Author’s response to reviews

Title: Efficacy of premedication with intranasal dexmedetomidine for removal of inhaled foreign bodies in children by flexible fiberoptic bronchoscopy: a randomized, double-blind, placebo-controlled clinical trial

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Author’s response to reviews:

Dear Editors and Reviewers:

Thank you for your letter and for the reviewers’ comments concerning our manuscript entitled “Efficacy of intranasal dexmedetomidine for removal of inhaled foreign bodies in children by flexible fiberoptic bronchoscopy: a randomized, double-blind, placebo-controlled clinical trial” (ID: BANE-D-19-00086R1). Those comments are all valuable and very helpful for revising and improving our paper. We have studied comments carefully and have made correction which we hope meet with approval. Revised portion are marked in red in the paper. The main corrections in the paper and the responds to the reviewer’s comments are as flowing:

Responds to the reviewer’s comments:

1. Response to comment: (Please provide the LMA manufacturer and the specific LMA type used during the FBs removal.)

Response: The LMA manufacturer is Henan Tuoren Medical Equipment CO., Ltd. and the LMA type is common LMA-classic.

2. Response to comment: (Extubation time was already define in the Methods section, line 196-197. Thus, it is not necessary to note it below Table 5.)
Response: We are very grateful to the reviewer’s suggestion. We have delete the note about extubation time below Table 5.

3. Response to comment: Line 264, the FBs were removed via rigid bronchoscopy in the study (ref 18).

Response: We are very sorry for the inaccurate citation of this reference. We have removed this reference from here and added a more appropriate reference.

4. Response to comment: At 25 min before anesthesia induction, the patients were administered either intranasal dexmedetomidine (20171202; Nhwa Pharmaceutical Co., Ltd., Jiangsu, China) 1mcg·kg⁻¹ (100 μg in 1 ml) or intranasal 144 normal saline 0.01ml·kg⁻¹ (Figure 1).

It will be appropriate to write how the blinding was ensured. Who prepared the drug, who administered it and who made the observation/recordings rather than it was a double blinded study.)

Response: We are very sorry for the implementation of blindness was unclearly. We have described about how the blinding was ensured in method. (The intranasal drugs were prepared by a dispensing nurse of our department, then administered by a doctor who was unaware of patient randomization. All outcome parameters were recorded by another doctor who was unaware of patient randomization.)

5. Response to comment: (Also use “ug” uniformly throughout instead of ug or mcg in the text)

Response: We are very sorry for the mistake about the uniform. We have changed all “mcg” to “ug”.
6. Response to comment: Anesthesia was induced via mask using 5%-8% sevoflurane in 100% oxygen at 6 L·min⁻¹ until the BIS decreased to 40, at which point the LMA was inserted. Here, the authors describe that the BIS value was 40 in all patients at the time of LMA insertion. However, the mean BIS value at the time of LMA insertion (TLMAi) is higher (55-60) in both groups (Figure 6).

Response: We are very sorry for the inaccurate description about this in method. At the beginning, we planned to insert the LMA at the time of BIS value decrease to 40. However, we found that for some children sevoflurane inhalation time exceeded the time reported in the literature for induction of tracheal intubation while the BIS value was 50-60. So we decided to insert LMA 4mins after consciousness extinction and EtSevo concentration maintained at the same level over 1.3 MAC or BIS decrease to 40.


7. Response to comment: The primary outcome measurements were the incidence of adverse events including: oxygen desaturation, CO2 retention, coughing, body movements, bronchospasm, laryngospasm, breath-holding during the procedure, and coughing in the PACU. Oxygen desaturation was defined as SpO2 <90% for 10s. CO2 retention was defined as EtCO2 ≥45 mmHg at the end of the procedure. Why was CO2 retention considered only at the end of procedure and not during the procedure. (Line 177-178: The HR, RR, SpO2, and BIS were recorded at various time points. This did not mention about EtCO2.)

Response: We are very sorry for the lack of EtCO2. This because we found the data about EtCO2 during the procedure was inaccurate due to air leakage during operation.

8. Response to comment: Sample size calculation: It was based on the preliminary study considering reduction in laryngospasm (as complication). Was the sample size calculated considering other complication (coughing, body movements, bronchospasm etc) studied here and whether the sample size required was adequate for other complications as well?)
Response: The sample size of this study was only based on the preliminary study considering reduction in laryngospasm (as complication). We are very sorry that we do not consider other complications, this is the limitation in our study. We are very grateful to the reviewer for his/her comment. We will consider more other complications (such as coughing, body movements, bronchospasm etc) when calculate sample size in our future research.

9. Response to comment: (Discussion: Decreased secretion from crying during patients' separation from their parents and anesthesia induction can reduce the incidence of laryngospasm and coughing.

Reframe this sentence as it gives the impression that the secretions are decrease due to crying and anesthesia induction.)

Response: We are very sorry for the misleading in this sentence. We have reframed this sentence as follow: Less crying during separated from parents and anesthetic induction can reduce secretion production. Then decreased secretion can reduce the incidence of laryngospasm and coughing.

10. Response to comment: (Figure legends: Correct the spellings.

Figure 5 and Figure 6: write 'fiberoptic bronchoscopy' instead of giberoptic bronchoscopy.)

Response: We are very sorry for the spelling mistake in Figure 5 and Figure 6. We have corrected the spelling.

11. Response to comment: (The authors’ should explain thoroughly the reasons for doing flexible bronchoscopy instead of rigid bronchoscopy when removing foreign bodies in children. This is not the standard procedure especially in small children. I am aware that the aims of the study rely in other aspects related to sedation, general anesthesia, etc. but this information may be misleading.)
Response: We are very grateful to the reviewer for his/her suggestion. We also think the rigid bronchoscopy is main technique for foreign body removal. We have already explained this in the background paragraph one.

12. Response to comment: (Moreover, they say that they use a flexible bronchoscope of 2.8mm but they don’t state the size of the working channel, which should be around 1 mm. What kind of forceps or basket are they able to use with such a small working channel? This issue should be addressed too.)

Response: The foreign body basket used in our study is Zero TipTM Airway Retrieval Basket (OD 1.0mm) made by Boston Scientific Corporation. The sizes of the working channels were 1.2mm and 2.0mm for 2.8mm and 4.0. bronchoscopies.

We appreciate for Editors/Reviewers’ warm work earnestly, and hope that the correction will meet with approval.

Yours sincerely,

Lan Wu