Reviewer’s report

Title: Quadratus lumborum block versus transversus abdominis plane block for postoperative analgesia in patients undergoing abdominal surgeries. A systematic review and meta-analysis of randomized controlled trials

Version: 1 Date: 05 Dec 2019

Reviewer: Adam Jacob

Reviewer's report:

Summary: In the research article "Quadratus lumborum [QL] block versus transversus abdominis plane [TAP] block for postoperative analgesia…", the authors describe a systematic review and meta-analysis of a randomized controlled studies comparing TAP vs QL for pain control after abdominal surgery. Methods were conducted following PRISMA guidelines. The primary outcomes were defined as pain scores an opioid consumption and secondary outcomes defined as postoperative analgesia duration and PONV incidence. The meta-analysis demonstrated a modest, but statistically significant, reductions in pain at all time points and 24 hour opiate use in patients that receive QL block compared to TAP block.

Overall, the methods seem robust and well-conducted and the paper is generally well-written. Nice work! This is the first systematic review and meta-analysis on this topic, helping to better define the roles of these techniques for postoperative pain management. I have a few comments and suggestions for the authors to consider…

General Comments:
1) This manuscript, like many, illustrates the difference between statistical significance and clinical relevance. I agree that the statistical analysis suggests benefit of QL over TAP. However, the clinical relevance of difference in pain of less than 2 points remains debatable. As such, I would simply advise the authors to comment on the difference between statistical and clinical difference, and perhaps lessen the strength of the support for the clinical benefit.

2) In the Background, I think you can make a more compelling argument for the need of performing systematic review and meta-analysis. You talk about each block individually, and the few studies that have compared the 2 blocks with mixed conclusions. This is the basis for your manuscript. At the top of the page 4, the sentence "At present, many meta-analyses have shown that TAP block and QL block can reduce the score of postoperative pain…" This statement is a little misleading. You need to clarify that "many meta-analyses" does not mean comparing TAP vs QL, but instead compares TAP block to alternative pain strategies or QL block to alternative strategies. Otherwise, the reader could question the need for another meta-analysis on TAP vs QL.

Specific Comments:
1) Abstract
   a. No suggested edits

2) Background
   a. Point #2 above
   b. Page 3 - The majority of the text in the first paragraph discussing PCIA, PCEA, etc is irrelevant to the focus of your paper and can be removed. I would recommend deleting from "The classic
postoperative analgesia…" motor block, urinary retention, and hypotension [4]."
c. Page 3 - I would suggest different terminology than "mature" and "embryonic" when describing TAP and QL blocks. TAP block is older, QL block is newer.
d. Page 4 - Please include a citation after the first sentence, ending in "… and it shows a better blocking effect."

3) Methods
a. How can you have multiple primary outcomes? Are you able to select a single primary outcome, and the rest become secondary outcomes?
b. Can you clarify that pain was normalized on 0 to 10 scale, and opioid use was measured in measured/oral morphine equivalents?

4) Results
a. No suggested edits

5) Discussion
a. No suggested edits

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

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.

Yes

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 recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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