Reviewer’s report

Title: Effect-site concentration of propofol required for LMA-SupremeTM insertion with and without remifentanil: a randomized controlled trial

Version: 3 Date: 6 July 2015

Reviewer: SANG BEOM Beom NAM

Reviewer’s report:

Major Compulsory Revisions

1. The EC50 of propofol was defined as the average of the crossover midpoints in each group. You conclude that EC50 of propofol necessary for LMA-supreme insertion was 5.5 µg.mL-1 without remifentanil co-administration and 2.44 µg.mL-1 with concurrent remifentanil infusion. However, Figure 2 and 3 shows the different results. I found the crossover midpoints were 5.25, 5.75, 7.25, 6.75, 6.25, and 6.25 in Fig 2 and 3.75, 3.75, 1.75, 1.75, 2.25, and 2.25 in Fig 3. So, the averages are not 5.5 and 2.44, but 6.32 and 2.54, respectively.

2. I cannot find exact definition of “failure” of insertion. From line 5 of page 7, you described the definition of “movement”. From line 14 of page 7, you defined “failure” by Muzi score. Did you define “failure” of insertion by “movement” and Muzi score? You need to clarify the definition of failure of insertion.

Table 4 shows Muzi score. The number of patients whose Muzi score more than 2 (“failure”) is 6 in propofol+saline group and 9 in propofol+remifentanil group. However, Figure 2 and 3 shows the different number of patients whom you could insert the LMA-supreme successfully (18 patients in Fig 2 and 11 patients in Fig 3).

3. Table 5 shows fiberoptic position of patients in each group. Total number of patients of each group is 32 and 26. The proportions of patients whose fiberoptic position was 4 and 2 in propofol+saline group were 39% and 14%, respectively. I cannot obtain actual number of patients from your data. Also, 37, 26, and 11% of patients in propofol+remifentanil group were not accurate.

Minor Essential Revisions

4. I understand the different number of patients in each group. However, you have described that you used “block randomization”. As far as I know, block randomization is used to keep the numbers of subjects in each group similar at all times. For each block of patients of size 10, 5 subjects are assigned to each group. In other words, with blocks of size 10, after every 10 patients there will be an equal number assigned to each group. So, after 6th block was finished, the patients of each group were equally 30. You should finished 6th block trial before you started 7th block. If you used block randomization, the number of patients in propofol+remifentanil group should be at least 30. I think you used simple
randomization. If you used simple randomization, please revise your manuscript.

5. Inclusion criterion was ASA physical status I and II patients aged 18–60 years. So, ASA physical status class >3 patients should not be included in screening for eligibility. It is better to remove ASA physical status classification >3 patients from screening subjects.

6. Please check the unit. You used mL instead of mL-1 throughout article. Also, you need to standardize unit including table and figure. (ml vs. mL)


8. From page 14, line 10, you had described the study using SLIPA and gave the reference number 8. However, reference 8 is not related to SLIPA.

9. Please check references style.

10. The other minor points were marked in attached file.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests