

Original Paper

Comparison of therapeutic effects of dorsal wrist splint with cockup splint in carpal tunnel syndrome based on median sensory nerve conduction measurements

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Abstract

Background and Objective: Carpal tunnel syndrome (CTS) is one of the most common disease among the entrapment neuropathies. The purposes of this study was to compare the efficacy of a new dorsal wrist splinting versus common palmar splinting for CTS based on sensory nerve conduction measurements.

Materials and Methods: This single blind randomized control trial study was carried out on 22 idiopathic CTS patients. Subjects were randomly divided in two groups: Dorsal splint group (n=12) and palmar splint group (n=10). Both groups used splints for 4 weeks. Sensory conduction study of median nerve were done initially for having baseline and after 4 weeks follow up. SPSS-16 and Kolmogorov–Smirnov, independent T, and paired T tests were used for analysis of Data

Results: After four weeks median nerve sensory distal latency and conduction velocity improved significantly in both groups (P<0.05). There was significant difference between both groups due to electro-diagnostic improvement.

Conclusion: This study showed that based on electro-diagnostic method, dorsal wrist splint is more effective than cockup splint in carpal tunnel syndrome.

Keywords: Carpal tunnel syndrome, Dorsal wrist splint, Nerve conduction study

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