Author's response to reviews

Title: Sagittal plane gait characteristics in subjects with hip osteoarthritis with mild to moderate symptoms compared to healthy controls: A cross-sectional study

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Author's response to reviews: see over
Details of revision, version 2

We thank both the reviewers for another thorough evaluation of our revised version of the manuscript “Sagittal plane gait characteristics in hip osteoarthritis patients with mild to moderate symptoms compared to healthy controls: A cross-sectional study”, and are pleased to hear that they found our revised manuscript to be improved. To our best effort, we have tried to meet the latest suggestions from both reviewers in this second revision.

We have responded to each comment made by the two reviewers successively in this report. Our responses and explanations to the changes made are given in italics.

Author’s responses to the reviewers

Reviewer’s report

Title: Sagittal plane gait characteristics in subjects with hip osteoarthritis with mild to moderate symptoms compared to healthy controls: A cross-sectional study

Version: 2

Date: 30 October 2012

Reviewer: Yong-Hao Pua

Reviewer’s report:
The authors are responsive to my critiques and their efforts to revise the manuscript are apparent. I do, however, have a few remaining concerns, and they are detailed below.

- Major Compulsory Revisions

Background
I am generally satisfied with the authors’ justification to analyze MJS as a dichotomized variable. Nevertheless, however sound the justification, the problem of reduced statistical power remains. In fact, an indication of this problem may be seen from the authors’ conclusion that both groups did not differ statistically on the hip ROM measures (page 17). Inspecting Table 3, however, it is evident that clinical, but not statistical, differences in hip flexion and internal rotation ROM could be observed between the 2 groups. Specifically, the between-group differences in hip flexion ROM was 9 degrees; in internal rotation ROM, 7 degrees. In my judgment, these differences have either paralleled or exceeded their minimum detectable change scores. Can the authors acknowledge the possibility of low statistical power or explain their null findings in their revised paper?
We have included a sentence in the last paragraph in p. 17 in the Discussion, emphasizing the potential power issue following the relatively low number of patients for the subgroup analyses, and also specifically explained that the differences in ROM flexion and internal rotation may be of clinical importance even though they are not statistically significant. The issue of statistical power with regard to the results from the subgroup analysis is, thus, now being addressed to be interpreted with caution in both the abstract, discussion and conclusion.

Results
I am satisfied with the authors’ responses. In the Table footers, however, the authors seem to vacillate between “Nm/BW” and “Nm/BW*100”. I prefer the latter. Please be consistent with the notations.

The reason for this is that in consistency to previous literature (although there is no absolute consensus), we have calculated the isokinetic strength measurements from the formula Nm/BW*100; whereas the joint moments are given as Nm/BW. In our view, keeping these notations will make comparisons to other studies easier to interpret.

- Minor Essential Revisions
  Tables
  Several 95% CIs included 0 but the attendant P-values were <0.05. I believe – and hope – that these are transcription errors. Please fix them.

  We apologize for these errors in some of the CI’s, which truly were transcription errors, as several negative signs before the upper numbers were deleted. We originally wrote the lower and upper numbers with a “–” between them, but changed to use the word “to”, and accordingly the negative signs were left out by mistake. For the kinematic values at toe-off in Table 4, however, the p-values had been altered during editing of the table. All errors are now corrected.

Grammatical and typo errors
  o pg4: “had focus” should read “focused”
    The authors still have not changed them. Please do so this time round.
  o Pg6: “53 first patients” should read “first 53 patients”

All changed in accordance with the suggestions.

Level of interest: An article of importance in its field

Quality of written English: Acceptable
Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests
Reviewer’s report

Title: Sagittal plane gait characteristics in subjects with hip osteoarthritis with mild to moderate symptoms compared to healthy controls: A cross-sectional study

Version: 2

Date: 30 October 2012

Reviewer: Joaquin Barrios

Reviewer’s report:
Much improved manuscript. Still needs some work prior to recommending publication in current form.

Major Compulsory Revisions
The authors continue to change tense, although better this time around. The first example can be found in the first sentence of the abstract. Stay in the past tense, which is what the paper is predominantly written in.

We have now changed the abstract and manuscript to past tense in all paragraphs describing the material, methods and results from our study. Only few sentences are still purposely written in present tense; i.e. when we are describing state of the art of current knowledge or how our study can be implemented in future work. Example: “However, what is new from our study, is that these hallmarks are evident already in hip OA patients at an early stage of symptoms.”

Please provide a description of the how the BLR was conducted in terms of outcome and predictor variable set-up.

We have included a sentence describing the BLR in the last paragraph in the Analysis (page 10). The key variables included are revealed in the results.

Minor Essential Revisions
Page 3: The last sentence of the Abstract Results: what is "This" referring to?

“This“ has been replaced with “The biomechanical differences”.

Page 4-5. The second paragraph of the Background: Still a difficult paragraph to follow. Consider deleting the sentence starting with "Whether gait..."

Sentence simplified and rewritten to “Thus, we wanted to investigate whether there were differences in biomechanical characteristics between patients with different levels of ROA.”

Page 10, Line 4 of the Analysis: Levene’s test is for equity in variances, not for normality
We absolutely agree; the original sentence could easily be misinterpreted. Sentence rewritten to “…normally distributed variables were first assessed from the Levene’s test to decide whether p-values should be reported based on equality of variances with a Student’s t-test or non-equality with a Welch’s t-test”.

Page 11, After INSERT TABLE 2, change "reduced with 10.0 degrees" to "reduced by 10.0 degrees"
Page 13: Don’t restate p-values in the Discussion’s first paragraph
Page 14: Change "compatible" to "comparable"
Page 16, Line 1: "contribute" should be "contributes"
Page 16, Line 8: Sentence should read "The hip OA patients in our study had a mean of 0.8 (8.7) degrees of passive hip extension ROM.

All changed in accordance with suggestions.

Level of interest: An article of importance 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