Reviewer’s report

Title: Comparison of serum markers for muscle damage, postoperative recovery, and surgical site pain after extreme lateral interbody fusion with percutaneous pedicle screws or traditional open posterior lumbar interbody fusion

Version: 1 Date: 29 Jul 2017

Reviewer: Kai Sprengel

Reviewer's report:

1) The procedure performing the 1 year follow up is still a little bit unclear (personal investigation, phone call, mail?) Please clarify.

2) I still think, that ANOVA instead of the t-test is indicated for interval scaled variables (sorry in Review 1 I suggest ordinal scaled, I apologize for this), like the NRS (not VAS), ECOG and probably some scores. The Mann-Whitney U test is correct for ordinal scaled variables. It seems to be used only for (some) of the new parameters like current smoking, because there were no changes in other p-values and you can't use it for nominal scaled variables like preoperative slip or number of fused levels. But if using the Mann-Whitney U test, also sex must be analyzed with this test. Please mark the used test in the text and tables in each parameter, so it is clear which test was used. If there a still doubts concerning the statistics, a statistician should be asked.

3) It seems that there was a learning curve of the surgeons in the beginning of the study as mentioned on page 5. Please discusses this weakness critically in "Discussion" or clarify if the expertise was gained before beginning of the study.

4) There was a difference between the two groups in using allograft or autologous bone. It is well known, that especially iliac crest bone grafting could strongly influence postoperative pain and therefore some of the used scores. Also, serum creatine kinase and inflammation markers could be influenced because of a second area of surgery. Please discuss this weakness critically in "Discussion".

I thank the authors for this interesting study and wish them all the best for a successful publication.

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 recommend additional statistical review

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