Author’s response to reviews

Title: Intravenous dexmedetomidine pre-medication reduces the required minimum alveolar concentration of sevoflurane for smooth tracheal extubation in anesthetized children: A randomized clinical trial

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Version: 1 Date: 27 Oct 2017

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A point-by-point response to each reviewer/editorial point

Reviewer 1:

1) First of all, methodology is not well described and it is not clear to the reader in this fashion. This is a randomized study and the authors should have followed the CONSORT checklist which is needed when reporting such a study. Please, revise the entire paper according with this checklist.

We have revised the entire paper according followed the CONSORT checklist. The CONSORT checklist has been included as a supplementary file.
2) In particular, generation and allocation sequence of randomization are not clear.

Methods section, lines11-14, page 6: the generation and allocation sequence of randomization has been highlighted with red body.

3) Also the blinding is not clear. Who was blinded? Why?

Methods section, lines14-18, page 6: An anesthesia nurse who prepared the drug or saline solution but did not participate in following study protocol. An attending anesthesiologist performed the anesthesia and another anesthesiologist, worked as research observer, to watch the process of extubation and collected study parameters.

The anesthesiologist and observer could not be blinded out. Because when anesthesiologist set up the sevoflurane level at 1.5%, he knew that patient did not have dexmedetomidine. When the research observer stood at the side could see the sevoflurane vaporizer and also sevoflurane level on the monitor.

4) There is no mention of sample size calculation and power analysis. Please, provide it and revise the paper.

Statistical Analysis section, lines4-10, page 9: The sample size calculation and power analysis has been highlighted with red body.

5) The paper would benefit from some copyediting for language use and grammar. I suggest that a collaborator fluent in english revise the paper.

We have revised the paper. The changes to the manuscript are highlighted with red body.
6) There is some sparse typing error, please revise the paper carefully.

We have revised the paper and corrected the sparse typing error. We highlighted them with red body.

Reviewer 2:

1. Methods: a Figure may be useful to make the protocol easier to understand

Consolidated Standards of Reporting Trials (CONSORT) flow diagram is shown in Figure 1.

2. It would be interesting to include the incidence of another complication: emergence delirium

In our previous study, we had found that a single dose of intravenous dexmedetomidine as pre-medication in combination with low-concentration sevoflurane at the end of surgery provided safe and smooth deep extubation condition, and it also lowered the emergence delirium in sevoflurane-anaesthetized children undergoing tonsillectomy.


We conducted this study to determine the effects of two different dosages of intravenous dexmedetomidine as pre-medication on optimal MACEX of sevoflurane using a modified Dixon’s up-and-down method, according to the different responses of the patients, either “smooth” or “not smooth” to tracheal extubation. Extubation was considered non-smooth if the patient showed coughing, breath holding, or laryngospasm immediately after extubation. So any airway events (coughing, breathe holding, laryngospasm, hypoxemia, and airway obstruction) were recorded, but emergence delirium was not included.
3. Please underline in the Discussion the original point of interest of this study (as other studies have investigated the effect of dexmedetomidine during extubation end during sevoflurane administration): the dose depending effect

Discussion section, lines6-13 page12: the original point of interest of this study has been underlined with red body.

4. Table 2: I suggest to make the P significance in a column because the * and the other symbols make the comprehension less immediate for the reader

Table 2 has been revised followed the suggestion.

5. Figure 1,2,3 are not necessary

Figure 2,3,4 (figure 1 had been added, Figure 1,2,3 changed to Figure 2,3,4) may be necessary and useful to make the protocol of the modified Dixon’s up-and-down method in this study to understand easier.