

Median Versus Ulnar Medial Thenar Motor Recording in Diagnosis Of Carpal Tunnel Syndrome

Authors : Emmanuel Kamal Aziz Saba

Abstract : Aim of the work: This study proposed to assess the role of the median versus ulnar medial thenar motor (MTM) recording in supporting the diagnosis of carpal tunnel syndrome (CTS). Patients and methods: The present study included 130 hands (70 CTS and 60 controls). Clinical examination was done for all patients. The following tests were done (using surface electrodes recording) for patients and control: (1) sensory nerve conduction studies: median nerve, ulnar nerve and median versus ulnar digit four sensory study; (2) motor nerve conduction studies: median nerve, ulnar nerve, median (second lumbrical) versus ulnar (interosseous) (2-LINT) motor study and median versus ulnar (MTM) study. Results: The tests with higher sensitivity in diagnosing CTS were median versus ulnar (2-LINT) motor latency difference (87.1%), median versus ulnar (MTM) motor latency difference (80%) and median versus ulnar digit four sensory latency differences (91.4%). There was no statistically significant difference between median versus ulnar (MTM) motor latency difference with both median versus ulnar (2-LINT) motor latency difference and median versus ulnar digit four sensory latency difference ($P > 0.05$) as regards the confirmation of CTS. Conclusions: Median versus ulnar (MTM) motor latency difference has high sensitivity and specificity for the diagnosis of CTS as for both median versus ulnar (2-LINT) motor latency difference and median versus ulnar digit four sensory latency differences. It can be considered a useful neurophysiological test to be used in combination with another median versus ulnar comparative tests for confirming the diagnosis of CTS beside other well-known electrophysiological tests.

Keywords : carpal tunnel syndrome, medial thenar motor, median nerve, ulnar nerve

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