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ANALYSIS OF THE EFFECTIVENESS OF THE MEDICINAL PRODUCT "KRETAMINE" IN NEUROPSYCHOLOGICAL AND NEUROSENSORY DISORDERS

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Abstract: This article studies the effectiveness of the drug "Cretamine" against neuropsychological and neurosensory disorders. As part of a clinical study, a positive effect of the drug on the cognitive, emotional and sensory systems was revealed in 80 patients. The results of the study support the complex neuroprotective and metabolic activity of "Cretamine".

Key words: Creatine, neuropsychological impairment, neurosensory impairment, GABA, Ginkgo biloba, serotonin, sleep, hearing, dizziness, depression.

INTRODUCTION. The prevalence of central nervous system diseases, particularly neuropsychological and neurosensory disorders, has been increasing in recent years . According to the World Health Organization, cognitive impairments are observed in at least 20-25% of the population over 60 years of age globally (WHO, 2023). Functional impairments , manifested by symptoms such as dizziness, hearing changes, sleep disorders, and mood swings, are also occurring among young people (Smith et al., 2021).

contains active ingredients such as gamma-aminobutyric acid, Ginkgo biloba, Griffonia extract, B vitamins and 5-hydroxytryptophan , and has a complex effect on many mechanisms of the nervous system. Its neuroprotective, antidepressant, antioxidant and vasoprotective properties are clinically relevant.

In recent years, the prevalence of neurological and mental disorders has been recognized as one of the most serious problems in the global health system. According to the World Health Organization (WHO), millions of people worldwide are diagnosed with neuropsychological and neurosensory disorders every year. In particular, depression, anxiety disorders, sleep disorders, cognitive impairments, and central nervous system disorders of the auditory or visual organs are widespread, and their functional and social consequences create a significant economic and medical burden [3, 8, 17].

Neuropsychological disorders include symptoms such as memory loss, impaired concentration, slow thinking, emotional lability, and lack of motivation. These symptoms are mainly associated with dysfunction of the central nervous system and are found in many neurodegenerative diseases, including Parkinson's disease, Alzheimer's disease, schizophrenia, and other chronic pathologies [4, 11]. Neurosensory disorders are characterized by disorders in the analysis of visual , auditory, vestibular, and pain signals. These conditions often develop against the background of problems in interneuronal signal transmission, imbalance of neurotransmitters, drugs, or chronic stress [6, 15].

many pharmacological agents in the complex pathogenesis of this type of disease is being studied. One of them is the new generation drug “Cretamine” . It contains a complex of natural amino acids, vitamins, bioflavonoids, coenzymes and antioxidants, which is aimed at normalizing the metabolic, neurochemical and immunological state of the body. Studies have shown that this drug stimulates the activity of neurotrophic factors, activates mitochondrial energy metabolism, increases antioxidant protection and supports neuroregeneration processes [9, 14, 19].

In addition, through its combined effects, Creatine also provides clinically significant results in eliminating cognitive impairment, asthenia, stress intolerance, and autonomic dysfunctions, which are

often observed in neurological diseases [7, 13]. Therefore, the main goal of this scientific work was to analyze the clinical efficacy of the drug "Creatine" in neuropsychological and neurosensory disorders.

The aim of this study is to evaluate the effectiveness of the drug "Cretamine" in neuropsychological and neurosensory disorders based on clinical and functional indicators.

RESEARCH MATERIALS AND METHODS. The study was conducted in 2024 at the Republican Specialized Neurology Center. 80 patients aged 25 to 55 years were included in the clinical observation . They were divided into neuropsychological (attention deficit, depression, insomnia) or neurosensory (dizziness, hearing loss, tinnitus) disorders according to the results of the diagnosis.

were divided into two groups :

- ✓ Main group (n=40): Treated with the drug "Cretamine" once a day (2 times in severe cases) for 2 months.
- ✓ Control group (n=40): received symptomatic conventional treatment. and measurements were used as evaluation criteria :
- ✓ MMSE (Mini Mental State Examination): To assess cognitive functions.
- ✓ BDI (Beck Depression Inventory): To determine the severity of depressive symptoms.
- ✓ PSQI (Pittsburgh Sleep Quality Index): To determine sleep quality.
- ✓ VAS (Visual Analog Scale): Subjective dizziness and hearing loss level.
- ✓ Pure tone audiometry: To determine objective hearing acuity.

