




# ACCELERATED DLPFC-TDCS AS AN ADJUNCTIVE TREATMENT FOR CHRONIC MIGRAINE UNRESPONSIVE TO MONOCLONAL ANTIBODIES: PRELIMINARY FINDINGS FROM A SHAM-CONTROLLED PILOT STUDY

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**Background.** Chronic migraine can remain highly disabling despite preventive treatment with monoclonal antibodies, with some patients continuing to experience frequent attacks. In this clinical population, transcranial direct current stimulation (tDCS) targeting the dorsolateral prefrontal cortex (DLPFC) may represent an adjunctive therapeutic strategy through the modulation of neural circuits involved in pain processing.

**Methods.** Eight patients diagnosed with chronic refractory migraine (7 women; 47.9±9.9 years) were enrolled in the study and assigned to one of two treatment sequences: sham–active (n = 4) or active–active (n = 4). Assessments were conducted at baseline (T0), one month after the first cycle (T1), and one month after the second cycle (T2). The primary outcome was the monthly number of migraine days; secondary outcomes included days of symptomatic medication use, HIT-6, MIDAS, and BDI-II. The comparison between real and sham stimulation was based on the changes observed between T0 and T1. Active versus sham stimulation during T0–T1 was assessed using ANCOVA on T1 migraine days adjusted for baseline.

**Results.** Repeated-measures ANOVAs showed significant time effects for monthly migraine days ($p=.007$), medication-use days ($p<.001$), and BDI-II scores ($p<.001$), with significant T1–T2 reductions in migraine and medication-use days. No Time×Group interactions emerged. Baseline-adjusted ANCOVA showed no active-versus-sham difference in migraine days at T1 ($p=.639$, $\eta^2=.046$).

**Conclusions.** These preliminary results highlight the potential of tDCS applied to the DLPFC as an adjunctive strategy in refractory patients. The outcomes observed encourage further study in a larger sample, which is necessary to define its specific effect relative to sham stimulation.