Reviewer's report

Title: Bispectral index-guided general anaesthesia in combination with interscalene block reduces desflurane consumption in arthroscopic shoulder surgery: a clinical comparison of bupivacaine versus levobupivacaine

Version: 4 Date: 23 April 2015

Reviewer: Xiangyang Guo

Reviewer's report:

Major Compulsory Revisions

1. The primary end point of this study was defined as a reduction in desflurane consumption. It was clear. However, the interpretation of sample size estimation was not sufficiently detailed. How about your data from your preliminary study? How many patients you chose as the basis of power calculation? There were 3 groups in your study, was your sample size estimation done between bupicacaine group and L-bupivicain, or among the three groups (group C, B, and L)? In the Discussion, the author mentioned that “First, the number of patients in each group might be more to claim strong statistical power”. This should not be a limitation. Furthermore, I DO not think the group C was needed.

2. The results demonstrated that levobupivacaine provided better quality and duration of analgesia than bupivacaine, the author’s explanation was “This may be due to the long duration of analgesia provided by the bupivacaine” last time, and now it was changed to “This may be due to the different profile of nerve block resolution of these two agents”. This point should be detailedly discussed. With respect to the profiles of L-bupivacaien vs. bupivacaien, is there any literature to support this viewpoint? For example, data from PNB guided by ultrasound.

Minor Essential Revisions

3. The author should be specify the type of surgery in the Abstract section, as the Abstract is a structurally independent part in the manuscript.

4. I do not think the limitations of the study you added in the Discussion section is reasonable, especially the third one you mentioned.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.