The manuscript is well written. It describes a prospective, randomized, controlled study of elderly patients scheduled for elective surgery under spinal anesthesia. They were randomized into the conventional surface landmark-guided midline technique (group LM), the preprocedural US-guided paramedian technique (group UP), or the preprocedural US-guided midline technique (group UM). All spinal anesthetics were administered by a novice first year residents. The manuscript concluded that a preprocedural US scan did not improve the ease of midline and paramedian spinal anesthesia as compared to the conventional landmark midline technique when performed by junior residents in elderly population.

Comments:

1. The design of the study have not eliminated two main sources of bias: 1) Patient bias: the anticipated degree of difficulty of obtaining a successful spinal anesthetic in the study population has not been standardized as an inclusion criterion for the study. For example, one group may have included more patients without features indicating a 'difficult spinal' than other groups and 2) Operator bias: residents who performed the spinal were junior resident who performed less than five spinal anesthetics. This is problematic because usually these residents with very limited experience can be at very different stages on their learning curve. It is assumed that about twenty repetitions of a certain procedure may produce a more even group of operators who have close levels of experience.

This issue of sampling bias has to be addressed clearly in the discussion. The reader should be more confident that sampling bias has not been a factor in the observed results.

2. Page 4 line 71: Define 'regular patient'.
3. Page 5 line 97: Why the definition of an elderly patient was assumed to be patients above 60 years? It is always assumed from a chronological viewpoint, that medical treatment of the elderly starts from the age of 65 years old.

4. Page 5 line 109: Was the presence of spinal abnormalities detected by imaging studies?

5. Page 8 lines 162-168: Define clearly the primary outcome and highlight the difference between such outcome and the secondary outcome 'number of needle insertion attempts and number of needles passes.'

6. Page 9 line 179-183: Name the statistical test used to calculate the sample size.

7. Page 11 lines 233-246: The manuscript should not compare the results of other reports to the current results because the operators in this manuscript are first year residents and not senior residents or staff anesthesiologists.

**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.

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