USE OF TRANSCRANIAL MAGNETIC STIMUAIATION (TMS AND RTMS) IN ADHD

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Introduction: We reviewed current state of research involving the applications of TMS and rTMS in understanding of pathophysiology as well as the treatment of ADHD.

Objectives: To assess how TMS has furthered our knowledge of neurobiological models of ADHD and to consider further research. To look at possible applications of rTMS in the management of ADHD and to evaluate the current state of research.

Methods: Literature review using an online search.

Results: The investigative studies are small in numbers, but show some promising results. TMS adds weight to the theory of a hypofunctional dopaminergic circuit involved in ADHD pathophysiology. Treatment studies (only 2) using rTMS shows some use in treatment of ADHD, such as brief improvement in attention. These studies, however, are very preliminary, small in numbers and suffer from methodological difficulties.

Conclusions: TMS has provided some useful information about the likely pathophysiology of ADHD, and results show that it is a safe an effective way to investigate and treat this condition. Much more research is needed to investigate the potential applications of this technology.

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3. Weaver et al. Transcranial magnetic stimulation (TMS) in the treatment of attention-deficit/hyperactivity disorder in adolescents and young adults: a pilot study. J ECT. 2012 Jun;28(2):98-103.