Reviewer’s report

Title: Extended effective electrodiagnosis in ulnar nerve entrapment at the elbow

Version: 1 Date: 20 April 2009

Reviewer: Ali Shakir

Reviewer’s report:

Major Compulsory Revisions:
1. There is a significant flaw in the study’s design. By the authors choosing to only look at using extended motor nerve conduction studies to increase sensitivity in the identification of UNE, they lose sight of the impact on specificity. If the repercussions of increasing sensitivity is the loss of specificity then there would be little clinical benefit from pursuing extended nerve conduction studies if the results were increasing false positive rate. Therefore without knowing the impact on specificity, their conclusion that three stimulation sites in the elbow is most effective is not supported. By determining the impact of specificity a better judgment of the value of three stimulation sites can be achieved. This would require adding an asymptomatic control group.

2. Also when evaluating sensitivity and specificity of a test, ideally one would want to use a gold standard that is separate from the test being studied to identify populations with and without disease. The lack of a diagnostic criterion for UNE based on clinical criterion independent of the electrodiagnostic variables under evaluation is a significant study limitation in regards to evaluating sensitivity as this could lead to a falsely elevated sensitivity for motor nerve conduction studies. This limitation should be brought up and discussed in the discussion section.

3. In the results section of the abstract it is mentioned that sensitivity for use of a third stimulation site increased from 80% to 96% but no where else in the paper is this mentioned. Only in the discussion section does it briefly state that sensitivity was increased by 16% by using a third stimulation site, but it is not clearly presented in the results section of the paper. There should be clarification in the results section of the paper stating this finding.

Minor essential revisions:
1. Did the authors mean amplitude (<2uV) rather than amplitude (>2uV), in the patient section of methods on page 5, regarding sensory amplitude criteria.

2. On page 12, 6th line from the top, unspecific is misspelled.

3. On page 13, 3rd line from the top, literature is misspelled.

Discretionary revisions:
1. Consider changing title to: The Impact of Extended Electrodiagnostic studies in
Ulnar Neuropathy at the Elbow.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests