Reviewer's report

Title: COMPARISON OF THE EFFICACY OF ERECTOR SPINAE PLANE BLOCK PERFORMED WITH DIFFERENT CONCENTRATIONS OF BUPIVACAINE ON POSTOPERATIVE ANALGESIA AFTER MASTECTOMY SURGERY: RANDOMIZED, PROSPECTIVE, DOUBLE BLINDED TRIAL

Version: 0 Date: 20 Nov 2018

Reviewer: Taner Abdullah

Reviewer's report:

Thank you for your manuscript "Evaluation of efficacy of erector spinae plane block performed with two different bupivacaine concentrations on postoperative analgesia of adult female patients after mastectomy surgery". Providing an effective analgesia after surgeries is one of the most important aims in the daily practice of anesthesia. This topic is even more important when it comes to a surgery with a high percentage of chronic pain, such as mastectomy. From this perspective, your study has a high clinical importance. Yet, there are some points need to be cleared out.

a) Please re-evaluate the doses for rocuronium, atropine and neostigmine in terms of typo.

b) Why did you use BMI as an exclusion criteria? Also, why did you prefer "35" as the cut off value instead of 30 (which is the cut off for diagnosis of obesity) or 40 (which is the cut off for diagnosis of morbid obesity).

c) You adjusted the doses of induction agents according to patients' weight values. Yet, all patients received 10 mg of tramadol and 4 mg of morphine as bolus doses. Did you consider to adjust the doses of analgesic agents according to patients' weight values?

d) In your methodology it is stated that "If NRS score was 4 or more, patients were planned to receive intravenous 25 mcg fentanyl as rescue analgesic in the recovery room". None of the patients received this treatment according to text. Yet, table 3 reveals that there were some patients with a NRS score of 4 in both groups on the 30th minute after surgery. How were those patients managed in terms of analgesia?

e) NRS values are not clinically significant on 15th minute. Values become clinically significant for some patients (NRS=4) on 30th minute and reach their maximum values in both groups on 12th hour. Physiologic basis of this trend should be discussed in
"discussion" section as well as the pharmacokinetic features of local anesthetic agent used (onset, duration, time for maximum effect)

f) General anesthesia was induced as soon as the block interventions were completed. So you were unable to evaluate the block for sensory block area and failure preoperatively. Did you evaluate the blocks for failure, duration and sensory block area on any postoperative time points? Inadequate sensory block should be an exclusion criteria in such clinical studies.

g) Please state how values are expressed under each table. (e.g: Values are mean ± SD, min-max(median), etc.)

h) What is the unit for rescue analgesic in SW in table 2? There is statistical significance between the groups and values are lower in Low ESP group. I was unable to understand what the numbers are stand for.

i) Both groups had received effective analgesia regimens according to mean NRS values (less than 4). From this perspective, there is not a clinical significance between these two regimens. How about complications related to opioid consumption? You stated that six patients (28.5%) in high ESP group and seven patients (33.3%) in Low ESP group had moderate to severe nausea in the postoperative period. Did you evaluate the patients for nausea only in recovery room or on all of the time points? It is not clear in the text.

j) If there is not a reduction in complications related to opioid consumption, why should we use a high local anesthetic concentration when it is possible to provide an effective analgesia (NRS<4) with a lower concentration? Please express your opinions in discussion section.

k) Please relocate the values on x-axis in figure 2.

l) What is the definition of 0th min. for HR and MAP? When did you record the baselines? It is unclear in the text.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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