Analysis of the emotional and physical state of patients with neuromuscular diseases before and after rehabilitation using a visual analogue scale

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ABSTRACT

The timely appointment of rehabilitation measures for patients with neuromuscular diseases (NMS) is an important step in planning care for patients in this group, since it helps prevent the development of emergency conditions and complications, reduce the number and duration of hospitalizations, slow down the progression of the underlying disease, increase social activity, and in some cases - Maintain employment. When selecting rehabilitation measures, it is important to analyze the load tolerance, assessing the level of emotional comfort and physical condition.

Keywords: Muscular dystrophies, neuromuscular diseases, rehabilitation, visual analogue scale

Introduction. Myopathy (from other - Greek. μῦς “muscle” + π άθος “illness, suffering”) are chronic progressive neuromuscular diseases characterized by primary muscle damage.

Currently, there are different classifications. An earlier was the clinical classification of neuromuscular diseases, which were previously all considered a disease of the muscles. Within the framework of this classification, limb -girdle, face-shoulder-scapular, humero-tibial , and other species were distinguished. There is currently no clear clinical classification of neuromuscular diseases and myopathies in particular, but historically developed and assigned to certain diseases are still widely used.

The emergence of pathogenetic classification is associated with the emergence of new knowledge that myodystrophy can occur due to multiple nerve damage, due to metabolic disorders, toxic effects, inflammatory processes, gave rise to a division into primary muscle diseases, neural amyotrophy , etc. The pathogenetic classification of myopathy with the development of science is becoming more detailed, and now scientists are trying to indicate the affected protein in the diagnosis (for example, calpainopathy , titinopathy , etc.). Clarification of the defective protein also allows one to assume and establish a mutation.

It is necessary to separate hereditary and acquired myopathies. The history of hereditary myopathies contains more or less clear indications of the presence of the disease in relatives, although this is not necessary. Examples of hereditary myopathies: dystrophic myopathies (Duchenne myopathy , etc.), mitochondrial myopathies, storage diseases (Pompe disease, etc.).

The pathogenesis of various types of myopathies is different, depending on the affected gene and even locus. Violation of the synthesis of structural proteins of myofibrils leads to the appearance of dystrophic myopathies (or dystrophic myodystrophy - DMD. For example, Duchenne DMD , limb - girdle myodystrophy , etc.). Violation of the synthesis or a decrease in the activity of enzymes lead to the appearance of storage

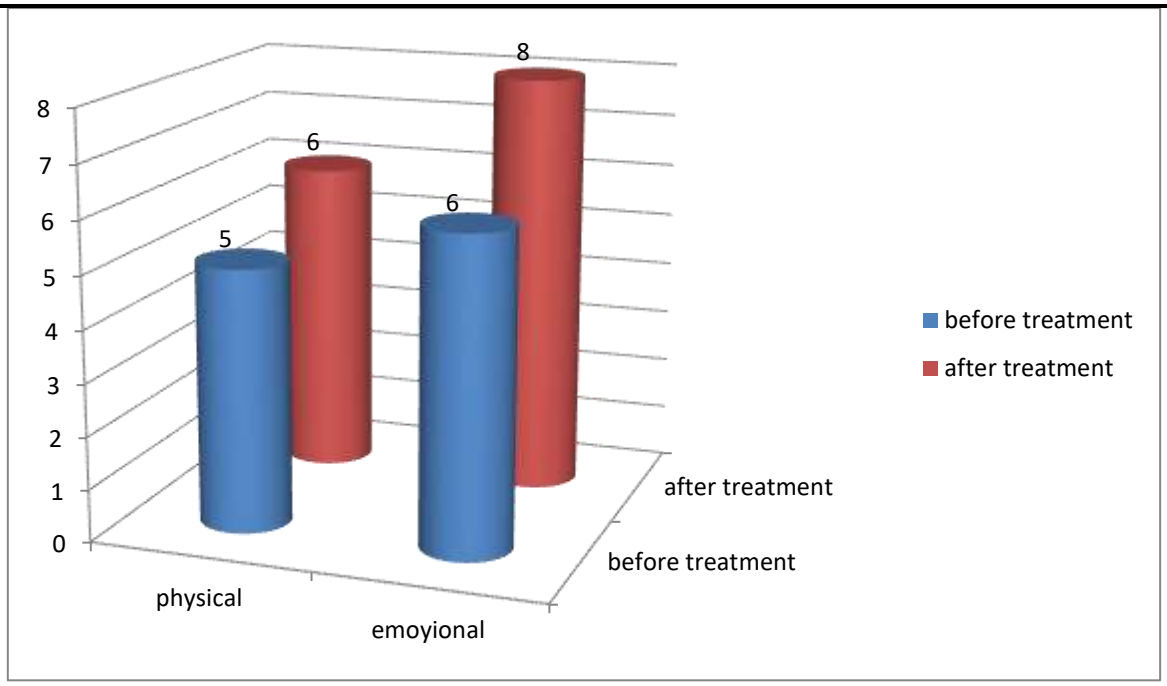
diseases. In any case, sooner or later the main manifestations of myopathy (as well as other neuromuscular diseases) will appear: muscle weakness and muscle atrophy.

