Follow-up of brain-derived neurotrophic factor (BDNF) during a one-year antidepressant treatment.


Background and aims: The brain-derived neurotrophic factor (BDNF) seems to be implicated in the neurobiology of depression. The aim of the study was to assess the relationship between the improvement of depressive symptoms during a one-year antidepressant treatment and serum and plasma BDNF levels.

Methods: Plasma and serum BDNF levels were assayed using the ELISA method, in 15 drug-free patients with major depression and in 15 healthy control subjects. Blood samples were collected at the baseline and the 2nd week, 1st, 3rd, 6th and 12th month of antidepressant treatment. Patients were naturally treated with selective serotonin reuptake inhibitors and tricyclic antidepressants at variable dosage.

Results: At baseline, the mean serum and plasma BDNF levels were significantly lower (p<0.05) than those found in the control subjects. However, from the 1st month of treatment, patient plasma BDNF levels did not differ significantly from the values reported in healthy control subjects (p=0.079). On the contrary, at each evaluation time, serum BDNF levels in patients were significantly lower than those of the control subjects.

Conclusions: Untreated depressed patients showed reduced baseline serum and plasma BDNF levels, as compared with control subjects. The normalization of plasma BDNF up to the values found in control subjects occurred after 1 month of antidepressant treatment. On the contrary, at every time assessment, patient’s serum BDNF levels were lower than those of control subjects suggesting that serum BDNF might represent a non-specific trait marker of depression.

Stimulation of the subthalamic nucleus in parkinsonian’s disease and mood disorders, one-year follow-up

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Background and aims: Several cases of transient acute depression or manic symptoms are reported in the literature after bilateral subthalamic nucleus (STN) deep brain stimulation in patients with Parkinson’s disease. Different hypothesis involve premorbid personality disorders, thymic past history or subthalamic nucleus.

Methods: We elaborate a one year prospective study to evaluate mood disorders frequency and physiological mechanisms of 20 Parkinsonian patients treated by bilateral STN stimulation. Evaluation consists of pre and post-operative psychiatric interview and scales assessing depression and mania.

Results: At the present time, 18 patients have been operated, 17 have finished the program. Meaning age of patients: 63.1 years ± 7.3, with 5 women. No significant differences between men and women age, and duration of Parkinson disease (11.9 ± 4.4), were found (n=18).

One month before surgery, MADRS, Bech and Beck means (n=18) are respectively: 7.2 ± 4.2; 1.3 ± 1.6; 6.4 ± 3.5. At 3 months after surgery means (n=18) are: 3.9 ± 3.8; 1.1 ± 1.6; 3.1 ± 2.6. At 6 months after surgery means (n=17) are: 6.7 ± 4.8 ;0.65 ± 1.1 ; 3.80 ± 2.6.

One patient, 70 years old, has presented a hypomanic-like episode post-operatively; one other patient, 68 years old, presented a major anxiodepressive episode one month post-operatively (DSM-IV criteria). One patient, 53 years old, presented a moderated anxiodepressive episode, 6 months after surgery.

Conclusion: Data are still on analysed, but these cases draw our attention to the effects of STN stimulation on mood and behavioural disorders.

Sexual dysfunctions in men with depressive disorders

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Objective of this investigation was distinguishing the totality of significant constitutional-biological factors for identification of the prognosis, course and development of methods of treatment of comorbid depressive and sexual disorders.

In clinics of Mental Health Research Institute 40 men with comorbid depressive and sexual disorders aged 25-55 years have been examined. Examination was conducted with psychopathological method, method of structural analysis of sexological disorders, statistic method. Three typological variants of depression have been distinguished: “vital depression”, characterized by anguish and apathy (25%), “reactive depression”, characterized by relevant psychogenic experiences (30%), “depression of exhaustion”, characterized by asthenic, psychosomatic manifestations (45%).

In mild (HDRS – 10 scores; 50%) and moderate (HDRS – 16 scores; 30%) depressive disorders sexual dysfunctions may be regarded as a general clinical radical in depressions in men and their prevalence rate constituted up to 80%.

They manifested themselves in decrease of libido (80%), erectile dysfunctions (58%), ejaculatory (26%) and orgasmic disturbances (10%).

In severe depressive states (HDRS – 25 scores; 20% of patients) sexological disturbances fade into the background, sexual life becomes irrelevant.

After restoration of mental state in depressive patients, sexual disturbances often remain. In this association program of treatment and rehabilitation of patients with comorbid depressive and sexual disorders with use of preparation LEVITRA (vardenafil) allowing realization of principle of complex biopsychosocial model.