

ULNAR NERVE CONDUCTION PARAMETERS AND THE EFFECT OF AGE AND GENDER ON CONDUCTION VELOCITY IN CARPAL TUNNEL SYNDROME PATIENTS

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Nerve conduction studies on ulnar nerve are commonly performed to assess the function of peripheral nerves and to investigate Carpal Tunnel Syndrome (CTS). Our aim was to determine the ulnar nerve conduction parameters and the effect of age and gender on them in Carpal Tunnel Syndrome patients.

This is a retrospective study from the reports at Department of Physiology, University of Jaffna and from a private hospital, done by one neurologist to investigate for CTS using the same machine. Data from patients with signs or symptoms of ulnar nerve diseases or peripheral neuropathy were excluded.

Data from 272 upper limbs (201 females, 71 males) were taken for analysis. Difference between both sexes was assessed by student T test. Regression analysis was done to see the correlation between age and conduction parameters. Mean ages of males (47.8 ± 13) and females (48 ± 12.5) did not differ statistically ($p > 0.05$). Mean Ulnar Motor Proximal Latency, Ulnar Motor Distal Latency and Ulnar Sensory Distal Latency were respectively 7.7 ± 0.3 ms, 2.3 ± 0.5 ms and 2.4 ± 0.3 ms in Males. The respective values were 6.7 ± 0.6 , 2 ± 0.5 and 2 ± 0.3 in females. Ulnar Motor Velocity (UMV) was 57 ± 8.7 m/s in males and 60 ± 8.7 m/s in females ($p < 0.05$). Both males and females had significant ($p < 0.05$) negative correlations (-0.288 , -0.306) between UMV and age. We conclude that the conduction velocity is slightly higher in females and is slows with age and these should be considered in interpretation of nerve conduction parameters.