Author’s response to reviews

Title: Foot posture in people with medial compartment knee osteoarthritis

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Author’s response to reviews: see over
Re: Revised paper 2144864759433306 “Foot posture in people with medial compartment knee osteoarthritis”

Dear Editor,

We would like to thank the reviewers for their comments and constructive feedback. We appreciate the opportunity given to amend the manuscript and resubmit to the editor for consideration for publication in Journal of Foot and Ankle Research. We have attached a revised manuscript and have addressed the comments of the reviewers. Our responses to the reviewers’ comments are presented below.

Sincerely yours,

Dr Pazit Levinger
REVIEWER 1: Roy Lidtke

1. Methods – Kellgren and Lawrence grading 1-4 of radiographic knee severity. Reference 31 (Noyes and Stabler 1989) seems to be more specific to arthrospic lesions. Need to address why they used this method over other methods.

RESPONSE:

We have inadvertently used the wrong reference for the grading of the radiographic severity of OA. We apologize for this oversight. We used the method by Brandt et al (Brandt et al., 1989) which has been shown to be equally effective as the Kellgren and Lawrence grading in defining the presence and severity of OA (Kijowski et al., 2006). We have replaced the reference.


2. Background reference 3 should be updated with reference to peer reviewed journal. There have been newer peer reviewed papers on the mechanism aspect of knee OA.

RESPONSE:

Reference 3 was replaced by the following reference: Roemhildt ML, Coughlin KM, Peura GD, Badger GJ, Churchill D, Fleming BC, Beynnon BD: Effects of increased chronic loading on articular cartilage material properties in the Lapine tibio-femoral joint. *J Biomech* 2010, 43:2301-2308

3. Results - suggest including graphical representation of the significant differences of the three foot measures in addition to table 3. It would make the findings easier to understand and enhance the article.
We have included a forest plot (Figure 3) that includes the effect sizes and 95% confidence intervals for the difference in foot posture variables between the control and knee OA groups.

Discretionary revisions

1. Suggest including the following in the references and discussion (McWilliams et al., 2010)

RESPONSE: We have included the above reference and the study by Sharma (Sharma et al., 2010) to the discussion to emphasize the effect of varus malalignment on knee OA as follows (page 8, third paragraph):

“Whether pronated foot posture is a risk factor for, or a consequence of, medial compartment knee OA cannot be determined from cross-sectional studies such as ours. People with medial compartment knee OA often display genu varum malalignment of the knee, which has been shown to increase the risk of development and progression of knee OA (McWilliams et al., 2010; Sharma et al., 2010). “


2. Would like to see some discussion with references on the foot toe out angle/progression angle and how these findings may tie into the observed toe out angle in gait with subjects with knee OA.

RESPONSE:
The reviewer has raised an important topic related to the toe out angle and foot progression angle during gait in people with knee OA. In the current project we have only evaluated static foot posture and did not include any dynamic assessment of the foot. We therefore feel that discussion of this topic may be more relevant for studies...
assessing foot kinematics. We acknowledge the importance of such investigation and currently working towards assessment of foot function during walking in people with medial compartment knee OA.

**REVIEWER 2: Andrea S Graham**

1. Spelling mistake of ‘particularly’.
   
   **RESPONSE:** changed as suggested

2. Considering slight adjustment to the title to reflect the content relating to reliability of foot measures.
   
   **RESPONSE:** Assessment of reliability is an essential precursor to comparing groups when using clinical measurements. However, as our main objective was to compare foot posture between those with and without knee OA, we would prefer the title to reflect this. As such, we respectfully request that the current title be retained.