Reviewers report

Title: Comparison of lumbar plexus block using the axis in-plane method at the plane of the transverse process and at the articular process: A randomized controlled trial

Version: 0 Date: 31 Aug 2017

Reviewer: Gianluca Cappelleri

Reviewers report:

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Revision Bane 25/8/17

The authors aimed to compare a short axis approach to lumbar plexus with a new "beach chair" approach. Presentation of the manuscript is a major issue. The background includes part of the methods (i.e. beach chair description) and some paragraph should be moved to discussion. Moreover, English needs a major revision from an English speaker. There are lot of errors in grammar, spelling and sentence construction. Some paragraph is very difficult to follow.

Specific comments

Abstract:

- What does maneuverability mean? The authors should provide a more clear definition for primary endpoint

- P2L13: "High rate of epidural anesthesia". I think that the authors should use " epidural spread" rather than "epidural anesthesia".

P2L27 Methods. Please provide information about type and dose of the used LA.

P2L38 results: Numeric value of the results should be reported extensively; the pValue alone is not sufficient.

Background:

- The first sentence is not clear. LP originates from T12 to L5. The anterior branch from L2-L4 supply the obturator nerve, the posterior branch from L2-L4 supply the femoral nerve. The anatomy description should be more accurate. Please revise.
- P4L27: The main advantage of LPB over spinal anesthesia is that LPB is a peripheral nerve block, therefore without or with few hemodynamic effects.

- P4L38: references # 8-10 report complications after LPB achieved with a pure landmarks technique. You can use just the same but you need to correct your sentence in the text.

P4L60: Background should be ended here. The following paragraphs must be moved to the methods (the new technique description) and to discussion.

Methods:

Presentation is confused. Both techniques have to be clearly described separately with all passages, avoiding the first paragraph (block details…) that is confounding and not useful.

- P7L36. ASA V or VI? Please correct to ASA IV or V

- P7L55: how randomization was performed? Description is confused. It seems that number of enrollment was not consecutive.

- P8L51. By writing simply "in a sterile manner" authors can better synthetize all the procedure.

- By considering the LA volume used for LPB (30 ml ropivacaine 0.5%) the authors should also provide the LA dose used for sciatic block.

- Short axis and beach chair description: These descriptions are very difficult to follow. The beach chair technique could be a logical consequence of the quadratus muscle approach recently described by Bendtsen (anesth analg 2017). You should mention it. A more accurate "English" description focusing on the structures visualize is needs.

P10L30: what's motion? May be you mean "motor" block

- How sensory assessment was made? By ice application? pinprick test? both? Yet, The Lateral-cutaneous nerve is a pure sensory nerve while the obturator is a motor nerve with a sensory distribution variable. How did you assess both? Please clarify.

- In block assessment, after the description of the score, the authors have to provide a definition of success and how long they have considered to reach all criteria.

- How the epidural anesthesia was assessed? This fundamental point is lacking.

- Statistical analysis: The authors cited an epidural incidence for both techniques but they did not provide a reference.

Results
- P12 from L22 to L38: This paragraph is superfluous. Data reported in table or figure have not to be reported also in the text. Please remove.

P12L58: The authors state that all patients had a successful LPB, but they did not report a definition of success.

Discussion:

The first sentences are not useful with the purpose of the article. A more logical structure is needed. The following is an example of brief outline:

- Presentation of results.
- The main differences with these results and literature,
- A possible explanation of the reasons for these differences
- Limitations of the study
- Conclusions

Overall the discussion is very difficult to follow and should be entirely revised.

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

Unable to assess

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.

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.

I recommend additional statistical review

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

Not suitable for publication unless extensively edited

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