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LOW FREQUENCY REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION IN ELDERLY: EFFECTS ON MOOD AND COGNITIVE FUNCTIONS

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Increasing the options for effective treatment of depression in elderly with the aim of improving quality of life remains a critical public health goal. Late-life depression is associated with cognitive impairment and dementia. Pharmacological therapy is a common modality of treatment for depression during the late-life period. Antidepressants seem to have some efficacy in improving cognitive functions. However pharmacological treatment in elderly causes some trouble because of the risk of metabolic side effects. Continuing use of antidepressant medication is associated with an increased relative risk of type 2 diabetes. Repetitive Transcranial Magnetic Stimulation (rTMS) represents an effective, well-tolerated non-pharmacological treatment for depression. Recently rTMS has been proposed as a possible treatment for the cognitive deficits associated with Alzheimer disease (AD). The findings of a recent study provide initial evidence for the persistent beneficial effects of rTMS on sentence comprehension in AD patients.

We propose the use of rTMS for treatment of depression in elderly in order to reduce the risk of metabolic side effects and to improve cognitive functions. In our experience, elderly depressed patient treated with rTMS, at 1 Hz at 110% of Rest Motor Threshold (RMT) over the right Dorso-Lateral Pre-Frontal Cortex (DLPFC) for three or four weeks, show a significant reduction in depressive symptomatology and furthermore a significant improving in cognitive functions (verbal fluency, visual-spatial memory and score in the MINI-Mental State Examination).

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