

THE DIAGNOSTIC VALUE OF MOTORTHRESHOLD AND CENTRAL CONDUCTION TIME IN REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION TREATMENT OF FIRST EVER ACUTE ISCHEMIC STROKE

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Introduction: Motorthreshold (MT) and Central Conduction Time (CCT) using Transcranial Magnetic Stimulation (TMS) are the most objective neurophysiologic value in monitoring cortical motorpathway. Although stroke patients need to know the prognostic and how widely the damage of the motorpathway, but using TMS as the therapeutic and diagnostic tool is still controversial. The aim of this study is to determine whether MT and CCT can be used as the diagnostic tool for monitoring the progress of repetitive TMS (rTMS) treatment for stroke patients.

Methods: 30 patients with first ever acute ischemic stroke from June to November 2012 were treated by rTMS for 5 consecutive days. CCT was measured before the stimulation and one week after the fifth treatment ended, hence MT were measured daily before the treatment began. Using Anova Repeated Measure we analyzed whether there was the significant differences between means of the CCT and MT.

Result: CCT at normal hemisphere ($p=0.761$) and at lesion side ($p=0.221$) were not significant different statistically. Mean MT were not different statistically between measurement ($p=0.152$). Variance MT at normal hemisphere ($p=0.561$) and at lesion side ($p=0.249$). In contrast there were a significant different between mean MT at lesion side before and the second stimulation ($p=0.035$) and even greater at the fifth stimulation ($p=0.003$).

Conclusion: MT should be the parameter diagnostic tool for rTMS treatment in Acute Stroke Patients. Hence CCT even were not different statistically, but still be used since the mean CCT is become shorter in post stimulation (25.1ms VS 19.2ms).