent the technique. You need to provide a video file comparing the two techniques so that the readers can properly understand potential benefits and risks.

Response: A video for the new technique is available and attached.

Reviewer Comment: The term “torque” is not defined in the abstract, most clinicians are not familiar with it, and the clinical consequences are not known. Please provide reference and justification for using “torque” as an endpoint for the mannequin study. However, this conclusion can only be based on the small sample from the mannequin trial where VL intubation with a standard EET is compared to VL intubation with the “pre-formed” ETT (Table 1). This should be the only focus of this study, and thus The conclusions made cannot be extrapolated to clinical practice.

Response: The definition of “torque” is added in the abstract, in the Measurements section,. Clinical consequences of “torque” with references (from # 11 to 15) were added in the 2nd paragraph of discussion. Accordingly, the subsequent references’ number were adjusted; as such:

Abstract Page3, methods: as such:

“In the mannequin trial, the outcome measures were quantification of torque (force with angular acceleration during levering),”

Discussion page; 8,9: as such

“During the practice on a mannequin, less torque was used with the pre-formed tube, as compared to that used with the conventional tube. The laryngoscopist who experiences difficulty will use more force, and torque will appear^[11]. Direct stimulation of the extensively innervated oropharynx by the laryngoscope blade will increase the hemodynamic changes^[12, 13]. Excessive force and torque applied during DL will be associated with inadvertent damage to the teeth, oral cavity, and/or oropharynx^[14, 15].”

Reviewer Comment: VL is indicated in anticipated difficult and/or emergent airway management where time to successfully intubation is of the essence. The “pre-formed” technique described is slower compared to convention ETT VL intubation and thus puts into question whether this technique is of real-world benefit in clinical practice.

Response: The time requested for intubation with pre-formed tube was longer than conventional tube. This may not be ideal during rapid sequence induction. However, it is useful in difficult scenario where adequate pre-oxygenation can ensure normoxia throughout intubation period. It was added in page 9,10; as such:

“The time requested for intubation with the pre-formed tube was longer than that with the conventional tube. This may not be ideal during rapid sequence induction. However, it is useful in difficult scenarios, where adequate pre-oxygenation can ensure normoxia throughout the intubation period. However, none of the patients in our study were desaturated during intubation. Previous studies on VL have reported slightly longer intubation times compared with DL^[2, 20]. Moreover, as the practitioner progresses along the learning curve, the time to intubate is expected to become shorter.”

Reviewer Comment: The comparison of VL to direct laryngoscopy (DL) in the retrospective analysis is incorrect/inappropriate and should be downplayed. The Adequate comparison should remain limited to be between VL with standard ETT versus VL with “pre-formed” ETT.

Response: we agree that mixed methods is not the ideal in research purposes. The mannequin part was to test the reproducibility of the new technique by variable operators. Ethical concerns were also limiting the possibility of randomization.

Reviewer Comment: The authors correctly state that the study is neither randomized nor blinded, however, the retrospective nature of the study is problematic. This section is of little value due to incorrect comparison groups and the presence of many confounding variables.

Response: This was explained under the limitations.

Reviewer Comment: A prospective clinical trial should have been performed comparing this technique only in VL, for any conclusions about the clinical benefit of this technique to be made.

Response: it is added as a limitation in the section of discussion.

Reviewer Comment: Paragraph 4 of the introduction should be in the methods section.

Response: This paragraph was shifted to the methods section, next to *Stepwise insertion of the tube* section; page 6.

Reviewer Comment: Paragraph 2 of the statistics section is concerning a retrospective analysis cannot be compared to a prospective randomized clinical trial.

Response: the mannequin part was prospectively designed to evaluate reproducibility. Subsequently, we evaluated the clinical practice retrospectively where *a priori* sample size couldn't be obtained.

Reviewer Comment: In paragraph 3 of the discussion, the authors cited a trial by Aziz et al and 'laryngeal view' in VL versus DL. This is of little value as 'laryngeal view' was not a metric in the present study.

Response: We agreed that laryngeal view is not a metric parameter in our study. However, our study can minimize some difficulties encountered in other VL assisted intubation studies.

Reviewer Comment: Numerous English grammar and typographical errors are present.

Response: The manuscript was edited for grammar by *Scribendi* (<https://www.scribendi.com/>) before sending it last time. A second language editing was performed by Filipodia Publishing LLC.

Reviewer Comment: The use of the term 'preformed' may be confused for a typographical error; it should be changed to 'pre-formed' and used consistently throughout the manuscript.

Response: The term "preformed" has been changed to "pre-formed" throughout the manuscript.

Reviewer Comment: The use of abbreviations is incorrect as 'Video Laryngoscopy (VL)' is only explained in the 'Core Tips'; this should be repeated in the abstract and again in the body of the manuscript.

Response: Abbreviations are there in the core tip, in the abstract and also in the body of the manuscript.

EDITORIAL OFFICE'S COMMENTS

Science editor Comment: 1 Scientific quality: This manuscript is an Editorial, and it does not reach the publication standard of the WJA. (1) Classification: Grade D; (2) Summary of the Peer-Review Report: Reviewer 03342506 pointed out that the conclusions drawn by the authors are overly ambitious given the methodology used in the study. Retrospective analysis is incorrect. 2 Language quality:

Response: the conclusion was revised and rewritten

Company editor-in-chief Comment: The quality of the English language of the manuscript does not meet the requirements of the journal. Before final acceptance, the author(s) must provide the English Language Certificate issued by a professional English language editing company.

Response: The manuscript was edited for grammar by *Scribendi* (<https://www.scribendi.com/>) before sending it last time. A second language editing was performed by Filipodia Publishing LLC.

Response to reviewers-----Round 2

Response to Second round revision

Reviewer comment: Please add a sentence "Prospective studies are warranted." to the abstract and manuscript conclusion.

Reply: phrase "Prospective studies are warranted" has been added to abstract and conclusion at the end of Discussion.