Reviewer’s report

Title: THE INFLUENCE OF THE INFUSION OF EphEDRINE AND PHENYLEPHRINE ON THE HEMODYNAMIC STABILITY AFTER SUBARACHNOID ANESTHESIA IN SENIOR ADULTS - A CONTROLLED RANDOMIZED STUDY

Version: 2 Date: 09 Sep 2019

Reviewer: Ya-Jung Cheng

Reviewer's report:

This is a retrospective analysis for a prospectively collected patients receiving thoracic surgery with or without intraoperative thoracic paravertebral block (TPVB). The authors concluded that TPVB was associated with lower postoperative pulmonary complications (PPCs).

There are two major concerns as below:

1. The grouping: It is not clear to show how the patients were included in the TPVB group. As the data were not even as a randomized design, the readers have no idea about how the patients were included (by anesthesiologists' preference, by consents, or by optimal operation time?). If the patients were included by one specific anesthesiologist or surgical team, the authors cannot rule out the differences were from different application or experience.

2. The measurement: The goals of this investigation were the PPCs. However, the results indicated that only postoperative atelectasis was significantly different. The measurement on postop pulmonary atelectasis and the possible association factors such as pain score and the retention of chest tubes should be demonstrated.

Minor concerns

1. Abstract: TPVB was "associated" with less postoperative atelectasis. Line 25, use P= ? instead of p&gt; 0.05.

2. Introduction: as epidural was shown associated with less PPCs in COPD patients, the impact on PPCs with intraoperative TPVB remains unknown. I suggest the authors to move line line16-29 in discussion to the introduction and make it more clearly, for what made you focus on the impact of TPVB for "geriatric" patients. What should be concerned if another regional anesthesia (ex, thoracic epidural anesthesia) is applied on geriatric patients?

3. Methods: line 27, retrospective analysis would be better than the " secondary analysis". The methods should be clearly rewritten especially for grouping, consents, with or
without epidural, etc. Measurement, the definitions of postoperative atelectasis, respiratory failure, etc. should be stated. I suggest using such as reintubation rate, or prolonged administration of antibiotics, etc. to make your results more clear. Were the pulmonary atelectasis and infection diagnosed by CXR? When the CXR would be performed? Were chest tubes retained as a routine? For how many days? The extubation criteria should be demonstrated. The postoperative VAS score or the consumption of postoperative analgesics should be demonstrated to show the effectiveness and duration of intraoperative TPVB. It would be clearer than ensuring the effectiveness by stating TPVB was performed by experienced anesthesiologists.

4. Results: As this is not a prospective randomized study, it is like a retrospective study on geriatric patients with or without TPVB. It would be better if the authors could demonstrate the results about PCA. It will be helpful for the authors to discuss their results. After clarifying the diagnosis of atelectasis, it is clear that for geriatric patients, preoperative high DLCO, short op time, and with TPVB were associated with less postoperative pulmonary atelectasis.

5. Discussion: please focus on discuss your results and your suggestion. Do you think it is about the adequacy of analgesia immediately after operation, or intraoperative TPVB provides more benefits than a traditional epidural analgesia?

I think this topic is interesting. However, this manuscript was not clear enough for readers to catch the authors' points. An intraoperative regional anesthesia is always helpful for postoperative respiratory rehabilitation for less consumption of narcotics. That is why this article should be restructured and the hypothesis should be rethought and focused on the PPCs for geriatric patients.

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.

Yes

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

Unable to assess

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.
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I have no conflicts of interests.

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