

P-1374 - BRAIN ELECTROMAGNETIC TOMOGRAPHY CHANGES (SLORETA) AFTER RIGHT PREFRONTAL 1HZ RTMS IN DEPRESSIVE PATIENTS

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Background: The aim of our study was to examine whether the change of current density detected by standardized low resolution brain electromagnetic tomography (sLORETA) is different between responders and non-responders to prefrontal repetitive transcranial magnetic stimulation (rTMS).

Methods: A total of 25 inpatients with depressive disorder (DSM-IV criteria), who previously did not respond to at least one antidepressant treatment underwent 4 weeks of rTMS treatment (1 Hz, 100% of motor threshold, 600 pulses/session, 20 session) applied over the right dorsolateral prefrontal cortex. 19-channel EEG was recorded before treatment and 3 days after rTMS treatment. The effect of rTMS on brain electrical activity (revealed by the use of sLORETA, Pascual-Marqui RD, 2002) was measured separately in responders (reduction of MADRS \geq 50%) and non-responders.

Results: The significant current density increase in alpha 1 band was detected in prefrontal and limbic cortex (Brodmann areas 6, 8, 9, 32) bilaterally ($p < 0.05$, corrected) in a group of nine responders. No significant changes were detected in non-responders.

Conclusions: Our findings implicate that the antidepressant effect of 1Hz rTMS is connected with a current density increase in alpha 1 band in the prefrontal cortex.

Supported by 1M0517 and MZ0PCP2005.