**Author's response to reviews**

**Title:** Monitoring Sedation for Bronchoscopy in Mechanically Ventilated Patients by Using the Ramsay Sedation Scale Versus Auditory-Evoked Potentials

**Authors:**
- Chien-Wei Hsu (cwhsu2003@yahoo.com)
- Shu-Fen Sun (sfsun.tw@yahoo.com.tw)
- Kuo-An Chu (kachu@vghks.gov.tw)
- David Lin Lee (llee@vghks.gov.tw)
- Kam-Fai Wong (wongkf@nuk.edu.tw)

**Version:** 2  
**Date:** 1 January 2014

**Author's response to reviews:** see over
Answer to Referee Comments:

Referee: 1
Discretionary revision:
In conclusion, the first sentence could rephrased as AEP monitoring provided better sedation monitoring and allowed more appropriate sedative adjustment to reach sedative goal in mechanically ventilated patients receiving FB than RSS monitoring. Patients ....

Answer:
We had rephrased the first sentence in the conclusion section according to your comment.
It is revised as” AEP monitoring provided better sedation monitoring and allowed more appropriate sedative adjustment to reach sedative goal in mechanically ventilated patients receiving FB than RSS monitoring. Patients ....”

Thanks for your comments

Corresponding author: Chien-Wei Hsu
December 30, 2013
Referee: 2
Major compulsory revisions:
1. What was the duration of bronchoscopies in each group?

Answer:
The median duration of bronchoscopies was 29 [27-32] minutes in AEP group and 30 [28-32] minutes in RSS group. There was no significant difference between the two groups ($P = 0.860$). The data were shown in Table 2.

2. Was ramsay sedation scale measured in the AEP group as well? It should be noted that assessment of both ramsay sedation scale and auditory evoked potentials requires external stimuli and each can potentially lead to an increase in AAI. If one group (i.e. the AEP group) received only one set of stimuli while the other group received both, it could be a possible source of confounding.

Answer:
Ramsay sedation scale was also measured in the AEP group. Whenever the sedative dosages were adjusted by the values of AAI during bronchoscopy, RSS was also measured in the AEP group. However, we did not use the value of RSS to adjust sedative dosages in the AEP group.

Minor essential revisions:
1. There are some minor grammatical errors.

Answer:
We had corrected some grammar errors in the manuscript.

Discretionary revision:
1. There seems to be good data for a negative correlation between RSS and AAI and this study establishes it as well. However, it’s not entirely clear if RSS of 6 might correlate better with AAI of 25-40 than RSS of 5. How many patients in the RSS group were at RSS 5 Vs 6 prior to the initiation of bronchoscopy? The study is probably not powered enough for a sub-group analysis, but this could be addressed by a larger study.

Answer:
There were 10 patients were at RSS 5 and 8 patients at RSS 6 prior to the initiation of bronchoscopy in the RSS group. We agreed with your comments that the study is not powered enough for a sub-group analysis. If we want to do subgroup analysis, we need
to increase the study cases.

2. How was the sedation managed immediately post-bronchoscopy? Fig. 3 shows measurements up to 30 minutes. Was that the duration for which all end-points were measured in each case? It will be helpful to clarify that.

Answer:
Sedation target was returned to light sedation level post bronchoscopy. If the duration of bronchoscopy was less than 30 minutes, the parameters such as AAI, heart rate and mean arterial pressure were not measured post bronchoscopy. We had mentioned in the methods section of abstract (page 3) “Before FB and during FB, the AAI, heart rate (HR), and mean arterial pressure (MAP) were recorded every 5 min.”, and the “Phase 2: Flexible bronchoscopy examination” section of methods(page 9) “The AAI, HR, and MAP were recorded every 5 minutes during bronchoscopy.”

Thanks for your comments

Corresponding author: Chien-Wei Hsu
December 30, 2013