Efficacy of Repetitive Transcranial Magnetic Stimulation in Treatment of Primary Chronic Daily Headache

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Abstract

Headache is the most prevalent pain disorder, affecting 66% of the global population disturbing both quality of life and work productivity. Transcranial magnetic stimulation (TMS) proved to be a useful noninvasive tool to stimulate cortical areas of the brain. In particular, repetitive transcranial magnetic stimulation (rTMS) allows modulating cortical activity. This study aimed to investigate the efficacy of rTMS over left Dorsolateral prefrontal cortex (DLPFC) in treating patients with primary chronic daily headaches (chronic tension type headache and chronic migraine). Twenty seven patients participated in the study, distributed into study group (sixteen patients) and control group (eleven patients). The study group received twelve sessions of (5Hz) real rTMS delivered over the left DLPFC. The control group received twelve sessions of Sham rTMS. A statistically highly significant reduction of measured headache parameters was observed in the study group post treatment ($P < 0.001$), with a percentage of improvement (94.5%). No significant reduction of headache parameters was observed in the control group post treatment ($P > 0.05$), with a percentage of improvement (7.9%). rTMS is an effective modality in relieving pain in patients with chronic daily headache. This runs with the approval of the suggested role of DLPFC in pain control.

Biography:

Ayat Allah Farouk Hussein is Associate professor at Cairo University, Egypt. She started her research on Clinical Neurophysiology Unit at Cairo University, Egypt. During her Ph.D. she joined research groups at Cardiff University, United Kingdom. She obtained Ph.D on 2010, and started her academic carrier as assistant professor at Cairo University, and promoted to Associate professor on 2017. Dr. Ayat has successfully published several papers related to the area of Clinical Neurophysiology.

Speaker Publications:

1. "Factors affecting the corrosion behaviour of aluminium in acid solutions. I. Nitrogen and/or sulphur-containing organic compounds as corrosion inhibitors for Al in HCl solutions"
2. "Factors affecting the corrosion behaviour of aluminium in acid solutions. II. Inorganic additives as corrosion inhibitors for Al in HCl solutions"
3. "Influence of Stem Cell Therapy on Statin-induced Myopathy of Skeletal Muscle in Female Rats"
4. "Factors affecting the corrosion behaviour of aluminium in acid solutions. II. Inorganic additives as corrosion inhibitors for Al in HCl solutions"
5. "CalicotomeExtract as a Friendly Corrosion Inhibitor forCarbon Steel in Polluted NaClSolution: Chemical and Electrochemical Studies"

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