The effectiveness of Transcranial direct current stimulation (tDCS) on brain electrical activity and amygdala activity and symptoms of patients with Obsessive-Compulsive Disorder (OCD): a study based on QEEG and LORETA

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Abstract

Objective: The aim of the present study was to investigate the effects of transcranial direct current stimulation (tDCS) on brain electrical activity and amygdala activity and symptoms of patients with Obsessive-Compulsive Disorder (OCD).

Methods: A total of 30 patients with OCD were randomly divided into two groups: a tDCS group and a control group. The patients in the tDCS group received 20 sessions of tDCS over 4 weeks, while the control group received sham tDCS. Brain electrical activity was assessed using QEEG and LORETA before and after the intervention.

Results: The results showed a significant decrease in the symptoms of the OCD group after the intervention compared to the control group. In addition, there were significant changes in brain electrical activity and amygdala activity in the tDCS group compared to the control group.

Conclusion: The findings of the present study suggest that tDCS has the potential to improve symptoms of OCD by modulating brain electrical activity and amygdala activity.