Reviewer’s report

Title: Centre of pressure characteristics in normal, planus and cavus feet

Version: 0 Date: 14 Nov 2017

Reviewer: Joshua Burns

Reviewer's report:

This interesting study compared COP characteristics between normal, planus and cavus foot posture groups. The COP measures for comparison included the velocity of the COP, the lateral-medial force index and the centre of pressure excursion index. I have 4 minor comments to address:

1. The cavus foot posture group had an FPI range of 0 to -4 which is quite narrow and only mildly supinated. This is in contrast to the planus group which has representatives along the continuum of the FPI. This should be cited as a limitation and might explain some of the non-significant findings.

2. There is also some concern naming an FPI of 0 as pes cavus. A score of <0 would be more intuitive. Have the authors also considered assessing the relationships between COP and foot posture as a continuous variables, which negates the arbitrary cut-points?

3. In addition to velocity of the COP, the lateral-medial force index and the centre of pressure excursion index did the authors consider calculating COP medial excursion area, lateral excursion area, and total excursion area, as we did previously (J Am Podiatr Med Assoc 98(2): 112-117, 2008)?

4. The boundaries for the inclusion into foot posture groups in Supplementary file 1 are important methods and should be in the main paper and not as a supplement if possible.

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