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Neurophysiological Grading Tool of Ulnar Nerve Entrapment Across Wrist and Across Elbow with Case Presentation

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Ulnar nerve entrapment across the elbow (UNEAE) and across wrist (UNEAW) is the second most common entrapment of the hand after carpal tunnel syndrome. There are few gradings available for UNEAE and lesser in UNEAW.

The aim of this research is;

1. To create a clinically appropriate ulnar nerve entrapment grading tool to covers both area of entrapment in one research paper.
2. To see the relation of sensory nerve involvement across wrist with the entrapment across elbow and to evaluate its effectiveness in terms of compatibility with previous research, without any invasive tests like needle EMG examination.
3. To identify the lesion below and across wrist in terms of to support the clinical Physiologist (CP) to grade them properly and also help the consultant in deciding to treat with conservative or surgical treatment.
4. To compare the recording from the first dorsal interosseous (FDI) muscles with the abductor digiti minimi (ADM) muscle to see which muscle is more sensitive and shows early changes in ulnar nerve entrapment.

The proposed revised grading system is based on more nuanced, descriptive categories, ranging from “normal”, “early”, “mild”, “moderate” and “severe”. To create full grading system of UNEAW and UNEAE some additional category of clinical grading is therefore proposed.