

DEBATE: TRANSCRANIAL MAGNETIC STIMULATION IS AN EFFECTIVE TREATMENT FOR NEUROPSYCHIATRIC DISORDERS – NO

Irena Rektorova

Applied Neuroscience Research Group, Masaryk University Brno and First Department of Neurology, St. Anne's Hospital, School of Medicine, Masaryk University, Brno, Czech Republic

Repetitive transcranial magnetic stimulation (rTMS) is a non-invasive tool employed for studying cortical excitability and plasticity of the stimulated area and associated circuitries. rTMS has also potential to induce behavioral after-effects including effects on specific neuropsychiatric symptoms. However, on the therapeutic side, studies employing rTMS particularly on subjects with major depression, schizophrenia and Parkinson's disease have provided some disappointing as well as encouraging results. The exact mechanisms of rTMS are still not known. I will specifically discuss the studies flaws and confounding factors related to variability of stimulation parameters and the length of stimulation, the severity and duration of the specific disease, use of concomitant medication, duration and effect size of rTMS. Variability of studies designs related to the exact coil placement and the issue of sham stimulation will also be touched upon. Although a number of meta-analyses have been published so far favoring rTMS for the treatment of major depression, and negative symptoms and auditory hallucinations in schizophrenia in particular, there are too many issues that still need to be resolved before rTMS could be recommended for the treatment of these neuropsychiatric symptoms and diseases.