FEATURES OF CLINICAL AND EPIDEMIOLOGICAL CHARACTERISTICS OF PATIENTS WITH MYASTHENIA GRAVIS

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Abstract*. Myasthenia gravis is characterized by episodes of muscle weakness and fatigue, which are based on the destruction of acetylcholine receptors by factors of humoral and cellular immunity. It is more common in young women and older men, although it can develop in people of any gender and age. Symptoms worsen with muscle activity and improve with rest. Diagnosis is based on measurement of serum levels of acetylcholine receptor (AChR) antibodies, electromyography and bedside tests (ice test, rest test).*
Keywords*: myasthenia gravis, AChR, diagnosis, Proserpine test.*

Relevance: The relevance of the problem is determined by the fact that recently there has been a tendency to increase the incidence of myasthenia gravis, as well as its combination with other, not only autoimmune, diseases. The frequency of the disease has now increased and ranges from 1 to 24 cases per 100000 population, despite the undoubted progress in understanding the mechanisms of myasthenia gravis development, improvement of methods of its diagnosis and treatment. [1,2,6]

However, it is known that the main damaged link in myasthenia gravis is the acetylcholine receptor (AChR) of the postsynaptic membrane of the neuromuscular junction. Increased levels of autoantibodies to AChR are detected in most patients with the generalized form of the disease and account for almost 85% of all cases. [3] However, a lot of studies have shown that there is no correlation between the concentration of AT to AChR and the severity of the clinical picture in patients with myasthenia gravis. As a result of recent studies in the literature, it has been reported that the borderline of expected clinical improvement is the reduction of autoantibodies by more than 20%, and the reduction of AT levels by 50% or more is accompanied in most cases by a clear positive clinical effect. [4,5]

Objective of the study. To study clinical and neurological features of myasthenia gravis.

Materials and methods of the study. 36 patients with myasthenia gravis were included in the study. Anamnesis of the disease, forms of myasthenia gravis, neurostatuses were studied. Clinical and instrumental examination included ENMG and MRI. Proserine test was also one of the diagnostic criteria of the study.

The average age of patients at the time of examination was 49±15 years (from 18 to 70 years), men - 11 (52.4%), women - 10 (47.65). The data on the sex and age composition of the examined patients are presented in Table 1.

Examination findings. In typical cases of the disease, the first signs are disorders in the eye muscles, in which patients may experience drooping eyelids, double objects. Neurological examination reveals ptosis, often asymmetrical. The intensity of ptosis varies throughout the day, depending on physical activity. Usually, ptosis increases in the evening, sometimes manifests itself

when fixing the gaze. Lesion of the bulbar muscles leads to dysfunction of the soft palate and epiglottis, which is manifested in difficulty swallowing, changes in the sound of the voice ("nasal" tinge, "fading") and fatigue when talking. In patients with generalized form of myasthenia gravis, one of the most serious manifestations is weakening of the respiratory muscles. This leads to dyspnea on physical exertion and sometimes even at rest.

Table-1 Distribution of patients by gender and age

Age of patients	men		women		total	
	abs.	%	abs.	%	abs.	%
18-40 years old	5	15,6	5	13,8	10	27,7
40-60 years old	9	25	6	16,6	15	41,6
60-75 years old	7	19,44	4	11,1	11	30,5
Total:	21	56,25	17	43,75	36	100

Ocular form of myasthenia gravis, 1 (3%) bulbar form, and 31 (86%) generalized form were detected in 4 (11%) patients. (Fig1)

