

### The value of Sensory action potentials amplitudes difference of ring finger in the diagnosis of mild carpal tunnel syndrome

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**Statement of the Problem:** Carpal tunnel syndrome (CTS) is the most common entrapment neuropathy caused by compression of the median nerve at the wrist. the diagnosis of carpal tunnel syndrome (CTS) continues to be challenging due to a large number of electrodiagnostic (EDX) tests available; Median-Ulnar Sensory Latency Difference to the Ring finger (ringdiff) is an efficient method for establishing a relative slowing of the median nerve compared with the ulnar across the wrist; The purpose of this study is to show the value of the sensory nerve action potential SNAP amplitude difference between median and ulnar nerves in the ring finger which is another important parameter that is usually neglected.

**Methods:** We conducted retrospective comparative study about electrophysiology findings in 420 suspected carpal tunnel syndrome patients among them 300 definitive diagnosis of CTS was confirmed by 6 different EDX tests (1) and 120 not and a control group of 50 individuals. Results: in 100% of the confirmed CTS patients and in 98% of the other suspected CTS patients the SNAP amplitude of median nerve was decreased by more than 25% compared to the SNAP amplitude of the ulnar nerve in ring finger; thing witch is not observed in control individuals in which the difference was less than 25% or no difference.

**Discussion:** The median nerve fibers to the ring finger may be more subject to compression and their SNAP amplitude is the most decreased comparing to other fingers. Conclusion: median-ulnar SNAP amplitude difference to the ring finger is an important parameter that can allows a great accuracy for confirming the clinical diagnosis in the mild carpal tunnel syndrome at an early stage and allow a rapid management in order to reduce the pain and avoid the functional repercussions notably on the motricity.

#### Biography

Ayoub Boudiba is a resident in clinical neurophysiology.; have his passion in improving health and Make electrophysiological explorations more precise and simple in order to be easily realizable ; He has worked and is still working on carpal tunnel syndrome CTS, a very common pathology affecting 2% of the population and whose diagnosis is still controversial. This study drew attention to a parameter that is often neglected and which can help enormously diagnosis at a very early stage of pathology and allow a rapid management in order to reduce the pain and avoid the functional repercussions notably on the motricity.

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