Reviewer's report

Title: Effect of Glenohumeral Forward Flexion on Upper Limb Myoelectric Activity during Simulated Mills Manipulation; Relations to Peripheral Nerve Biomechanics.

Version: 1 Date: 4 June 2014

Reviewer: Leanne Bisset

Reviewer's report:

This paper investigated the mechanical effects on the radial nerve through changes in the pre-manipulation position for a Mill's elbow manipulation. Overall, I commend the authors on a well-controlled study design and a nicely written paper.

I make the following comments and suggestions:

1. Lines 148-149: how did you define the center of the muscle bellies?
2. When collecting EMG data from muscles that undergo some degree of movement, how can you be sure that the muscle fibres underlying the surface electrodes is the same between positions? For example, moving from shoulder abduction to shoulder flexion may mean that position of the electrodes overlying the upper trapezius, pectoralis major and biceps brachii muscle have moved - did you confirm that there was still muscle activity recorded from relevant muscles between positions, prior to formal testing?

The possibility that changes in shoulder position may be a potential confounder for measurement of EMG amplitude in muscles around the shoulder (i.e. those muscles that change length with change in shoulder position) needs to be explicitly mentioned as a limitation in the discussion.

3. Methods: was the study participant required to actively hold their shoulder in the test positions, or was this a passive position where the investigator supported the arm? Can you please make this clear in the methods?
4. Line 229: this shoulder read "....while maintaining the 90 degrees elevation in the frontal plan."

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 have no competing interests