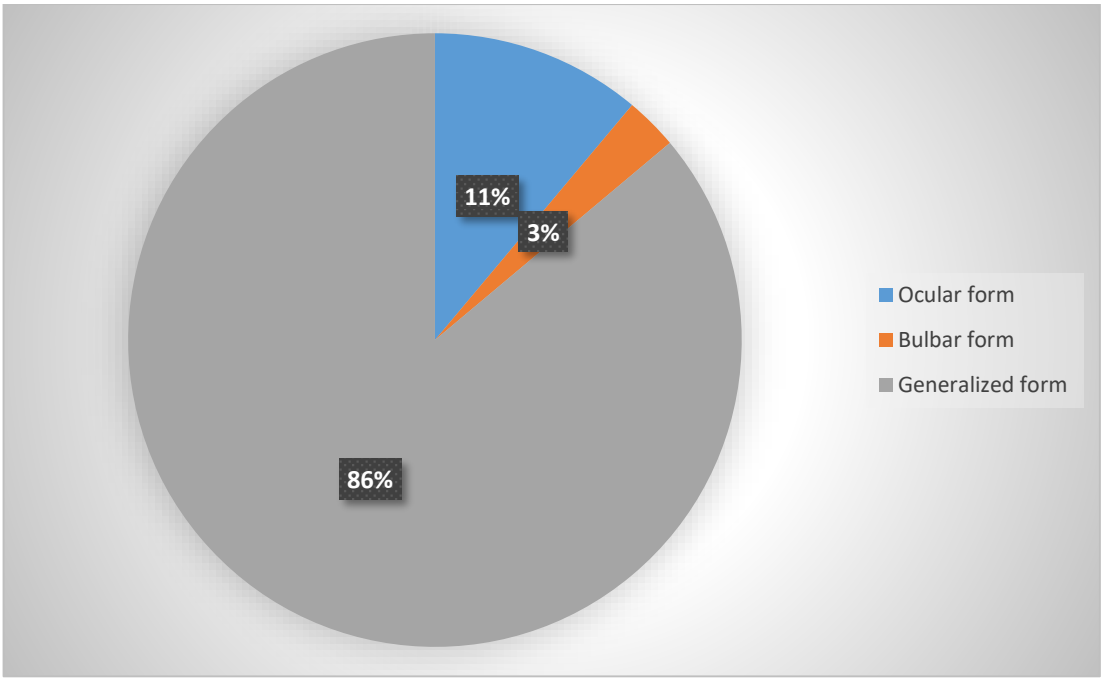

Fig.1 Forms of myasthenia gravis

Almost half of the patients 16 (44.4%) have fatigue of neck muscles, especially extensor muscles, and characteristic hanging of the head (Fig2).

The severity levels of the disease were identified. 10 (27.7%) had mild, 23 (63.88%) had moderate, and 3 (8.3%) had severe myasthenia gravis. (Figure 3)

Elderly patients were significantly less likely to undergo TE(Thymectomy) only 1 patient (2.7%) due to the fact that thymus gland pathology was less frequently detected in the elderly group. Whereas myasthenia gravis patients of young (4 patients - 11.11%) and middle age (2 patients - 5.55%) underwent TE more often (Fig4).

At the same time, in a number of cases myasthenia gravis patients may develop critical conditions, so-called crises, requiring emergency measures, which often causes significant difficulties for practicing physicians. Myasthenic crises in anamnesis were observed in 5 (13.8%) patients: 2 (5.5%) of them were recurrent, 3 (8.3%) had a single case. The remaining 31 (86.1%) patients had no myasthenic crises (Fig. 5).

