



Fund “Nauka” Project № 15020 Resume – Competition-Based Session 2015:

“Investigation of the transcranial magnetic stimulation effectiveness on the cognitive disorders in depressive episodes in patients with recurrent depressive disorder (f33) and bipolar affective disorder (f31.3, 4, 5)”

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The World Bank estimates that mental health problems account for 8.1% of all health problems and the depressive disorders account for heaviest burden, accounting for 17% of mental disorders. The incidence of depressive disorder is 2-5% of general population, with lifelong morbidity in various studies ranging between 10 and 20%. WHO prognostic data on the severity of health indicators show that depression will take 2nd place after ischemic heart disease. The medical treatment is often incomplete and new therapeutic methods are being sought worldwide. Related to overall functioning of patients with depression, the management of cognitive functions represents particular interest. Neurocognitive deficits in depression persist beyond periods of illness and are found during remission. They extremely impair the functioning and well-being of patients and are significant supporting factor through the psychiatric statement. Transcranial magnetic stimulation is a relatively new biological non-drug approach in the treatment of depressive disorder. Relatively safe and effective treatment of affective symptoms has been found with this method. The effect on neurocognition has not been studied in detail.

For the scientific purposes of this project, a rTMS-device was purchased. A battery of tests for neurocognition was developed- for verbal fluency, “Tower of London”, “Trial making test”, Controlled Oral Word Association Test. There were recruited patient in current depressive episode, divided in two groups- within recurrent depressive disorder and bipolar affective disorder. The cognitive battery was administered before the rTMS course and after the last application. After statistical processing of the results, it was found that rTMS has a beneficial effect on the investigated neurocognitive domains in all patients with affective disorders.

The present study answers some questions about the effectiveness of rTMS in affective disorders, but also raises some new ones- the possibility of remission, response to subsyndromal symptoms, long time treatment, and the need for repletion of the procedures to develop an algorithm for the treatment of a depressive episode.