

Comparative sensory nerve conduction velocity study of median nerve with sensory division of medial planter nerve in type 2 diabetes mellitus

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Objective: Sensory poly-neuropathy is a common complication of long standing type-2 diabetes mellitus. This study aimed to show the early sensory nerve involvement in medial planter nerve.

Methods: In this study 30 healthy and 48 diabetic patients with a history of over 10 years of disease were selected. The sensory conduction study; sensory amplitude of the potentials were recorded in the median and medial planter nerve. Furthermore, F and H response were noted in all cases.

Results: A normal value of sensory conduction velocity below forearm of median nerve is 58 ± 1.6 m/sec and the amplitude of sensory potential was $10.06 \mu\text{v}$. The normal value of sensory division of medial planter nerve velocity was 41.63 ± 5.34 m/sec with mean amplitude of $8.24 \pm 3.08 \mu\text{v}$. It was noted that in 35% of cases the conduction velocity in the sensory median nerve was slow with 23% having significantly low sensory amplitude. In sensory division of medial planter the conduction velocity is slow in about 46% of cases with reduced sensory potential amplitude.

Conclusion: The conduction velocity in patient with type 2 diabetes more than 10 years duration is slower and early involvement in sensory medial planter nerve. This suggests that medial planter sensory nerve is more adversely affected than the sensory nerve of median nerve.

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