Reviewer’s report

Title: The correlation between postural control and upper limb position sense in patients with chronic ankle instability

Version: 1 Date: 3 March 2015

Reviewer: C. Collin C Herb

Reviewer’s report:

Line 41 - Need to give a definition of CAI in the context of this study. Recent recommendations on diagnosis of CAI have been made.

Line 49 - Throughout, make sure you are clear on use of terms proprioception, postural control and balance. Proprioception is a sensory function and effective postural control requires motor response as well as sensory function therefore making comparisons between a static postural control test and proprioceptive function is misleading. I recommend you review Riemann and Lephart, JAT, 2002, The Sensorimotor System, Part I. Balance is a sensorimotor task and may be affected by the sensory and motor dysfunction in this population.

Line 67 – The methods used in assessing postural control do not solely reflect proprioception function in the current study.

Line 75 - To say subjects were divided is misleading. There were two groups based on the pathology of CAI.

Line 77 - Does this include the use of Subjective questionaires, such as the FAAM and IdFAI. These need to be reported in the subject’s demographics table. If they were not collected, please justify this decision.

Line 125 – Can you site the sensitivity of the Biodex Multi-Joint System?

Line 135 - Has this method of measuring joint position sense been used in the past. Justify your use of shoulder rotation as your measure of upper extremity joint position testing. Did you consider any different testing positions? This method only assesses the ability to position the joint in one plane of motion with the shoulder abducted.

Line 151 – It is not clear whether you are comparing lower extremity or upper extremity measures here.

Line 166 - Justify your comparisons. What is the significance of making comparisons in balance on the side with no history of injury? Would you expect to have differences in the side that is not unstable?

Line 191: Again, use of the term proprioception is not entirely correct here. Proprioception is a sensory function and balance, specifically, depends on motor function as well.

Line 195 – Ankle instability has been associated with changes in postural stability compared to healthy controls. These should be discussed along with the systematic reviews. See Ross et al, Clin J. Sports Med, 2004, Wikstrom et al,

Line 207 - Recommend you expand on this paragraph to include discussion on what this may mean clinically.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I have no current conflict of interest.