Reviewer’s report

Title: A Comparison of Blind Intubation with the Intubating Laryngeal Mask FASTRACH™ and the Intubating Laryngeal Mask Ambu Aura-i™ A Prospective Randomised Clinical Trial

Version: 0 Date: 30 Oct 2018

Reviewer: Mark Koning

Reviewer’s report:

This interventional study examines the success rates of blind intubation through two different LMA’s. Due to a cross-over design, the researchers are able to further investigate the influence of the endotracheal tube. The conclusion that LMA’s are equivalent for ventilation, but the Ambu-I is not suited for blind intubation seems correct.

I hope my comments will aid the readability of the manuscript and the presentation of the data. It is an interesting topic.

Title:

I miss the statement of "blind intubation" in the title, which is the primary outcome. May I suggest: "A Comparison of Blind Intubation through a Intubating Laryngeal Mask: FASTRACH™ versus Ambu Aura-i™: a Prospective Randomised Controlled Trial".

Abstract:

This trial was registered in 2017, while it was conducted in 2011. Please state "retrospectively registered", as demanded by the Editorial Policy.

While on the subject, is there an explanation for the delay in publication of these results?

Introduction:

Well written introduction.

Methods:

I would like to applaud the authors for their setup of the trial. Especially the cross-over design is of value.

1. Please state the registration number by clinicaltrials.gov
2. In the discussion you mentioned the change in fiberscope during the study. This could be of influence, and should be mentioned in the Methods. Consequently, after how many patients did the change occur? Was the randomisation performed in blocks (and if so, how large was a block), or could it be that the all the Aura-I patients were randomised with the old scope and all the LMA-FT patients received the new scope?

3. line 119: two attempts is written twice.

4. after 2 unsuccesfull attempts of the first endotracheal tube, you crossover to the other tube. Is this tube attempted twice as well, before fiberoptic guidance? (line 165)

Results:

The authors mention all the assessed outcomes. However, the style makes it difficult to read. While it is written in a chronological order, it seems a bit chaotic to me. The reason might be the way of describing the results, because it is hard to remember what is mentioned with group 1a/1b and group 1a + 2a, for instance. Perhaps it's more clear if the groups are described as "Aura-I" & "LMA-FT" and "LMA-ett" & "Rusch"?

1. Figure 1: Consider stating the cross-over in the boxes, this will probably more informative. (e.g. a) Rusch, n=19, - crossover to LMA ett (n=...) Cross-over from LMA-ETT (n=..), Fiberoptic guidance (n=..)

2. The unit of Airway Pressure Leakage is not mentioned, is this cmH2O? (line 220-221)

3. Can't table 1 and 2 be combined to one table?

4. The primary outcome seems "downplayed", probably because it is the last sentence of a paragraph (line 222-223). It's maybe best to start a new paragraph for the primary outcome.

5. The primary outcome is difficult to assess for me. I would suggest presenting the data in Table 3 & 4 as n (%), the addition of percentage would make it more intuitive. Furthermore, p-values are missing the table.

6. Line 224-225 is uniformative, please state the effectsize, since the p-value does not indicate the true difference between the variables. This holds true for line 227.

7. line 230-231; while this outcome is probably statistically significant, why is a test not possible? It seems that 23/40 vs 3/40 would be easily assessed?

8. The figure legends could fit the actual data as well (for example: Figure 3: ALP in Aura-i and LMA-ft (18.1 cmH2O +/- 7.6 vs 15.9 cmH2O +/- 7.0, p= 0.017)
Discussion:

I think this can be written more briefly.

It is usual to start the first paragraph with the major results of the current study, which is really starts from line 330-332.

I would like to ask the researchers if they have an explanation for the difference in successrate of blind intubation in these two LMA-devices. Is there a difference in curvature, depth or angle to the glottic entrance, for example?

Results are mentioned in the discussion, this is inappropriate. For example, line 360-362. May I suggest to move these items to the results-section? Maybe something as: "Failure by fiberoptic guidance was higher in the Ambu-I group (n=4 (5%) versus the LMA-FT group (n=1, 1%), p=0.02. The causes were laryngeal lateralization (n=3 vs n=1) and epiglottic folding (n=1)" (Numbers are fictive). In this way, the results are presented in one sentence/paragraph, which makes it easier to read.

I miss the limitation of the change in fiberscope (as mentioned in methods), although if the randomisation occurred in a block-manner, it probably is not of influence and can be omitted.

Conclusion:

I agree with the authors.

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

No

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.

Yes

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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