ERRATUM TO ‘5TH INTERNATIONAL BRAIN STIMULATION MEETING’ ABSTRACTS

The abstract below was mistakenly omitted from the ‘5th International Brain Stimulation Meeting’ abstracts, published in Brain Stimulation issue 16/1.

In addition, the abstract previously numbered ‘P3.179’, entitled ‘Development of home high definition-transcranial direct current stimulation technology; hardware and individualized headgear’, should instead have been numbered ‘P2.179’.

The Publisher apologizes for these errors.

P3.179

The effect of non-invasive brain stimulation (NIBS) on alcohol use disorders (AUD)

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Abstract

Alcohol yearly causes 3 million deaths worldwide. A lot of treatments already exist, but many of them are subject to a high percentage of dropout or relapse. Transcranial direct current stimulation (tDCS), a NIBS, currently receives a lot of attention as a possible new addiction treatment. Nonetheless, there is no existing consensus yet concerning the concrete parameters (e.g. montage, current, intensity). Secondly, tDCS research often focuses on subjective outcomes (e.g. craving), which could lead to more biases and fluctuations. Also, current research often uses few stimulation sessions (e.g. 1 or 2 sessions). In this study, we desire to investigate the effect of high-definition tDCS (HD-tDCS), a more focal stimulation variant of tDCS, on AUDs. Using HD-tDCS, it’s possible to restrict stimulation to one hemisphere, and thereby control for potential inhibition effects of the cathode. To find an answer to this research question, a between-subject design, including 70 patients with an AUD, is carried out. Participants receive a total of 5 sessions of either real or sham right anodal HD-tDCS over the dorsolateral prefrontal cortex (dlPFC), carried out on five executive days. Craving will be reported on a Visual Analogue Scale (VAS) at baseline and after every tDCS session. Moreover, activity of the brain (EEG) will be measured both at baseline, as well as after the first and the last tDCS session, to measure effects on short-term and longer term. Brain activity will be measured both at rest and during two inhibition tasks (Go/NoGo and Cue Reactivity). Four weeks after the last tDCS session, abstinence will be assessed, as a follow-up measure. The goal of this research project is to describe positive effects of right dlPFC tDCS on abstinence, craving, and EEG outcomes.

Research Category and Technology and Methods

Clinical Research: 9. Transcranial Direct Current Stimulation (tDCS)

Keywords: substance use, alcohol use disorder (AUD), HD-tDCS, inhibition

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