

عنوان مقاله:

The Effect of High-Frequency Repetitive Transcranial Magnetic Stimulation on Functional Indices of Affected Upper Limb in Patients with Subacute Stroke

محل انتشار:

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خلاصه مقاله:

Background: Repetitive transcranial magnetic stimulation (rTMS) is a novel technique that may improve recovery in patients with stroke, but the role of rTMS as an applied and practical treatment modality for stroke rehabilitation has not been established yet. **Objective:** This study was conducted to determine the effects of a rehabilitation program (RP) in conjunction with rTMS on functional indices of the paretic upper limb in the subacute phase of stroke. **Material and Methods:** In this experimental study, twenty patients in the subacute phase of stroke were randomly assigned into two groups: The high frequency rTMS (HF-rTMS) in conjunction with RP (experimental group), and the RP group (control group). The experimental group received 10 sessions of 20 Hz rTMS on the affected primary motor cortex and the other group received 10 sessions of RP. In experimental group, RP for the paretic hand was conducted following rTMS session. Box and block test (BBT), Fugl-Meyer Motor Assessment for upper limb (FMA-UL), grip strength and pinch strength were used to assess motor function before the first session and after the last session of treatment. **Results:** Significant improvement in BBT, FMA-UL, grip strength and pinch strength was observed in both groups. Improvement of BBT and grip strength was significantly greater in the experimental group rather than the control group ($p < 0.05$). FMA-UL score and the pinch strength were greater in the experimental group, although the differences were not statistically significant. **Conclusion:** HF-rTMS in conjunction with RP is effective to improve the function of upper limb. It seems HF-rTMS is a novel feasible and safe technique for hemiparesis patients in the subacute phase of stroke

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