P01-52

THE EFFECT OF RIGHT-SIDED PREFRONTAL HF-RTMS ON ALCOHOL CRAVING: PRELIMINARY RESULTS

S. Herremans, N. Vanderbruggen, D. Zeeuws, L. Santermans, C. Baeken, VUB Psychiatry, UZBrussel, Brussel, Belgium

Introduction: Repetitive transcranial magnetic stimulation (rTMS) affects neuronal circuits and neurotransmitter systems in the brain. Recent data suggest that this application could diminish 'craving' in patients with alcohol dependence.

Objectives and aims: Given these preliminary data, we examined whether one high frequency (HF)- rTMS session over the right dorsolateral prefrontal cortex (DLPFC) would reduce alcohol craving in alcohol dependent patients in their natural habitat.

Methods: After detoxification during hospitalization, 22 current alcohol dependent inpatients were included (8 female, 14 male; age= 49.95 ± 8.82y).

We used a sham-controlled between-subjects design where after randomization patients received under MRI guidance one right-sided DLPFC active HF-rTMS session or sham. In each high-frequency (20 Hz) stimulation session, patients received 1560 pulses at 110 % MT. The obsessive-compulsive drinking scale (OCDS) was collected at baseline, just before and just after the stimulation session on Friday after detoxification and on the three consecutive days following stimulation in patient's natural habitat.

Results: Although the OCDS total score significantly decreased after the detoxification period, one sham-controlled stimulation session did not affect immediate craving measurements. Furthermore, no significant group differences were observed on OCDS total scores when patients were in their natural habitat.

Conclusions: Although the right DLPFC was targeted under MRI guidance, our preliminary results indicate that one sham-controlled HF-rTMS session does not affect craving in recently detoxified alcohol dependent patients. Besides the limited number of patients it could be possible that only one stimulation session could be insufficient to have a subjective effect on craving.

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