Aim of the study. To assess the emotional and physical state of patients with neuromuscular diseases before and after rehabilitation using a visual analogue scale.

Materials and methods. Emotional and physical state before and after rehabilitation activities were assessed using a visual analogue scale (VAS). The values of the visual analog scale vary from 10 points (complete emotional comfort in assessing psychological well-being, lack of fatigue, full physical activity) to 0 points (severe discomfort and weakness). In the study, 33 NMB patients were surveyed: 20 (60%) men and 13 (40%) women, the median age was 62.0 [56.0; 65.0] years. Among patients with NMP, 12 (36.4%) had MND, 16 (48.5%) had MG, 3 (9.1%) had SMA, 1 (3%) had dystrophic myotonia , 1 (3%) had mitochondrial myopathy. Among MG patients, there were 2 (12.5%) patients with ocular form and 14 (87.5%) patients with generalized form of MG, among the latter 7 (50%) with bulbar disorders and 7 (50%) without them. According to MGFA classification: severity class 1 - 2 (12.5%), severity class 2 - 10 (62.5%) patients, severity class 3 - 4 (25%) patients. Among patients with MND: 8 (67%) with ALS, 3 (25%) with primary lateral sclerosis, 1 (8%) with progressive bulbar palsy. All patients underwent a complex of rehabilitation measures for 14 days. The main directions of rehabilitation measures included training the inspiratory muscles, improving coughing, and improving lymphatic drainage function. Depending on the severity of motor disorders, therapeutic exercises (RG) included active, active-passive or passive exercises. The LT time was 15–30 minutes, the exercise intensity varied from mild to moderate, the number of repetitions varied from 3–4 to 6–8 times.

The LH complex included exercises for the head and neck, lower and upper limbs, back, limb belts in various positions: standing, sitting, lying on the back, on the side, on the stomach. Also, all patients underwent breathing exercises in a standing and sitting position, involving the upper shoulder girdle and arms, with the number of repetitions of exercises 2–4 times. The methods of coughing were explained. Taking into account the epidemiological situation caused by the new coronavirus infection, some patients underwent rehabilitation activities at home (patient education and well-being control was carried out remotely through phone calls and when filling out questionnaires)

Assessment of the state of patients with neuromuscular diseases according to the visual analog scale before and after rehabilitation



Statistical data processing was carried out using the Statistica 10 program, the results were presented as Me [LQ; UQ], a comparative analysis was carried out using the Wilcoxon test.

Results. According to the results of the VAS analysis (figure), a significant improvement in physical condition was obtained: Me 5.0 [4.0; 6.0] / Me 6.0 [5.0; 7.0] (W, p=0.035), as well as emotional state: Me 6.0 [5.0; 8.0] / Me 8.0 [6.0; 8.0] (W, p=0.038), which indicates a subjective improvement in endurance and exercise tolerance and high motivation and interest of patients in rehabilitation / habilitation activities.

Conclusion. Based on the data obtained, it can be noted that LH is well tolerated, as well as the positive mood of patients due to the individual selection of exercises according to functional capabilities, as well as strict dosing of the number of exercise repetitions. Moderate regimens of physical training have a positive effect on the functional state of patients, expanding motor activity due to involvement in the rehabilitation process. Comprehensive treatment of these patients can lead to an improvement in the well-being of patients, an improvement in the quality of life and a better socialization of both patients and their relatives and friends.

Literature

1. Muzaffar, Z. (2022). HIV Encephalopathy and its Pathogenetic Aspects. *European Multidisciplinary Journal of Modern Science*, *4*, 843-846.
2. Зокиров, М. М., Рустамова, И. К., Касимова, С. А., & Кучкарова, О. Б. (2019). Жарохатдан кейинги талвасада кечки нейровизуализацион ўзгаришлар. In *Современная медицина: новые подходы и актуальные исследования* (pp. 56-60).
3. Zokirov M., Mukhammadjonov, O. (2022). Cognitive Impairments in Patients with HIV-Associated Encephalopathy. *Central asian journal of medical and natural sciences*, *3*(2), 401-405.
4. Zokirov, M. M., & Mukhammadjonov, O. (2022). Cognitive impairment in patients with Parkinson's disease and optimization of its treatment. *Eurasian Scientific Herald*, *7*, 177-180.
5. Зокиров, М., & Туланбоева, С. (2022). Когнитивные нарушений у пациентов с ВИЧ–ассоциированной энцефалопатией. *Barqarorlik va*

yetakchi tadqiqotlar onlayn ilmiy jurnali, 68-73.
6. Muzaffar, Z. (2022). Literature reviews on nervous system damage during hiv infection. *Barqarorlik va yetakchi tadqiqotlar onlayn ilmiy jurnali*, *2*(9), 141-147.
7. Muzaffar, Z. (2022). Correction of cognitive disorders in patients with hiv encephalopathy. *Web of Scientist: International Scientific Research Journal*, *3*(12), 402-411.
8. Muzaffar, Z. (2022). Psychological State in Patients with HIV Infection. *Amaliy va tibbiyot fanlari ilmiy jurnali*, *1*(6), 52-56.
9. Зокиров, М., & Мадмаров, Д. (2022). Корреляция ээг картины головного мозга и когнитивного статуса у пациентов с эпилепсией. *Theoretical aspects in the formation of pedagogical sciences*, *1*(5), 227-230.
10. Зокиров, М. (2021). Medical sciences. *scientific ideas of young scientists*, 21
11. Зокиров, М. (2022). Анализ когнитивных нарушений у пациентов с вич–энцефалопатией. *Barqarorlik va yetakchi tadqiqotlar onlayn ilmiy jurnali*, *2*(10), 251-260.
12. Muhammadjonov, O., & Zokirov, M. 2-toifa qandli diabet bilan og'rigan bemorlarda yurak-qon tomir kasalliklarining xavf omillarining tarqalishi. *Студенческий вестник Учредители: Общество с ограниченной ответственностью" Интернаука" Тематическое направление: Other social sciences*, 53-54.
13. Зокирив М. Коррекция когнитивных нарушений у больных с ВИЧ-ассоциированной энцефалопатией. *Дж. Теор. заявл. науч.* **2021** , *7* , 62–66. [**Академия Google**] [**Перекрестная ссылка**]
14. Мурадимова, А. Р., & Ахмедова, Ф. Ш. (2019). СЕСТРИНСКИЙ УХОД ЗА ПАЦИЕНТАМИ ПРИ ГЕМОРРАГИЧЕСКОМ ИНСУЛЬТЕ. In *Инновации в медицине* (pp. 188-192).
15. Мурадимова, А. Р., Усманова, Д. Д., & Садиков, У. Т. (2020, October). ПЕРЕСЕКАЮЩИЕ ПАРАЛЛЕЛИ: СОСУДИСТАЯ ДЕМЕНЦИЯ И ИШЕМИЧЕСКАЯ БОЛЕЗНЬ СЕРДЦА. In *НАУЧНО-ПРАКТИЧЕСКАЯ КОНФЕРЕНЦИЯ С МЕЖДУНАРОДНЫМ УЧАСТИЕМ «АКТУАЛЬНЫЕ ПРОБЛЕМЫ ПАТОФИЗИОЛОГИИ»* (Vol. 28, p. 85).
16. Мурадимова, А. Р. (2019). КЛИНИКО-НЕВРОЛОГИЧЕСКИЕ ОСОБЕННОСТИ ТЕЧЕНИЯ СОСУДИСТОЙ ЭПИЛЕПСИИ, ПРОГНОЗИРОВАНИЯ И ЛЕЧЕНИЯ. In *Инновации в медицине* (pp. 178-182).
17. Ахмедова, Ф. Ш., Ахмедова, Е. А., Мурадимова, А. Р., & Абдужаппарова, Н. Э. (2019). НАРУШЕНИЯ КОГНИТИВНЫХ ФУНКЦИЙ ПРИ ПОСТТРАВ-МАТИЧЕСКОЙ ЭНЦЕФАЛОПАТИИ. In *Инновации в медицине* (pp. 166-173).
18. Мурадимова, А. Р. (2019). КЛИНИКО-ДИАГНОСТИЧЕСКИЕ АСПЕКТЫ И СОВРЕМЕННЫЕ ПОДХОДЫ К ЛЕЧЕНИЮ СОСУДИСТОЙ ДЕМЕНЦИИ. In *Инновации в медицине* (pp. 185-188).
19. Мурадимова, А. Р., & Хайдарова, Б. А. (2019). ДИФФЕРЕНЦИАЛЬНО-ДИАГНОСТИЧЕСКИЕ КРИТЕРИИ РАЗЛИЧНЫХ ВИДОВ ГИПЕРКИНЕЗОВ. In *Инновации в медицине* (pp. 183-185).
20. Усманова, Д. Д., Мурадимова, А. Р., & Ашуралиев, И. М. (2019). НЕЙРОТРОФИЧЕСКИЕ БЕЛКИ КРОВИ И ИХ КОРРЕЛЯЦИИ С ФАКТОРАМИ СОСУДИСТОГО РИСКА У ПАЦИЕНТОВ С ДИСЦИРКУЛЯТОРНОЙ ЭНЦЕФАЛОПАТИЕЙ, ОСЛОЖНЕННОЙ СОСУДИСТОЙ ДЕМЕНЦИЕЙ. *РЕДАКЦИОННАЯ КОЛЛЕГИЯ*, 12.
21. Мурадимова, А. Р. (2019). КЛИНИКО-НЕВРОЛОГИЧЕСКИЕ ОСОБЕННОСТИ

