

CEREBELLAR TRANSCRANIAL MAGNETIC STIMULATION FOR ANHEDONIA IN DEPRESSION - CASE REPORT

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Transcranial magnetic stimulation (TMS) is an established method for treatment-resistant depression, although its efficacy in individual patients is quite varied. Diagnostic biomarkers that would lead to more personalized therapy are currently not known. Magnetic resonance imaging (MRI) shows promise as a tool for delineation of structural or functional characteristics that could prove as valuable markers for the selection of individualized TMS treatment protocols.

A 52-year old patient had depressive episodes since the age of 26 years. He experienced multiple and long-lasting relapses, regardless of different antidepressant medication and other interventions during multiple hospitalizations. He was enrolled in a TMS treatment research study. MRI was performed as part of pre-treatment evaluation and an enlarged CSF cistern next to the cerebellum was found. Neuroradiologist concluded that it represented a developmental anomaly and judged it as a benign formation not exerting any pressure on the cerebellum. We performed a standard 10 Hz DLPFC stimulation protocol, after which objective evaluation with depression scales did not show any kind of improvement. Patient reported anhedonia as one of the most significant and treatment-resistant symptoms of his depressive disorder.

The study by Drysdale et al (2016) pointed towards the existence of different neurophysiological subtypes of depression, which also respond differently to TMS treatment. One of the described subtypes is strongly related to anhedonia. Brady et al (2019) described the efficacy of cerebellar TMS treatment in patients with schizophrenia for functional recovery of disrupted cerebellar-prefrontal network, related to negative symptoms such as anhedonia. We hypothesized that a similar approach could be useful for anhedonia in depression and treated the patient with a stimulatory cerebellar TMS protocol, where the coil was positioned over the midline of the cerebellum. As this intervention was not a part of the research study, we did not use formal clinical scales for the evaluation of treatment efficacy, but clinical observation and the patient's subjective experience showed noticeable, although short-lived improvement of anhedonia and his mood in general.

The individualization of TMS treatment can make a huge difference in its efficacy. Determination of functional dysconnectivity patterns in brain disorders like depression can lead to a selection of more appropriate treatments for individual patients.

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MUSIC THERAPY AND MENTAL HEALTH IN PREGNANCY

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Introduction: In a woman's life, pregnancy is a unique experience accompanied by significant physiological, biochemical, and psychological changes that can affect mental health status. Participation in preventive activities during pregnancy has an impact on better emotional state after childbirth.

Discussion: The therapeutic effects of listening to music on the health of mother and child have been proven in numerous studies. Listening to music during pregnancy contributes to a better sense of well-being and less pronounced symptoms of postpartum depression. Scientific evidence confirms the effects of music therapy on the level of stress and anxiety in pregnant women, but also calmer children and better emotional bonding. The application of GIM therapy - music - induced imagination - also provides significant results in strengthening psychological resilience.

Conclusion: Music therapy is a simple, non-pharmacological and safe method that significantly contributes to mental health in pregnancy and after childbirth. The application of music therapy has a scientific potential that offers many ideas for the development of medical - music research.

Key words: mental health - pregnancy - music therapy

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COMPARISON OF THE SCHEIN AND OSDI QUESTIONNAIRE AS INDICATOR OF TEAR FILM STABILITY IN PATIENTS WITH SCHIZOPHRENIA

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Background: The aim of this research was to determine which of two chosen questionnaires for subjective symptoms of dry eye (Ocular Surface Disease Index and Schein questionnaire) is more reliable in the assessment of dry eye in patients with schizophrenia.

Subjects and methods: Our research included 80 patients (160 eyes) of both sexes with schizophrenia ranging between the age of 25 and 55 who have been taking one of three antipsychotic drugs namely clozapin, olanzapin, quetiapin for five or more years and were in a stable phase of the disease or remission. All participants were required to satisfy all included and excluded criteria. They all filled out the Schein and OSDI questionnaires for assessment of subjective symptoms. Tear break-up time test (TBUT) for objective evaluation of tear film stability was also performed. In order to determine the correlation between two subjective and objective tests we calculated Spearmans correlation coefficients.

Results: Results of the correlation between the OSDI questionnaire and TBUT test for the right eye was $r=-0.73$; $p<0.01$ and for the left eye $r=-0.72$; $p<0.01$. Results of the correlation between the Schein questionnaire and TBUT test for the right eye was $r=-0.62$; $p<0.01$ and for the left eye $r=-0.60$; $p<0.01$. A detailed analysis showed that there are no statistically significant differences between the correlations. Both subjective questionnaires were statistically significantly and negatively correlated with the TBUT test, showing that an increase in the results on the OSDI and the Schein questionnaires led to the decreases in the results on the TBUT test.

Conclusion: In patients with schizophrenia, OSDI and Schein questionnaire are equally reliable in the assessment of subjective symptoms of Dry eye disease (DED). Considering that, OSDI is more common in clinical practice and includes questions regarding QOL it is recommended for use in patients with schizophrenia.

Key words: schizophrenia - Schein questionnaire - OSDI questionnaire - dry eye - tear film stability - TBUT

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