

Peer Review File

Article Information: <http://dx.doi.org/10.21037/apm-20-1774>

Response to the Reviewer A:

Comment: Paper is very well written. Study well done. Tables are helpful.

Reply: Thanks for our reviewer's approval of our study. We will continue our clinical study, and do our best to contribute to the development of medicine.

Changes in the text: None.

Response to the Reviewer B:

In this interesting work the authors randomize patients receiving a modified radical mastectomy between the use of Propofol or Sevoflurane in the final 30 minutes of a general anesthetic to evaluate the time to emergence/extubation, respiratory recovery and permanence in recovery. The incidence of post-operative adverse events was compared as well.

Comment 1: Not all the abbreviations used by the authors are explained (i.e. PACU and EA)

Reply 1: Thanks for our reviewer's excellent comment. We have double checked our

manuscript, and added the explain of all the abbreviations in the revised version.

Changes in the text: We have added the missed explain of the abbreviations in the abstract and main text of the revised manuscript (see Page 2, line 39, 41; Page 4, line 75).

Comment 2: What type of axillary lymph node dissection was performed? How many were sentinel node biopsies and how many were node clearances in each group?

Reply 2: Thanks for our reviewer's excellent comment. Accordingly, we have added the details of performance of axillary lymph node dissection in the revised version. The sentinel node biopsies has revolutionized the management of clinically node-negative women with breast cancer, and the recommended management of the patient with sentinel node metastases is completion axillary lymph node dissection (Giuliano AE, McCall L, Beitsch P, et al. Locoregional recurrence after sentinel lymph node dissection with or without axillary dissection in patients with sentinel lymph node metastases: The American College of Surgeons Oncology Group Z0011 randomized trial. *Ann Surg* 2010; 252: 426-432). In our study, all patients received sentinel node biopsies, and 23 patients in group Sev and 20 patients in group Pro underwent sentinel lymph node dissection, respectively. The other 27 patients in group Sev and the rest 30 patients in group Pro received completion axillary lymph node dissection. No statistical difference was observed in the type of axillary lymph node dissection between the two groups ($P=0.55$).

Changes in the text: We have added the details of performance of axillary lymph node

dissection in the section of Methods of the revised version (see Page 7, line 130-131) and table 1.

Comment 3: Were the operations performed as day-case or did the patients stay overnight?

Reply 3: Thanks for our reviewer's excellent comment. In our clinical center, modified radical mastectomy is not performed as a day surgery. The patients suffering from breast cancer need to be admitted to the hospital on the day before surgery, and generally discharged on the second day after surgery.

Changes in the text: We have added the related illustration in the methods (see Page 7, line 145-146).

Comment 4: It's common for the patients to develop adverse effects such as PONV after discharge from recovery, when they are back to the ward. As mentioned by the authors the lack of this data is big limitation and I don't think an anesthetic technique should be evaluated only until the patient steps out of recovery. It would be beneficial to include the data on how these patients recovered in the ward.

Reply 4: Thanks for our reviewer's excellent comment. It is true that the evaluation of the anesthetic technique should include the data on how patients recovered in the ward. The antiemetic drugs, used as a rescue method, are administered once the patients appeared nausea or vomiting in the ward. Therefore, we reviewed the electronic medical records of the included patients, and analyzed the record of their use of

antiemetic drugs to reflect the occurrence of PONV in the ward. As advised, we added these data in the outcomes section of the revised version. The limitation was that we simply observed the incidences of nausea and vomiting in PACU and in ward, but we didn't compare the severity grades.

Changes in the text: We added the data of occurrence of nausea, vomiting, and rescue of antiemetic drugs in the ward in the Methods and Discussion section and table 3 of the revised version (see Page 8, line 167-168; see Page 12, line 262-263).

Comment 5: One of the secondary endpoints of this study was to compare the length of stay in recovery for the two groups but I can't find the data.

Reply 5: Thanks for our reviewer's excellent comment. The length of stay in recovery was defined as duration of PACU stay, which was one of the secondary endpoints of our study. The duration of PACU stay between two groups had significantly differences in the result section and figure 4 in the revised manuscript (41.04 ± 5.54 min vs. 49.24 ± 5.58 min, $P < 0.0001$, Fig. 4).

Changes in the text: We highlighted the data of duration of PACU stay in red in the revised manuscript (see Page 9, line 193-195).

Comment 6: The authors state that modified radical mastectomy requires a general anaesthetic. I would rather say that this operation is generally performed under general anaesthetic. There is emerging literature on the use of regional blocks without general anaesthesia in breast cancer surgery, particularly from Italian groups such as Garreffa

et. al (PECS blocks; <https://doi.org/10.1111/tbj.13587>) and Santonastaso et. al (Thoracic paravertebral block; <https://doi.org/10.1177/0300891620951626>). This alternative approach should be included in the discussion as it brings similar advantages (reduced recovery time and discharge to the ward) and is also applicable to patients at increased risk for GA (i.e. elderly).

Reply 6: Thanks for our reviewer's comment. It is true that it would be more appropriate to state that "the modified radical mastectomy is generally performed under general anesthesia". With the development of regional nerve block, some anesthesiologists have successfully applied regional blocks without general anesthesia in breast cancer surgery. It is applicable, especially for patients at high risk (advanced age, multiple comorbidities) or those who prefer regional anesthesia with sedation. However, due to the high amount of local anesthetic required for bilateral block (risk of toxicity), regional nerve blocks are often limited to unilateral surgeries. Furthermore, it is often time-consuming to perform, and the patients may experience stress and anxiety perioperatively. In our study, the enrolled patients were 18-64 years old and ASA I - II without multiple comorbidities. They preferred general anesthesia, so we only performed ultrasound-guided Pecs II block for postoperative analgesia. We did not compare the advantages and disadvantages between regional anesthesia and general anesthesia. Therefore, a further prospective randomized study is needed to determine the factors that impact outcomes in patients receiving similar anesthesia schemes. Just as our reviewer recommended, we have added relevant discussion in the revised version.

Changes in the text: As advised, we have modified the relevant statement in the

Introduction section of the revised version (see Page 4, line 64). Besides, we added some contents about the application of regional blocks in the Discussion section and Reference of the revised version (see Page 12-13, line 263- 268).