
A RANDOMIZED COMPARATIVE STUDY BETWEEN THE SHORT TERM OUTCOME OF ELECTROCONVULSIVE THERAPY VERSUS REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION IN THE TREATMENT OF A GROUP OF PATIENTS WITH DEPRESSION

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Background: Electroconvulsive therapy (ECT) has a long history in treating depression and its benefits are well known. Repetitive transcranial magnetic stimulation (rTMS) has been introduced more recently to the treatment spectrum.

Aims: To test the equivalence of rTMS with ECT, and compare the neurocognitive side effects of both treatment modalities.

Methods: This is a randomized comparative study, forty patients with major depressive disorder referred for ECT were randomly assigned to either a 20 session course of rTMS to the left dorsolateral prefrontal cortex or a standard course of ECT. The primary outcome measure was the score on the Hamilton Depression Rating Scale HAM-D. Secondary outcome measures were cognitive battery that assessed different aspects of cognitive functions and a subjective mood visual analogue scale. The cognitive battery comprised the Rey-Osterrieth complex figure test, the Trail making test A and B, the Digit span subtest from the Wechsler Adult Intelligence Scale.

Results: ECT was more effective than rTMS in the short-term treatment of major depressive disorder as evident by HAM-D scores. rTMS was well tolerated with less impact on the cognitive functions compared to ECT. Level of improvement by ECT was correlated with older age, and severe baseline HAM-D symptoms, while the level of improvement by rTMS was correlated with more memory affection at the end of treatment.

Conclusions: ECT was more effective than rTMS in the short-term treatment of major depressive disorder regarding the overall mood symptoms. rTMS was well tolerated with less impact on the cognitive functions.