Reviewer's report

Title: Compression and contact area of anterior strut grafts in the instrumented spine: a biomechanical study

Version: 1 Date: 8 April 2013

Reviewer: Parshia Moghadas

Reviewer's report:

The reviewer would like to thank the authors for the very interesting study they performed. There are few comments the authors are asked to revise.

Minor Essential Revisions:

Comment #1:
Line 6, Abstract: in the Background section, the aim of the study is not clearly defined. The authors are asked to either add a sentence to specify the aim(s) of the study, or to expand the final sentence to reflect the aim(s) clearer.

Comment #2:
Figure 3 caption: it is not clear what “Significant changes: # vs. baseline “pressfit” situation: P < 0.05; * vs. group A-Type P < 0.001” represents in the figure. For example, what does “* vs. group A-Type” mean? Does it mean that the columns with a * sign are in fact the results versus that for group A-type or does it have a different meaning? Please revise, either by re-writing the figure caption or briefly explaining it in the main text.

Also, is there any particular reason why one of the hash signs on the graph is gray?

Similar comments also apply to Table caption.

Comment #3:
How was the mean contact force calculated? Was it based on the final reading or a series of readings at any one time? The authors are encouraged to specify the cycle time during which the contact force was measured.

Comment #4:
Figure 4 neither matches the caption nor the material it has been referred to in the main text. Please make the necessary changes.

Also, there is an additional figure (Figure 5) at the end of the manuscript, which has not been referred to in the text. It does not have a figure caption either, so it may have been uploaded by mistake. The authors are asked to make the necessary amendments.

Comment #5:
Typo errors:

Line 127, Methods section: anterior should start with capital A, to match the rest of the list

Line 165, Results section, final paragraph: “group C-Type C”- Please remove one of the “C”s.

Line 198, Discussion: “group C-Type group”- Please remove one of the “group”s.

Line 264, Conclusions: please correct the sentence “can help surgeons to in their choice of”

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests