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# COMBINATION THERAPY POST-STROKE DEPRESSION

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**ABSTRACT:** The experience of combined therapy (venlafaxine and cognitive behavioral psychotherapy) of post-stroke depression in patients of a rehabilitation hospital is presented. 38 patients with organic depressive disorder of varying severity were examined according to ICD-10. According to the dominant affect, the patients were divided into 4 groups – with a predominance of an anxious component, a dreary-anxious mixed variant, "classic" dreary depression and astheno-depressive syndrome with an unstable underlying affect. Using psychometric The HADS, HARS, CGI-S and CGI-I scales show the effectiveness of combined therapy for all components of post-stroke depression, and an advanced reduction of the anxiety component is noted. Combination therapy has shown the greatest effectiveness in the treatment of anxiety depressions of moderate severity. The good tolerability and safety of venlafaxine was noted. The conclusion is made about the expediency of using venlafaxine in combination with cognitive behavioral psychotherapy in the rehabilitation of neurological patients in the post-stroke period.

**Keywords:** cognitive behavioral psychotherapy, post-stroke depression, venlafaxine, rehabilitation of neurological patients.

## INTRODUCTION

Depression develops in about a third of stroke patients, which worsens cognitive functions, quality of life, complicates rehabilitation and increases the risk of recurrent stroke. If signs of major depressive disorder, according to various studies, are detected in 10-32% of patients in the post-stroke period, then mild depressive disorder is noted in almost 40%. Diagnosis of affective disorders in this category of patients is difficult due to speech and cognitive impairments, therefore it requires an assessment of the emotional state and consultation with a psychiatrist. Antidepressants – selective serotonin reuptake inhibitors (SSRIs) and psychotherapy aimed at increasing household and social activity are widely used for the treatment of post-stroke depression. Patients who have suffered a stroke are not recommended to prescribe tricyclic medications antidepressants due to their possible side effects due to alpha1-adrenergic blocking, anticholinergic and histaminergic effects. Venlafaxine (venlafaxine hydrochloride – [2-dimethylamino-1-(4-methoxyphenyl)-ethyl] cyclo hexan1-ol), classified as a third-generation antidepressant, is a drug from the group of "double-acting" antidepressants, the pharmacological effects of which are determined by the effect on the reuptake of both serotonin and norepinephrine. Moreover, the serotonergic effect is significantly predominant, which makes venlafaxine comparable to preparations SSRIs. When evaluating both the short-term response to therapy and the long-term effectiveness, venlafaxine is also comparable to tricyclic antidepressants, with its undoubtedly better tolerability. There are data from pharmacoeconomical studies indicating the advantages of venlafaxine over antidepressants of other pharmacological groups, the most important of which are its safety and tolerability. When using higher doses of

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venlafaxine a noradrenergic effect appears and, accordingly, its dual effect is realized. In addition, in high doses, the drug has a dopaminergic effect, increasing dopamine neurotransmission in the anterior cortex. Thus, in high doses, venlafaxine has an effect on all neurotransmitters involved in the pathogenesis of depression, which indicates its effectiveness in various variants of anxiety-depressive spectrum disorders. Data from controlled clinical trials conducted in recent years confirm the therapeutic efficacy of venlafaxine in practice. The aim of this study is to evaluate the therapeutic efficacy of venlafaxine in combination with cognitive behavioral psychotherapy in neurological patients with post-stroke depression.

## MATERIALS AND METHODS OF RESEARCH

The study included 38 patients aged 60 to 75 years (26 women and 12 men; average age 66.8 ± 5.0 years), whose condition was determined by clinically pronounced depressive syndrome within the framework of organic depressive disorder according to ICD-10. The main research methods were clinical and psychopathological using psychometric scales - Hamilton depression and anxiety (HDRS, HARS), general clinical impression to assess the severity of the disease (CGI-S) and improvement (CGI-I). The drug venlafaxine was prescribed at the starting dose 75 mg / day (37.5 mg in the morning and evening) as monotherapy, after 2 weeks the dose was increased to 150 mg / day (75 mg in the morning and evening). In case of night sleep disorders short-term (from 2 to 5 days) administration of doxylamine 15 mg per night was allowed. For the treatment of somatic diseases, drugs that do not have psychotropic activity were used. The dynamics of the condition was recorded during 5 visits: visit 1 – initial assessment, visit 2 – assessment of the condition after 1 week, visit 3 – assessment of the condition after 2 weeks, visit 4 after 3 weeks and the final visit 5 was carried out after 4 weeks of therapy, before discharge from the hospital.

