



## DIAGNOSIS OF ANXIETY AND DEPRESSION IN MOTOR NEURON DISEASE WITH CLINICAL-NEUROLOGICAL METHODS

*Akbarova Saida Bakhtiyorovna.*

*PhD, assistant of Normal physiology department of Andijan state medical institute, Uzbekistan.*

*Ravzatov Jasurbek Bakhromovich.*

*PhD, assistant of the department of training family doctors of Andijan state medical institute, Uzbekistan.*

**Abstract:** Motor neuron disease according to ICD-10 belongs to the class of diseases with systemic atrophy of the elements of the central nervous system. Motor neuron disease (MND) is also called amyotrophic lateral sclerosis (ALS). This disease is characterized by damage to the upper neurons of the brain with subsequent disruption of their connection with the spinal cord. As a result of the disease, paralysis of the whole body develops.

**Key words:** Motor neuron disease, amyotrophic lateral sclerosis, degenerative processes, anxiety, depression.

### Introduction.

Motor neuron disease is rare. Its prevalence is approximately 2-3 people per 100 thousand per year. Most often, the disease occurs in people aged 60-70 years, although the development of pathology in people under 40 years is not excluded. Depression in amyotrophic lateral sclerosis (ALS). The diagnosis of ALS is a stressful situation and develops in all patients with ALS, which can lead to the development of symptoms such as fear, anxiety, depression. Patients with a dominant depressive syndrome are recommended to take antidepressants.

Patients with depression and other concomitant syndromes have a long history of their illness, they persistently but unsuccessfully seek medical advice from doctors of various specialties. They undergo numerous studies that do not confirm either a somatic or neurological organic disease. These are patients who, despite many months of examinations by various specialists, do not have a definite diagnosis. They are often treated symptomatically, trying to relieve the pain syndrome with various analgesics. The treatment is ineffective, and patients continue to seek medical advice.

**The aim of the study** is the role of the complex approach with clinical-neurological diagnostic methods is defined, for the development of depression and anxiety degree of motor neuron disease.

### Methods

110 men and women who applied to the clinic of the Andijan State Medical Institute and the multidisciplinary clinic of the Tashkent Medical Academy, 45 patients with MND (8B60): of which 34 with the classic disease "ALS" (8B60.0).

### Results



### Assessment of anxiety and depression levels using the HADS scale

Identification of affective disorders in ALS is complicated by the fact that the symptoms of the underlying disease may be accompanied by symptoms similar to those of depression and anxiety. For example, progressive weight loss, loss of appetite, increased fatigue, general weakness, sleep disturbances with early awakening may be manifestations of both the underlying disease and affective disorders.

A study of anxiety and depression levels using the HADS scale, conducted in patients of the main group, showed that subanxiety disorders predominated in the structure of affective disorders in patients in 40% (in 18 patients), subclinical depression occurred in 64.4% of patients (in 29 patients). Clinically pronounced depression was detected in 17.8% of patients (8 patients), while anxiety disorders were less common - in 2.2% of patients (1 patient). The average anxiety and depression scores are shown in Table 1.

### Average HADS scores in patients with ALS

Average scores (M±S) ALS forms	Формы БАС					$\chi^2$ ; p
	CThF	LSF	BF	PGF	CF	
Depression	8,7±0,88	9,5±0,32	8,5±1,5	8,8±0,34	7	15,2; 0,916
Anxiety	6,7±0,88	7,6±0,24	6,5±1,5	7,1±0,26	6	22,3; 0,324

### Discussion

#### Comparison of clinical parameters in the examined patients

Indicator	MND	Secondary MND (myelopathy)	p
Assessment of the level of depression according to the HADS scale, points	9,09±0,23	2,77±0,31	<0,001

When analyzing anxiety states and depression in all subjects using the HADS scale, the following indicators were revealed: the average anxiety level in patients with ALS was 7.29±0.18 points, in patients with myelopathy 1.54±0.25 points, in the control group 1.13±0.33 points ( $\chi^2=76.75$ ;  $p<0.001$ ). The average depression level in patients with ALS was 9.09±0.23 points, in patients with myelopathy 2.77±0.31 points, in the control group 1.4±0.37 points ( $\chi^2=76.39$ ;  $p<0.001$ ). These indicators were statistically significant. The results indicate an associative relationship with the level of depression and anxiety states in patients with ALS.

