

PP19: Normative median and ulnar nerve conduction parameters in young adults

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Objectives: To establish normal values for Nerve Conduction Studies (NCS) in Median and Ulnar (motor and sensory) nerves of upper limb among healthy volunteers

Methods: NCS were performed and the measures included Distal Latency (DL) (ms), Proximal Latency (PL) (ms) and Conduction Velocity (CV) (m/s) in both motor and sensory of Median and Ulnar nerves among 99 individuals at University of Jaffna.

Results: The mean ages were 21.4 (± 1.2) in males and 21.7 (± 1) in females (n=99). There were significant differences between males and females in PL and DL of motor and sensory nerves, but not CV except for left motor ulnar and right sensory ulnar nerves ($p < 0.05$). NCS parameters between left and right limbs were not statistically significant. Mean of median motor DL, PL, and CV were 3 (± 0.4), 7.4 (± 0.6), 62.7 (± 4) in males and 2.8 (± 0.3), 6.8 (± 0.6), 61.7 (± 5.4) in females respectively while the respective parameters in Ulnar motor nerves were 2.2 (± 0.2), 7.4 (± 0.6), 64.8 (± 5.5) in males and 2.1 (± 0.1), 6.9 (± 0.6), 66.6 (± 6.3) in females. Mean DL, PL and CV of sensory median were 2.8 (± 0.2), 6.6 (± 0.4), 69.7 (± 4.6) and 2.6 (± 0.3), 6.9 (± 0.6), 70.9 (± 7.9) in males and females respectively while the respective values in Ulnar sensory were 2.4 (± 0.3), 7.5 (± 0.6), 67.4 (± 5) in males and 2.2 (± 0.3), 6.9 (± 0.6), 71.9 (± 6) in females. Height had significant ($p < 0.05$) correlation with latencies but not CV. CV was faster in sensory than motor nerves ($p < 0.001$).

Conclusions: Our results establish normal NCS values for Median and Ulnar nerves in young healthy adults enabling better interpretations of NCS by reducing false positive or negative diagnoses.