Reviewer’s report

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

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Reviewer: Eszter Hidasi

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Todnem et al report an extended electrodiagnostic procedure for the evaluation of ulnar nerve entrapment at the elbow. They included 127 UNE patients consecutively based first of all on the electrodiagnosis of the ulnar nerve compression. Before the electrophysiological examinations they checked the patients physically. They extended the standard electrophysiological method with an extra stimulation point in the mid-sulcus at the elbow. Beside the motor nerve conduction studies they evaluated the function of sensory nerves and performed EMG examinations as well.

There was a little bit confused for me to understand the number of the examined patients, because they mentioned sometimes 127, sometimes 122, or 121, or 120 patients. If there were 127 person in the study, why did they check the paraesthesias just in 122 cases, the reduced ulnar sensitivity in 121 cases, and the muscle strength in 120 cases?

The evaluation of the pain in different regions is also confused. Did they check it at the hand, elbow and forearm, or at the hand, elbow and shoulder?

What did it mean: reduced muscle strength? What kind of movements did they examined?

These questions are answerable and the datas are correctable.

I have two basic problems with this study.

1. In my oppinion the inclusion criteria were unadvised. If they excluded the patients with clinical signs of ulnar nerve lesion, but without the electrophysiological evidence of this lesion using just the standard ENG method, then they could lose patients potential electrophysiological abnormalities detectable just with the extended ENG method. There could be useful to examine a group of this type of patients with the extended ENG method. The real clinical advantage of this new method could be to find the most patients with ulnar nerve lesion (compression)for surgical, or conservative therapies.

2. Nowadays there is a very sensitive, and not time-consuming method to diagnose precisely the ulnar nerve entrapment. This is the inching stimulation technique. With this method the precise localisation of the nerve compression could be performed. Using the inching technique the nerve is stimulated in 1 or 2 cm long segment steps, and the site of the nerve compression is clear for the clinician and the surgeon. To use just one more stimulation point (in the mid-sulcus) is not enough for the precise diagnosis.
Summing up that what has been said, the question posed by the authors is well defined, the method, what they used is not appropriate, the data are not always sound, the manuscript adheres to the relevant standards, the limitations of the work are not sufficiently stated, the authors clearly acknowledge their work upon which they are building, the title and the abstract accurately convey what has been found, but in my opinion the manuscript is not acceptable for publication because of the two major problems.

**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