Reviewer’s report

Title: Preprocedural Ultrasound versus Landmark Techniques for Spinal Anesthesia Performed by Novice Residents in Elderly: A Randomized Controlled Trial

Version: 1 Date: 11 Jul 2019

Reviewer: Jeffrey Gadsden

Reviewer's report:

This study of the value of pre-procedural spinal ultrasound in geriatric patients using novice trainees as subjects is simple and interesting. There are some details that need clarification, but in general the methods are well-described and appropriate. My specific comments are as follows:

L118. Substitute "lumbar flexion" for "an arched back".

L122. The description of the block allocation and the number of residents doing each procedure in each block is confusing. Please clarify how residents were selected to perform the study intervention when a subject was enrolled...presumably not all residents were available at all times, did they each do six in a row (as in the blocks you describe)? The statement that "the resident had to complete two to three blocks" is also confusing...a reader might interpret "blocks" as neuraxial procedures. Suggest renaming it "subject allocation blocks" or something similar.

L127. Was there any evidence of a learning effect over the course of the study? Please comment on this possibility and, if present, how was it mitigated

L133. What anatomic range was selected...between L1 and S1? Or more narrow? Earlier language seems to just say lumbar.

L149. Please describe explicitly where the skin mark was made...both sides of probe? towards midline?

L274-283...suggest summarizing/shortening this paragraph

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.

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 am able to assess the statistics

**Quality of written English**

Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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