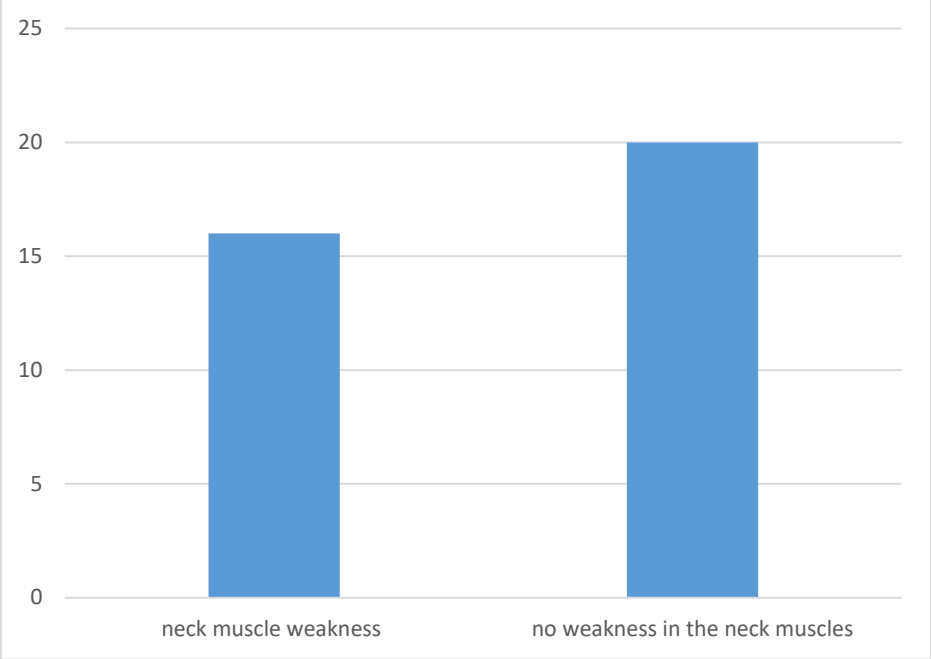

Fig2. Presence of neck muscle weakness.

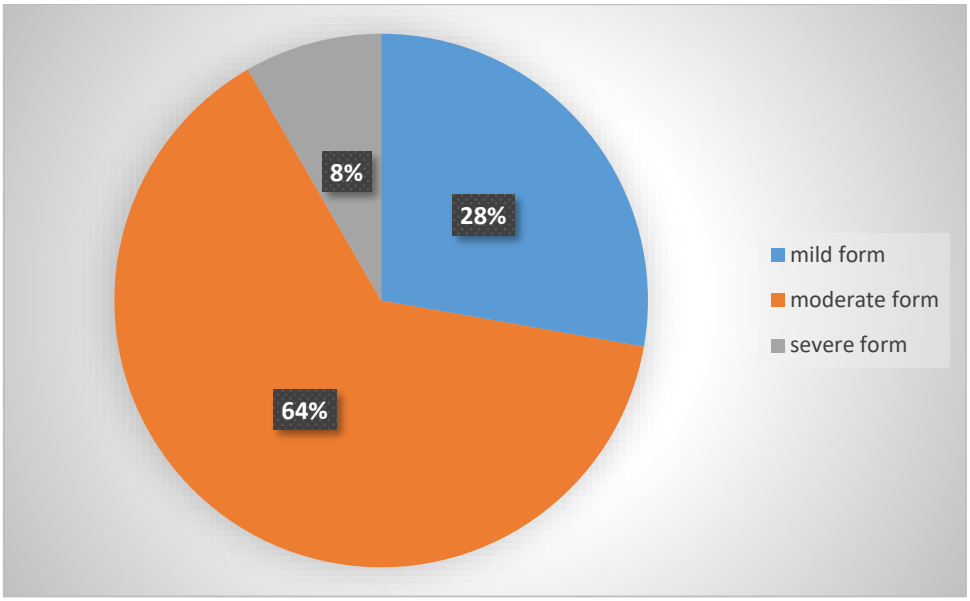

Fig3. Degrees of severity of myasthenia gravis.

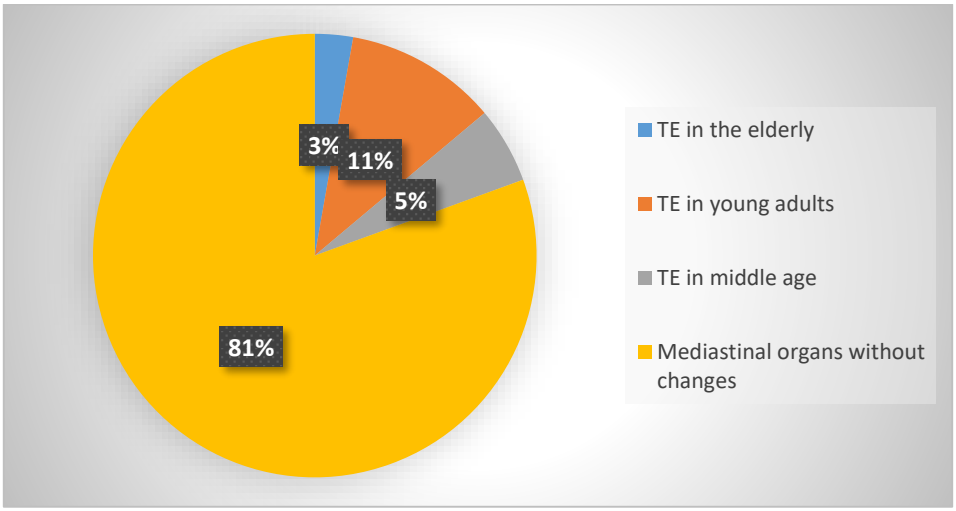

Fig4. History of TE.

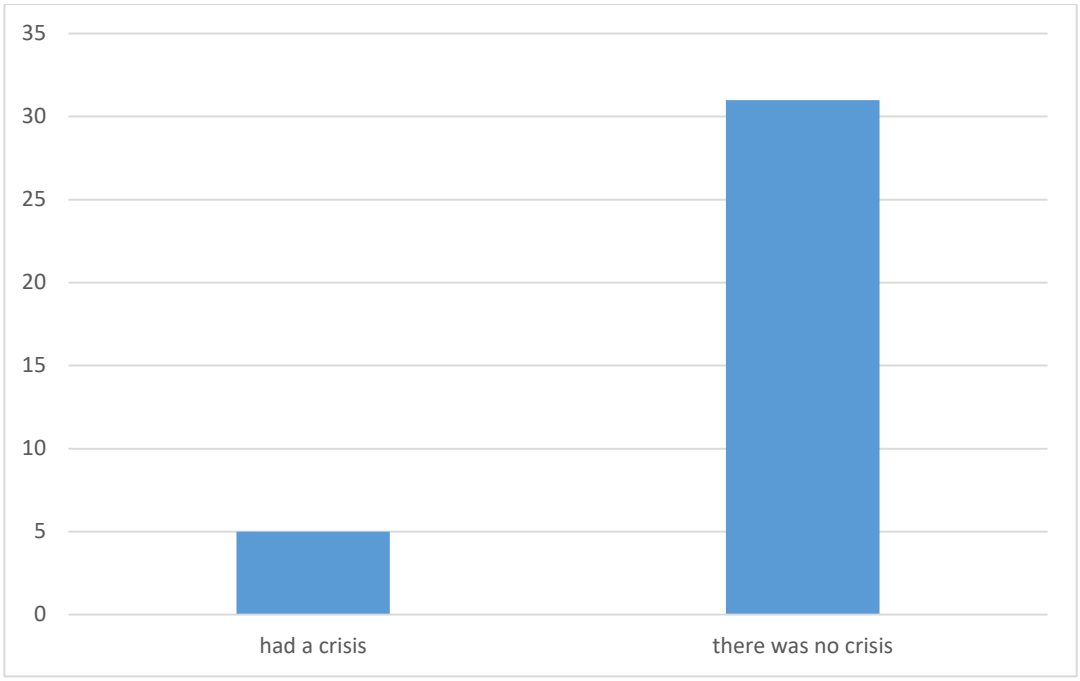

Fig5. Presence of a history of myasthenic crisis.

Conclusions. Thus, the generalized form of myasthenia gravis was mainly observed in 31 (86%) patients, ocular form of myasthenia gravis wasdetected in 4 (11%) patients, and bulbar form was detected in 1 (3%). Patients with mild 10 (27,7%), with moderate 23 (63,88%), and only 3 (8,3%) had severe myasthenia gravis were more frequent. Progress in the study of the causes and treatment of myasthenia gravis in recent years has led to a decrease in mortality and improved quality of life of patients with this disease. Modern research methods allow not only to detect the disease, but also to predict its nature.

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