

Gender and Arm Length: Influence on Nerve Conduction Parameters in the Upper Limb

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Abstract

Median, ulnar, and radial nerve conduction studies (NCS) were performed in 44 subjects. Student's t-test was used to compare nerve conduction velocities (NCV), distal latencies (DL), and distal amplitudes (DAMP) for the two sexes. Only the sensory DAMPs showed statistical significance ($p < .001$) for gender. Women had greater mean median (52.4 microV vs 31.4 microV), ulnar (52.9 microV vs 27.0 microV), and radial (46.1 microV vs 20.1 microV) sensory DAMPs. Stepwise linear regression analysis of NCVs, DLs, and DAMPs on gender and arm length showed statistical significance only for the median ($R^2 = .46$, $p < .001$), ulnar ($R^2 = .59$, $p < .001$), and radial sensory DAMPs ($R^2 = .29$, $p < .001$) for gender. Arm length did not account for any additional variability. Gender showed an effect on the distal sensory DAMPs obtained by antidromic technique in this study. In contrast to the reported effect of leg length and height on lower limb studies, arm length did not affect upper limb studies.