Reviewer’s report

**Title:** Reliability of clinical tests to evaluate conduction loss and increased mechanosensitivity of the peripheral nervous system

**Version:** 1  **Date:** 10 October 2008

**Reviewer:** Toby Hall

**Reviewer's report:**

- **Minor Essential Revisions**

I would like to congratulate the authors of this paper for their efforts to pursue research related to clinical practice. Assessment for neurological deficit and peripheral nerve sensitization is common in clinical practice but has received only minor attention in terms of research investigation. This study has been very well thought out and very well written and should be published after the following minor considerations.

1. The title could better reflect the nature of the study. I suggest …“Reliability of clinical tests to evaluate conductivity and mechanosensitivity of the upper limb peripheral nervous system”

2. I am unsure as to the purpose or usefulness of statistically comparing the reliability statistics between nerve conduction and nerve mechanosensitivity. I cannot see how this adds anything to the paper. Either I missed something or the authors need to explain why they did this. Does the reliability of nerve conduction, more than mechanosensitivity have any advantage?

3. The authors should incorporate some very brief discussion of the validity of the clinical tests they used in the discussion section. Reliability is an important aspect of any clinical test but test validity is equally important. Some mention was made in the conclusion about diagnostic merit but for example what is the validity of the bedside neurological examination? A test may be reliable but if it is not valid then it’s value is diminished.

1. Is the question posed by the authors well defined?
   The study question has been clearly defined.

2. Are the methods appropriate and well described?
   Generally yes. Some minor clarification is required.

1. Why were 31 subjects chosen, was this based on any calculation of sample size?

2. Were subjects’ naïve to testing prior to the examination by the GP? Had they received physiotherapy treatment before the study started. This is important as it might make a difference to testing if subjects were familiar with the tests and with the required responses.
3. Sensation was assessed as follows “Sensory testing was rated as normal or abnormal” Does this include heightened sensation, or just diminished sensation?.

4. What dermatomal maps were used (reference).

5. The assessors were also required to state whether the sensation loss was dermatomal or non-dermatomal. The results of this have not been included in the results section or the Table.

6. How much pressure was used in nerve palpation? This is important for replicating the study and for clinicians.

3. Are the data sound?
Yes

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
Yes, but some data is missing as mentioned above.

5. Are the discussion and conclusions well balanced and adequately supported by the data?
The discussion and conclusion are well written but as mentioned above there should be some brief discussion regarding the validity of the clinical tests.

6. Are limitations of the work clearly stated?
Some limitations have been recognized.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
Yes

8. Do the title and abstract accurately convey what has been found?
The title needs some adjustment as mentioned above.

9. Is the writing acceptable?
Some minor text revision as follows:
1. Page 5 last paragraph. Median nerve is miss spelt.

**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