New Day in Medicine
Новый День в Медицине
NDM

TIBBIYOTDA YANGI KUN

Ilmiy referativ, marifiy-ma'naviy jurnal

AVICENNA-MED.UZ

ISSN 2181-712X.
EiSSN 2181-2187

5 (55) 2023

www.bsmi.uz
https://newdaymedicine.com
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Тел: +99890 8061882

ТИББИЁТДА ЯНГИ КУН
НОВЫЙ ДЕНЬ В МЕДИЦИНЕ
NEW DAY IN MEDICINE

Илмий-рефератив, маънавий-маърифий журнал
Научно-реферативный,
духовно-просветительский журнал

УЧРЕДИТЕЛИ:

БУХАРСКИЙ ГОСУДАРСТВЕННЫЙ МЕДИЦИНСКИЙ ИНСТИТУТ
ООО «ТИББИЁТДА ЯНГИ КУН»

Национальный медицинский исследовательский центр хирургии имени А.В. Вишневского является генеральным научно-практическим консультантом редакции

Журнал был включен в список журнальных изданий, рецензируемых Высшей Аттестационной Комиссией Республики Узбекистан (Протокол № 201/03 от 30.12.2013 г.)

5 (55)

2023

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Received: 20.04.2023, Accepted: 30.04.2023, Published: 15.05.2023.

UDC 616-08.17, 616-009.21

COMPREHENSIVE TREATMENT OF COGNITIVE DISORDERS IN PATIENTS WITH MYASTHENIA GRAVIS AND ITS DIAGNOSTIC APPEARANCE

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✓ ***Resume***

Currently, there are no unified views on the pathogenesis of cognitive disorders in myasthenia gravis. As the main reason, the authors point to the dysfunction of the basal cholinergic system. This process is caused by the effect of antibodies on the acetylcholine receptor in cholinergic neurons of different areas of the brain. However, other groups of authors doubt that the acetylcholine receptor antibody can cross the blood-brain barrier and affect the cognitive system. The article presents the results of a comprehensive neuropsychological examination of patients with myasthenia gravis.

Keywords: myasthenia gravis, memory, neuropsychology, cognitive, intellectual.

КОМПЛЕКСНОЕ ЛЕЧЕНИЕ КОГНИТИВНЫХ РАССТРОЙСТВ У БОЛЬНЫХ МИАСТЕНИЕЙ И ЕЕ ДИАГНОСТИЧЕСКИЕ ПРОЯВЛЕНИЯ

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✓ ***Резюме***

В настоящее время нет единых взглядов на патогенез когнитивных расстройств при миастении. В качестве основной причины авторы указывают на дисфункцию базальной холинергической системы. Этот процесс обусловлен влиянием антител на ацетилхолиновый рецептор в холинергических нейронах различных областей головного мозга. Однако другие группы авторов сомневаются в способности антител к рецепторам ацетилхолина проникать через гематоэнцефалический барьер и воздействовать на когнитивную систему. В статье представлены результаты комплексного нейропсихологического обследования больных миастенией гравис.

Ключевые слова: миастения, память, нейропсихология, когнитивные, интеллектуальные.

МИАСТЕНИЯ БЕМОРЛАРИДА КОГНИТИВ БУЗИЛИШЛАРНИ КОМПЛЕКС ДАВОЛАШ ВА УНИНГ ДИАГНОСТИК КЎРИНИШИ

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✓ ***Резюме***

Ҳозирги вақтда миастениядаги когнитив бузилишлар патогенези борасида ягона қарашлар мавжуд эмас. Асосий сабаб сифатида муаллифлар базал холинэргик тизим дисфункциясини кўрсатадилар. Мазкур жараён мия турли соҳалари холинэргик нейронларида ацетилхолин рецепторига антитело таъсири натижасида келиб чиқади. Бироқ бошқа гуруҳ муаллифлар ацетилхолин рецептори антителоси гематоэнцефалик тўсиқдан ўтиб, когнитив тизимга таъсир қилиши мумкинлигига шубҳа билан қарашади. Мақолада миастения гравис билан оғриган беморларни кенг қамровли нейропсихологик текшириш натижалари келтирилган.

Калит сўзлар: миастения гравис, хотира, нейропсихология, когнетив, интеллектуал.

Relevance

There are no clear ideas about the pathogenesis, nature and severity of cognitive disorders in patients with myasthenia gravis. This myasthenia treatment optimization for cognitive the system learning that it is necessary shows.

In Uzbekistan in the complex treatment of myasthenia of laser therapy place studied [7]. In Pakistan itself that's it in myasthenia till date cognitive in the system observed changes regarding take went something to work our eyes did not fall There is myasthenia in patients The need for early assessment of cognitive changes, improvement of the patient's quality of life, improvement of the quality of medical care for patients, and the need to develop a unified principle of patient management became the basis for choosing this research topic. Myasthenia gravis is characterized by skeletal muscle weakness and rapid fatigue. Symptoms of the disease increase during physical exertion and decrease after rest. In most cases, the disease has a remitting course, and in some cases it takes the form of myasthenic crises. Myasthenic crisis is manifested by pathologies in the respiratory and cardiovascular systems. At the onset of myasthenia gravis, movement disorders increase slowly, pathological muscle weakness occurs. In very rare cases, the disease begins acutely, and the patient can even tell the day and hour of the onset of the disease [1]. Acute onset of myasthenia gravis often indicates a poor prognosis. Symptoms grow rapidly, muscle weakness is scattered, and the activity of vital organs is impaired [2]. The onset of the disease is after upper respiratory tract infections in 19.1% of cases, after excessive physical exertion in 16.9% of cases, and after stress in 14.8% of cases. , 6.4% begins after childbirth, 6.0% after a long stay in the sun, 5.7% after the onset of chronic diseases. Myasthenia gravis often begins during pregnancy or puberty [3]. Pathological muscle weakness is manifested in the form of ptosis and diplopia [3]. Eye movement muscles are involved in the pathological process in 70-80% [4]. Ptosis can be bilateral, asymmetric, unilateral. The visibility of ptosis changes during the day, it increases when reading for a long time, focusing the vision on one point, doing physical exercises [5]. Myasthenia gravis differs from other neurological diseases in that the disturbances in the oculomotor nerves do not correspond to the innervation of the cranial nerves and change during the day. Pathological fatigue and weakness in facial muscles is observed in 89% of myasthenia patients [7]. The patient's face becomes hypomimic due to the dysfunction of the muscles of the eye circle and the muscle that pulls the corner of the lip out .

In the last 20 years, international literature has analyzed cognitive impairment in patients with myasthenia gravis. Previous studies have shown a high prevalence of difficulty concentrating, impaired memory and other cognitive function in patients with myasthenia gravis (Ayres.A.etal., 2020). A 2017 study from MBEizaguirretomon found that attention deficit was 37.5% and verbal memory was 33.3%. showed a decrease in forehead functions by 29.2%. A high percentage of changes in the cognitive sphere in patients with myasthenia gravis indicates the need for a deep study of modern views on cognitive disorders.

The study. Study of clinical and neurological features of myasthenia, assessment of cognitive function .

Research materials and methods

The research work was carried out at the Bukhara regional multidisciplinary medical center. During the study, the diagnosis of myasthenia was made based on the results of a comprehensive examination. Comprehensive examinations included complete neurological examination, clinical examination, subcutaneous proserin test, electroneuromyography, chest MRI or MSCT examinations. Myasthenia gravis patients aged 19 to 69 years were included in the study. Patients willing to participate in the study were included.

Inclusion criteria for the study:

1. Patients aged 16-69 years suffering from myasthenia gravis.
2. Patient consent

Exclusion criteria from the study:

1. Failure of the patient to consent to the study.
2. Patients with neurological and somatic disorders in the stage of decompensation (kidney, liver failure, uncompensated hypothyroidism, diabetes, malignant tumors, mental disorders, pregnant women).

3. Patients taking drugs that have a negative effect on cognitive function.

Written informed consent was obtained from the patients participating in the study. The main group of patients is 18-69 years old (average age 48.4±15.4 years). Among patients with myasthenia, women accounted for ---%, men --%. Among patients with myasthenia gravis, the ratio between women and men in age groups is as follows (Table 1):

1 . table

Age and gender composition of the main group of patients (p >0.05)

Age group	Number of patients	
	Women	Men
18-44 years old	11 (11.8%)	30(32.3%)
45-59 years old	14 (15.1 %)	7(7.5 %)
Over 60 years old	13(14.0 %)	18(19.3 %)
Total	38(40.9 %)	55(59.1 %)

The social employment of myasthenia patients showed the following indicators when asked (Fig. 2.1). --% of study patients are inactive. --% of them are disabled. Among working patients, professions not related to production (accountant, economist, teacher, doctor, etc.) accounted for 22.6%.

The result of EEG tests showed that there are mild and moderate diffuse non-specific changes in brain bioelectric activity. In patients with myasthenia, spike, polyspike, peak, polypeak, sharp slow waves characteristic of epilepsy were not detected. In the control group, the alpha rhythm was dominant compared to the patients with myasthenia gravis. The frequency of alpha rhythm was 8-9 Hz in 24% of patients with myasthenia gravis and 10% of controls. Alpha rhythm frequency higher than 11 Hz was observed in 13% of patients with myasthenia gravis. It was found that in this group, in 76% of cases, the alpha rhythm form was sharper than in healthy people. There were no statistical differences in EEG findings in the first and second group of patients.

When examining all 102 patients with myasthenia, it was found that denervation-reinnervation disorders were observed in 53% of 1st stage patients and 47% of 2nd stage patients (Table 2).

Table 2

Electroneuromyography indicators

Check time	Denervation-reinnervation processes							
	norm		Stage 1		Stage 2		total	
	number	%	number	%	number	%	number	%
Before sending Proserin	-	-	54	53	48	47	102	100

The results of MRI of the brain showed signs of vascular encephalopathy and frontotemporal encephalopathy in the brain (Table 3).

