Reviewer’s report

Title: Effects of lubrication on air-sealing performance of a pediatric cuffed tracheal tube

Version: 0 Date: 11 Jan 2017

Reviewer: Yu Chang Yeh

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In general, the topic is interesting, and the primary aim of this study is to investigate the effects of lubrication on air-sealing performance of a pediatric cuffed tracheal tube. There are several comments for this study.

Major comment

1. The study based on a tracheal model. As the authors mentioned that the limitations of this study included one size tracheal tube, one size acrylic cylinder, limited duration, and difference between acrylic cylinder and real trachea. In addition, great variety of size is an important issue for a study focused on pediatric patients. Additional experiments and clinical trial are required for clinical implication.

Minor comments

1. The amount of K-Y jelly applied to the cuff might need to be described.

2. A reference is needed to be cited to support that an acrylic cylinder with ID of 12 mm to simulate the trachea of an 8 years old patient.

3. In Table 1, the P value is not correct for peak airway pressure of 20 and 25 cm H2O. Furthermore, Fisher's exact test might be more suitable for this study.

4. In Table 2, the result might indicated that large longitudinal fold of cuff might have significant influence. Once it leaked, increase cuff pressure did not change anything. K-Y jelly might prevent air leakage for small longitudinal fold. The author may try to investigate the factors that are related to the size of longitudinal folds.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes
Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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