ТЕЧЕНИЯ СО-СУДИСТОЙ ЭПИЛЕПСИИ, ПРОГНОЗИРОВАНИЯ И ЛЕЧЕНИЯ. In *Инновации в медицине. Материалы I международной научно-практической конференции-Махачкала, 2019.-Том. II.-232 с.* (p. 178).

22. RASHIDOVNA, A. M., & USMANOVA, D. D. VASCULAR DEMENTIA: NEUROIMAGING ASPECTS. *БИОМЕДИЦИНА ВА АМАЛИЁТ ЖУРНАЛИ*, 200.
23. Мурадимова, А. Р. (2019). Нейрофизиологический аспект метаболической терапии хронической церебральной ишемии. In *Инновации в медицине* (pp. 192-197).
24. Muzaffar, G. (2023). Features of Reactive Psychosis in Schizophrenia. *Research Journal of Trauma and Disability Studies*, *2*(1), 44-49.
25. Muzaffar, G. (2023). Modern Concepts About Schizophrenia. *Eurasian Medical Research Periodical*, *16*, 37-41.
26. Гуломкодиров, М., & Машрапов, Ж. (2022). ЭМПИРИЧЕСКИЙ ПОИСК ВЗАИМОСВЯЗИ КОГНИТИВНОГО ФУНКЦИОНИРОВАНИЯ И ОБЩЕКЛИНИЧЕСКОЙ КАРТИНЫ У БОЛЬНЫХ ШИЗОФРЕНИЕЙ. *Theoretical aspects in the formation of pedagogical sciences*, *1*(5), 221-223.
27. Долимова М.А., Аграновский М.Л., Солиев Д.М., Гуломкодиров М.М. (2022). РОЛЬ ПОДДЕРЖИВАЮЩЕЙ ТЕРАПИИ В СРАВНИТЕЛЬНОЙ ЭФФЕКТИВНОСТИ КАЧЕСТВА И СТРУКТУРЫ РЕМИССИЙ ПРИ РЕЦИДИВНОЙ ШИЗОФРЕНИИ. *Искусство медицины. Международный медицинский научный журнал* , *2* (1).
28. Ғуломқодиров, М. (2021). АФЪЮНГА ҚАРАМЛИК ХОСИЛ БУЛИШ ДИНАМИКАСИ ВА ХУСУСИЯТЛАРИ. *Интернаука*, (20-7), 23-25.
29. Аграновский, М. Л., Гуломкодиров, М. М., Далимова, С. А., & Муминов, Р. К. (2022). АНАЛИЗ ДАННЫХ ОТДАЛЁННОГО КАТАМНЕЗА ПРИ ШИЗОФРЕНИИ С РЕМИТТУРУЮШИМ ТИПОМ ТЕЧЕНИЯ. *Экономика и социум*, (6-2 (97)), 285-288.
30. Аграновский, М. Л., Гуломкодиров, М. М., Муминов, Р. К., & Далимова, С. А. (2022). ОТДАЛЕННЫЙ ЭТАП ШИЗОФРЕНИИ С РЕМИТТУРУЮШИМ ТИПОМ ТЕЧЕНИЯ И РАССТРОЙСТВ ШИЗОФРЕНИЧЕСКОГО СПЕКТРА. *Экономика и социум*, (6-2 (97)), 289-292.
31. Ғуломқодиров, М. (2021). ЮРАК-ҚОН ТОМИР КАСАЛЛИКЛАРДАГИ ДЕПРЕССИЯ ХОЛАТИНИ ТАШҲИСЛАШ ВА ДАВОЛАШНИ ТАКОМИЛЛАШТИРИШ. *Интернаука*, (17-4), 61-62.