## THE RESULTS AND THEIR DISCUSSION

The exclusion criteria were a general severe somatic condition in the decompensation phase, as well as taking psychotropic drugs during the two weeks preceding inclusion in the study. At the time of inclusion in the study, the status of all patients had different psychopathological manifestations of depression. According to the dominant affect, most of the conditions (n = 18) could be attributed to the dreary-anxious depressive syndrome (mixed variant). In 6 cases (n = 6), by the beginning of therapy, the condition was defined as "classic" dreary depression with depression, phenomena of vital longing in the form of a diffuse feeling of oppression, heaviness in the chest, in 8 patients (n = 8), hypothymia was noted with a predominance of an alarming component – non-objective anxiety, internal tension, premonitions of unhappiness (anxiety depression).The study included 38 patients aged 60 to 75 years (26 women and 12 men; average age 66.8 ± 5.0 years), whose condition was determined by clinically pronounced depressive syndrome within the framework of organic depressive disorder according to ICD-10. In other cases, the condition corresponded to astheno-depressive syndrome (n = 6) with undifferentiated or unstable underlying affect and various asthenic, apathetic and psychovegetative disorders, their decreased mood was accompanied by a lack of motivation, loss of vitality, lethargy, indifference to everything around them. 15 (39.5%) patients suffered moderate depression according to CGI-S , they have an average starting score on the HDRS scale It was 17.2 ± 2.0, on the HARS scale – 24.5 ± 1.6 points. 17 (44.7%) patients were diagnosed with mild depression, they had an

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average score on the scale the HDRS was 12.4 ± 1.5, on the HARS scale – 15.5 ± 2.4 points. Depressive disorder of severe severity was found in 6 (15.8%) patients with average scores of 21.8 ± 1.2 and 28.5 ± 2.6 on the HDRS and HARS scales, respectively. During therapy, there was a significant decrease in indicators reflecting both depressive and anxious manifestations. This was confirmed by reliable reduction of the initial scores on the HDRS and HARS scales. A significant reverse development of anxiety affect ($p < 0.05$) in the examined patients was observed after a week of therapy, and depressive affect ($p < 0.05$) – from the 2nd week of treatment and became more pronounced against the background of further therapy with continuous improvement of indicators up to the last 4th week of therapy ($p < -0.01$). According to the effectiveness of treatment, patients were divided into respondents – 27 patients (71.0%) and nonresponders – 11 patients (29.0%). In the group of respondents, by the time the study was completed, according to the scale of general clinical impression, "marked improvement" was noted in 15 (55.6%), "moderate improvement" – in 12 (44.4%) patients. Moreover, in the group with marked improvement there were 7 (46.7%) patients with anxiety depression and anxiety-depressive variant of the condition and 1 (6.6%) patient with classical depression. The group of nonresponders included 5 patients (45.4%) with astheno-depressive a variant of depression, 4 (36.4%) with "classic" depression and 2 (18.2%) with mixed depression. In the same group, short–term side effects were observed - nausea (in 4 patients) and minor rises in blood pressure (in 3 patients). None of the cases resulted in the cancellation of venlafaxine.

## CONCLUSIONS

Thus, venlafaxine is an effective drug for the treatment of post-stroke depression. Cognitive behavioral psychotherapy aimed at increasing household and social activity complements the effect of pharmacotherapy and helps to increase patient compliance. The therapeutic effect of combined therapy is quickly realized. Clinically significant reduction of psychopathological disorders begins from the 2nd week of therapy, showing an advanced anti-anxiety effect. The greatest effectiveness of combined therapy is noted in the treatment of anxiety depression of moderate severity. Venlafaxine shows good tolerability and safety, which makes it possible to use it for rehabilitation of neurological patients in the post-stroke period.

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