

## **Ulnar Nerve Changes Associated with Carpal Tunnel Syndrome Not Affecting Median versus Ulnar Comparative Studies**

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**Abstract :** The present study was conducted to assess the involvement of ulnar sensory and/or motor nerve fibers in patients with carpal tunnel syndrome (CTS) and whether this affects the accuracy of the median versus ulnar comparative tests. The present study included 145 CTS hands and 71 asymptomatic control hands. Clinical examination was done. The following tests were done: Sensory conduction studies: median, ulnar and dorsal ulnar cutaneous nerves; and median versus ulnar digit (D) four sensory comparative study; and motor conduction studies: median nerve, ulnar nerve and median versus ulnar motor comparative study. It was found that 17 CTS hands (11.7%) had ulnar sensory abnormalities in 17 different patients. The median versus ulnar sensory and motor comparative studies were abnormal among all these 17 CTS hands. There were significant negative correlations between median motor latency and both ulnar sensory amplitudes recording D5 and D4. In conclusion, there is ulnar sensory nerve abnormality among CTS patients. This abnormality affects the amplitude of ulnar sensory nerve action potential. This does not affect the median versus ulnar sensory and motor comparative tests accuracy for use in CTS.

**Keywords :** median nerve, motor comparative study, sensory comparative study, ulnar nerve

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