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REHABILITATION MEASURES IN OSTEOSARCOPENIA

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Objective: The structural and functional state of bone and skeletal muscle tissue is a biomarker of healthy aging, and the treatment and rehabilitation of osteosarcopenia (OSP) is part of antiaging strategy. This emphasizes the clinical and social significance of OSP, the need to study this condition, risk factors, search for predictors, prevention, effective treatment and rehabilitation. The purpose of the work is to evaluate the effectiveness of using modern computerized HUBER systems in restoring postural balance in osteosarcopenia.

Methods: There were 140 postmenopausal women (56.7±2.3 years old) with osteosarcopies under observation. BMD was measured using DXA. Patients received standard osteotropic therapy (metabolites of vitamin D and denosumab) and two groups were randomized in rehabilitation methods: 1 (n=90) - a complex program on the HUBER platform with the function of biological feedback; 2 (n=50) training according to the classic complex program on the balancing platform-hemisphere "OsportBosu" without the function of biological feedback. To assess the functional state of the locomotor apparatus, a complex of registration and processing of biosignals in vertebrology "Insight TM" was used: pain sensitivity (algometry); flexible acoustics (ROM, inclinometry); surface electromyography (EMG); thermography of back muscles (Therma); heart rate variability (HRV).

Results: All patients (100%) complained of pain in the back, in the bones of the pelvis and limbs, weakness, increased fatigue and decreased ability to work. In the groups, patients were comparable in age and BMD. The T-score was (-3.52±0.54) standard deviation. Evaluation of the effectiveness of treatment showed an increase (p<0.05) in the time of maintaining balance in patients of group I after 6 and 12 months by 70% compared to the same in group II. As a result of treatment, there was an improvement (p<0.05) in the biomechanical and neurological condition of the spine using a set of exercises proposed on the Huber apparatus. There was also a positive trend in the data on "maintaining time balance" in patients in group 1. The results on the time of maintaining balance indicate that individual and dosed implementation of complex coordination tasks on the Huber hardware complex contributes to the preservation of the patient's coordination capabilities.

Conclusion: Rehabilitation measures using hardware biofeed-back are a highly effective method of medical support for patients with osteosarcopy.

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EVALUATION OF SAFETY OF BIOACTIVE CONCENTRATE OF SMALL MARINE FISH IN SENILE PATIENTS WITH KNEE OSTEOARTHRITIS AND HIGH COMORBIDITY RATES

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Objective: To evaluate the safety of bioactive concentrate of small marine fish (BCSSF) in elderly patients with osteoarthritis of the knee joint and high comorbidity.

Methods: The study included 20 patients with knee joint OA, whose average age was 77.6 (75.8; 80.5) y. Patients received injections of BCSSF daily for 1 ml intramuscularly in courses of 20 d with a 6-month interval (in total 2 courses). The effectiveness of therapy was assessed by VAS and WOMAC index, the safety of the drug was assessed based on clinical and laboratory parameters during the entire follow-up period.

Results: In elderly patients with knee joint OA, a high level of comorbidity was revealed - 5.4+0.8 diseases. The Charlson index was 1-2 points for 2 (10.0%) patients, 3-4 points in 14 (70.0%), ≥5 points in 4 (20.0%). By the end of the first course of BCSSF therapy, a statistically significant decrease in the total WOMAC index and a significant reduction in VAS pain were found. The positive dynamics persisted throughout the entire observation period. Thus, the number of patients who responded to therapy with a decrease in pain in the knee joint according to VAS by 20% or more by B1 was 13 (65.0%) patients, by B2 - 12 (60.0%). A statistically significant decrease in the total WOMAC index was revealed at all visits compared with the indicators obtained when the patient was included in the study: B0 - 1125±135.0, B1 - 647±229.0, B2 - 642±224.0 (p≤0.001). No serious adverse events and clinically significant changes in laboratory parameters were detected during the entire observation period.

Conclusion: The results of the study demonstrate the effectiveness of BCSSF in patients with knee joint OA and confirm the safety of its use in elderly patients with high comorbidity, which makes it possible to consider it as a first-line drug in the complex therapy of OA.

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RELATIONSHIP OF SARCOPENIA AND CAROTID ATHEROSCLEROSIS IN ELDERLY MEN WITH OSTEOARTHRITIS OF THE KNEE

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Objective: To evaluate the association of sarcopenia and carotid atherosclerosis in elderly male patients with osteoarthritis (OA) of the knee.

Methods: The study included 36 patients (mean age 68.9 (66; 71)

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