Table 3

Brain MRI scan

The norm		**Symptoms of vascular encephalopathy**		**Subatrophy of the forehead-occipital area**		**Total**	
number	**%**	**number**	**%**	**number**	**%**	**number**	**%**
2	**1.96**	**95**	**93.2**	**50**	**49.01**	**102**	**100**

ENMG examination. All patients underwent ENMG examination for diagnosis and comparative diagnosis. A characteristic sign of myasthenia is a sharp decrease (decrement) in the amplitude and area of the M-response to low (3 Hz) and high (50 Hz) rhythmic stimulation [4.] . One of the ways to accurately diagnose myasthenia is EMG. The diversity of clinical forms, the inclusion of different

groups of muscles in the pathological process prevent the existence of a standard method of muscle examination. It is not appropriate to examine the uninjured deltoid muscle in the craniobulbar form. The absence of neuromuscular conduction disorders in the muscles of the eye circle cannot rule out the presence of an ocular form of myasthenia gravis. Therefore, it is necessary to examine the clinically injured muscle. The improvement of the stimulation EMG now allows to determine the neuromuscular conduction in facial, chewing, breathing muscles, as well as in the distal and proximal parts of the muscles. The following scheme is used to determine the neuromuscular conduction: • Measurement of the negative phase of the response amplitude of the M-response to one supramaximal stimulus (in mV). • Measuring the magnitude of the M-response amplitude decrement at 3 Hz, as the ratio of the fifth M- response to the first (A5/A1). • Measure the amplitude of the M-response at a frequency of 3 Hz after 2 s of the tetanic series (post-tetanic relaxation) or measure at 10 s after the maximum voltage (relaxation after the activation) • Measure the amplitude of the M- response and the height of the decrement after the tetanic series during stimulation at a frequency of 3 Hz (postteta nic holl) or measurement after the maximum voluntary tension (exhaustion after activation) , to determine the percentage indicator of the ratio of the fifth to the first of the M-response and to determine the magnitude of the decrement before and after tetany or the ratio to the maximum high voltage. M-response area is estimated by measuring the amplitude of the M-response at high and low stimuli. In healthy people, the amplitude of the M-response does not show a decrement at a frequency of 3 Hz due to the high reserves of neuromuscular conduction. Due to the activity of all muscle fibers, the sum of the amplitude potential remains in a steady state. When the neuromuscular conduction decreases, the amplitude of the sum of M-responses decreases, the next M-responses decrease compared to the first. The height of the decrement is an important indicator that can reliably indicate a decrease in neuromuscular conduction. Most researchers indicate that it is higher than 10%, while some believe that the decrement is up to 15% [9].

The EEG examination was carried out on a 16-channel Neuron-spectr-2 electroencephalography device of the Neuron-spectr company (Russia). The EEG examination method was recorded in a traditional routine examination method for 25 minutes in a calm state and in a state of hyperventilation, and the data were spectrally analyzed. EEG examination is important not only in diagnosis, but also in determining adequate treatment.

LIST OF REFERENCES:

1. Agafonov B.V., Kotov S.V., Sidorova O. P. Myasthenia and congenital myasthenic syndromes. - M.: Medical Information Agency, 2013 224.
2. Gadzhiev S.A., Dogel L.V., Vanevsky V.L. Diagnostics and surgical treatment . - L.: Medicine, 2019 255.
3. Kuzin M.I., Gecht B.M. Myasthenia. - M.: Medicine, 2016 224.
4. Sepp E.K., Lantsova V.B. Myasthenia. - M.: Neuromed , 2008 112.
5. Baranov V.V. Optimizing diagnosis of lechenia myasthenia (clinical-immunol . i s - sled.): Autoref . dis .... cand. Med . n auk. - SPb., 2003 24.
6. Gecht B.M., Lantsova V.B., Sepp E.K. The role of autoantibodies to AXR in the pathogenesis of myasthenia gravis// Nevrologicheskiy zurnal. – 2013 8(1):35-37.
7. Hamed S, Mohamed M, Youssef A, et al. Assessment of cognitive function in patients with myasthenia gravis. Neuroimmunol Neuro in flamm. 2014 1(3):141. doi: 10.4103/2347-8659.143671.
8. Huseynovna KSA et al. Optimization of the Diagnosis and Treatment of Oral Epulis Based on Morphological and Cytological Analysis Texas Journal of Medical Science. – 2022 6:24-26 .
9. Haydarova D. K., Kazakov B. Sh. Optimization of the treatment of cognitive dysfunction, development and background of diabetes mellitus Journal of neurology and neurosurgery. – 2021 2(4).
10. Khodzhieva Dilbar Tadzhievna, Dildora Kadyrovna Haydarova, and Sitora Bakhramovna Barnaeva. "Kliniko-neurologicheskie aspekti izucheniya faktorov riska vozniknovenia sosudistyx sudorog pri hemorragicheskom stroke." Journal of neurology and neurosurgery issledovany 3.2 (2022).

Entered 20.04.2023