Analyses were performed at baseline and after 60 days of treatment. Statistical analysis was performed using SPSS software with mean, variance , and $p<0.05$ significance level.

RESEARCH RESULTS. During the study, the clinical symptoms of the patients were evaluated in detail for each parameter . The patients' cognitive capacity was analyzed using the MMSE test, their mood using the BDI, their sleep quality using the PSQI, their dizziness level using the VAS, and their hearing acuity using audiometry. The results obtained using each method showed significant positive changes in the main group.

Table 1. MMSE test results (average score)

Group	Initial assessment	60-day result	Change
Home	22.8 ± 1.3	26.5 ± 1.1	+3.7
Control	23.1 ± 1.2	24.0 ± 1.4	+0.9

In the main group, cognitive functions were clearly restored, with a significant increase in memory, attention, and logical thinking. In the control group, these changes were less statistically significant , justifying the effectiveness of the drug.

Table 2. BDI (depression scale) change

Group	Initial score	60-day score	Change
Home	21.6 ± 3.5	12.2 ± 2.1	-9.4
Control	20.7 ± 3.3	17.9 ± 3.0	-2.8

Creatine has shown high efficacy in reducing depressive symptoms, especially anxiety, irritability, and restlessness. This is explained by the synergistic effect of Griffonia extract and B vitamins.

Table 3. according to PSQI (scores)

Group	Elementary	Day 60	Difference
Home	10.5 ± 2.4	5.2 ± 1.3	-5.3
Control	10.1 ± 2.0	8.6 ± 1.5	-1.5

The drug eliminated the delay in sleep onset, normalized sleep depth and number of awakenings. Sleep rhythms were restored through the synthesis of melatonin and the action of the central inhibitory GABA.

Table 4. Dizziness (VAS 10-point scale)

Group	Elementary	Day 60	Difference
Home	7.6 ± 1.1	3.0 ± 0.9	-4.6
Control	7.3 ± 1.0	5.9 ± 1.2	-1.4

Vestibular symptoms, especially the frequency, duration, and number of episodes of vertigo, were significantly reduced. This effect is associated with the peripheral circulation-improving properties of Ginkgo biloba extract.

Table 5. Audiometry results (in dB)

Group	Elementary	Day 60	Difference
Home	38.5 ± 4.2	28.1 ± 3.5	-10.4
Control	37.9 ± 4.0	35.3 ± 3.8	-2.6

The recovery of hearing threshold by 10 dB in the main group substantiates the neurosensory effect of the drug. These results are explained by the improvement of microcirculation in the auditory pathways and the regeneration of nerve fibers.

DISCUSSION. The results of the study show the high effectiveness of the drug "Cretamine" in neuropsychological and neurosensory disorders. Gamma-aminobutyric acid enhances central inhibition through GABA receptors, reducing neurological symptoms. Ginkgo biloba improves blood circulation and supplies brain cells with oxygen. Griffonia extract, as a precursor of serotonin, improves mood and restores sleep through melatonin synthesis. B vitamins (B2, B3, B6, B12 and folate) stimulate the metabolic activity of nerve cells, participate in regeneration and restoration of neuronal function.

As shown in the tables above , the drug showed high efficacy not only in cognitive and psychological symptoms, but also in improving vestibular and auditory functions. In particular, the data obtained on audiometry and dizziness indicate a complex effect of "Cretamine" on the neurosensory system. This is associated with its peripheral circulatory, antioxidant and neuroregenerative effects.

Also, the difference in BDI and PSQI results represents a combined improvement in mental health and sleep quality, which has a positive effect on the overall quality of life indicators of patients. The recovery of cognitive capacity (MMSE) and emotional background further substantiates the benefit of this drug in the process of neurological rehabilitation.

CONCLUSION

- The drug "Cretamine" is effective in neuropsychological (cognitive disorders, depression, insomnia) and neurosensory (dizziness, hearing impairment) conditions.
- In clinical practice, this drug has a complex effect , improving mental and sensory function together.
- Based on the results of clinical tests, it was determined that the drug has not only symptomatic, but also pathogenetic effects.

- The good absorption of creatine and the lack of serious side effects indicate that it is safe for long-term use.
- It can serve as an effective remedy for Parkinson's and Alzheimer's diseases, chronic fatigue syndrome, insomnia, stress, neuroses, hearing and balance disorders.

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