### Conclusion.



During the comparative analysis of clinical symptoms in patients with MND, the following changes were observed: a decrease in the body mass index before the first symptoms of the disease appeared, an increase in anxiety and depression according to the HADS scale. When assessing according to the Hillel scale, it was found that the rate of development of the disease was higher in the disseminated type compared to the group of patients diagnosed with secondary MND compressive ischemic myelopathy.

### **Recommendations:**

1. In predicting the severity of the disease in patients with motor neuron disease, it is recommended to use a comprehensive diagnostic approach, including collecting clinical and anamnestic data, a complete study of patient complaints, studying functional, psychological and motor disorders of patients using the ALS FRS-R, HADS, Hillel scales, ENMG and MRI examinations, and determining the level of anti-MAG IgG in the blood using immunoenzyme analysis.
2. In patients with motor neuron disease, it is recommended to use Edaravon to reduce symptoms. The treatment regimen is 2 courses of 60 mg-40 ml of the drug administered intravenously once. The duration of the treatment course is 14 days. After a 14-day break, it is prescribed for the same number of days. The patient takes 60 mg per day for 14 days during the 1st course, and 1 ampoule for 14 days during the 2nd course.
3. It is recommended that patients with motor neurone disease be monitored dynamically every 3 months depending on the rate of disease progression and undergo an in-depth examination.

### **References**

1. Abati E., Bresolin N., Comi G., Corti S. Silence superoxide dismutase 1 (SOD1): a promising therapeutic target for amyotrophic lateral sclerosis (ALS). // *Expert Opin Ther Targets*. – 2020; 24 (4): 295–310.
2. Agah E., Saleh F., Sanjari Moghaddam H., et al. CSF and blood biomarkers in amyotrophic lateral sclerosis: protocol for a systematic review and meta-analysis // *Syst. Rev.* – 2018; 7: 237.
3. Akaishi T., Tateyama M., Kato K., et al. An autopsy case involving a 12-year history of amyotrophic lateral sclerosis with CIDP-like polyneuropathy // *Intern Med.* – 2014; 53(12): 1371–1375.
4. Al-Chalabi, A. Amyotrophic lateral sclerosis: moving towards a new classification system / A. Al-Chalabi, O. Hardiman, M.C. Kiernan // *Lancet Neurol.* – 2016. – Vol. 15. – № 11. – pp. 1182–1194.
5. Andrew A.S., Pioro E.P., Li M., et al. The incidence of amyotrophic lateral sclerosis in Ohio 2016–2018: the Ohio population-based ALS registry // *Neuroepidemiology.* – 2021; 55(3): 196–205.
6. Antao V.C., Horton D.K. The National Amyotrophic Lateral Sclerosis (ALS) Registry // *Journal Environ Health.* – 2012; 75: 28–30.



7. Antonescu F., Adam M., Popa C., Tuță S. A review of cervical spine MRI in ALS patients // Journal Med. Life. – 2018; 11 (2): 123–127.
8. Axel F., Thomas W., Benjamin R., Wolfgang R. Haplo insufficiency of TBK1 causes familial ALS and fronto-temporal dementia // Nature Neuroscience. – 2015.
9. Bä umer D., Talbot K., Turner M.R. Advances in motor neurone disease // J R Soc Med. – 2014 Jan; 107(1): 14-21. DOI:10.1177/0141076813511451.
10. Bandres-Ciga S., Noyce A.J., Hemani G., et al. Shared polygenic risk and causal inferences in amyotrophic lateral sclerosis // Ann Neurol. – 2019. 85(4): 470–481.
11. Bedlack R.S., Vaughan T., Wicks P., Heywood J., et al. How common are ALS plateaus and reversals? // Neurology. – 2016; 86: 808–812.
12. Bello-Haas V.D. Physical therapy for individuals with amyotrophic lateral sclerosis: current insights // Degener Neurol Neuromuscul Dis. – 2018; 8: 45–54.
13. Benbrika S., Desgranges B., Eustache F., Viader F. Cognitive, Emotional and Psychological Manifestations in Amyotrophic Lateral Sclerosis at Baseline and Overtime: A Review // Front Neurosci. – 2019; 13: 951.
14. Bhandari R., Kuhad A., Kuhad A. Edaravone: a new hope for deadly amyotrophic lateral sclerosis // Drugs Today (Barc). – 2018; 54: 349–60.
15. Bledsoe M.J., Rechtman L., Wagner L., Mehta, et al. Analysis of biospecimen demand and utilization of samples from the National Amyotrophic Lateral Sclerosis Biorepository // Biopreserv Biobanking. – 2021; 19(5): 432–437.