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## Comparison of EMG triggered stimulation and neuromuscular electrical stimulation on hand function in patients with stroke

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**Background:** The primary source of disability in individuals over the age of 50 years is because of complications of atherosclerotic vascular diseases. Majority of the patients have residual paralysis which affects their functional ability to do their activities of daily living. Motor dysfunction leads to major post stroke disability and handicaps them to conduct activities of daily living. About 87% of motor impairments of upper limb and hand occur in acute stage and that impairment which continue with time lead to restriction of ADLs.

**Objective:** To study the comparison of electromyography triggered stimulation and neuromuscular electrical stimulation on hand function in patients with stroke.

**Materials & Methods:** Experimental trail in which 30 chronic stroke patients with impaired hand function were randomly allocated to either EMG triggered stimulation (Group A) and neuromuscular electrical stimulation (Group B). Primary outcome measure was the Jebson Taylor Hand Function Test and Voluntary Control Grading for Hand.

**Results:** There was significant difference ( $p < 0.05$ , CI=95%) seen in all the components of Jebson Taylor Hand Function Test in both the groups individually. On comparison of group A and group B there was no statistically significant difference ( $p = > 0.05$ ).

**Conclusion:** This study concludes that EMG triggered stimulation as well as Neuromuscular Electrical Stimulation (NMES) is equally effective on hand function in stroke patients. There is no statistical and clinically significant difference on comparison of these two modalities.

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