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REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION (RTMS) AS A NEW SUPPORTIVE TOOL IN THE THERAPY OF PANIC DISORDER?

S. Deppermann[1], *N. Vennewald*[2], *F.B. Haeussinger*[1], *S. Sickinger*[1], *A.-C. Ehlis*[1], *A.J. Fallgatter*[1], *P. Zwanzger*[2]

[1]Psychiatry and Psychotherapy, Eberhard Karls University, Tübingen, [2]University of Münster, Münster, Germany

Introduction: With a life-time prevalence of about 3.5 percent, Panic disorder (PD) belongs to the most common anxiety disorders which can often chronify if not treated adequately. Characterized by the sudden onset of unexpected panic attacks it is associated with a significant loss of quality of life. As in other anxiety disorders, inadequate top-down regulation of subcortical structures by the prefrontal cortex (PFC) is assumed to be a core feature.
Objectives/aims: Even though fMRI studies could show that Cognitive Behavioral Therapy (CBT) is an effective treatment method that can normalize prefrontal hypoactivity, the onset of its effect is delayed. Moreover, recent neuroscientific studies indicated a beneficial effect of repetitive transcranial magnetic stimulation (rTMS), which has been shown to modulate neural activity by depolarization of cortical neurons. The goal of this study was, therefore, to investigate the application of a sham (placebo) controlled activating rTMS protocol during CBT.
Methods: Forty PD patients were assessed with the optical imaging method near-infrared-spectroscopy (NIRS) while performing emotional paradigms as well as a cognitive task before and after receiving 15 sessions of rTMS.
Results: Preliminary results show a significant increase in prefrontal activation from the beginning to the end of the treatment period. This effect was even larger in the active rTMS group.
Conclusion: It can hence be concluded that it is possible to depict the effects of CBT on a neural level after only three weeks. Furthermore, rTMS seems to serve as a useful tool in terms of supporting the general therapy outcome.

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