

Peer Review File

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Reviewer A

The authors evaluated the effect of local anesthetic volume for serratus muscle plane block using preoperative sensation test and postoperative pain intensity. Although this kind of study was already shown (Regional anesthesia and pain medicine, 2017, 42(6), 737–740), the authors clearly showed that more than 20mL of local anesthetic would be preferable to manage postoperative pain after breast surgery. Hypothesis, methods, statistical analysis looks good, and the results look reliable and clear.

Comment 1: Since the concentration of the local anesthetic used is constant, the dosage volume is increasing with the amount of local anesthetic used. If the authors want to say that the dosage volume is important because the systemic effects of local anesthetics cannot be ruled out, we had to decrease local anesthetics' concentration and align the total dosage of local anesthetics. At the very least, there should be mention of the systemic effects of local anesthetics.

Reply: Firstly, thank you for your comments and appreciation of our article. The systemic effects of local anesthetic and not exceeding the dosage limit are indeed what we should always pay attention to when doing regional anesthesia. The maximum dosage of ropivacaine in this study is 150mg, which may have potential neurological symptoms according to the reports that bilateral TAP block with 3mg/kg ropivacaine have potential neurological symptoms (PMID 20861094, 24935748). Meanwhile, another reviewer also raised the issue similar to yours. Therefore, we explained this problem in the Limitation section (see Page16, Line9-15). We agree with your opinion that when large volume is needed, we should decrease the concentration and align the total dosage.

Changes in the text: Page16, Line9-15.

Reviewer B

This is a well-written study that deals with important data. I have some questions and comments.

Comment 1: What is the study design of this research? Please clarify on title and method in detail. (ex prospective, randomized, double-blinded study)

Reply: Thank you for your suggestions. According to your opinions, we modified the title to “Comparison of the effect of different volumes ropivacaine on deep serratus anterior plane block in patients undergoing breast surgery: a prospective randomized double-blinded trial” (see Page1, Line3-5) and corresponding changes also have been made in the Method section(see Page8, Line4, Line21; Page9, Line1-3).

Changes in the text: Page1, Line3-5; Page8, Line4, Line21; Page9, Line1-3.

Comment 2: Did you check the plasma concentration of ropivacaine after US-guided SAPB? Please add the contents and references about the relation volume of local anesthetics and plasma concentration in the discussion or limitation.

Reply: We did not measure the plasma ropivacaine concentration, which is also an insufficiency in this study. Therefore, we have added the corresponding content in the Limitation section according to your suggestion. Please see the third point in Limitation section (Page16, Line9-15).

Changes in the text: Page16, Line9-15.

Comment 3: In table 1, please add the type of surgery.

Reply: Thank you for your suggestion. We reviewed the surgical data and have added the types of surgery in Table 1.

Changes in the text: Table 1 (attachment).

Comment 4: In figure 4C, typing error in the title of the y-axis.

Reply: Thank you for your suggestion. We have corrected the error in figure 4C.

Changes in the text: Figure 4C (attachment).

Reviewer C

Nicely written article that answers a clinical relevant question.

Comment 1: .pdf p.4 – Missing relevant reference: PMID: 33425573.

Reply: Thank you for your suggestion. We have added the reference and modified the corresponding section (see Page6, Line2-3).

Changes in the text: Page6, Line2-3.