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## **ASTHENIA AFTER COVID-19 IN SAILORS – THE ART OF CHOOSING DECISIONS AT THE REHABILITATION STAGE**

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Asthenic syndrome can be characterized as a general reaction of the body to any condition that threatens the depletion of energy resources. Accordingly, a decrease in activity should be regarded as a universal psychophysiological mechanism for preserving the vital activity of the system. Reduced activity is a universal psychophysiological mechanism for preserving the vital activity of the system in the event of any threatening situation, which operates on the principle: less activity - less energy need [1].

Noting the different nature of asthenic disorders, the International Classification of Diseases of the 10th revision classifies conditions, the main manifestations of which are asthenic symptoms, into different headings: F48.0 “Neurasthenia”, F06.6 “Organic asthenic disorder” and G93.3 “Fatigue syndrome after transferred viral disease.” Separately, we should consider the situation with post-infectious asthenia, which was previously discussed as part of the seasonal increase in the incidence of acute respiratory infections, but has become a serious problem in connection with the COVID-19 pandemic [2].

Despite the diversity of the clinical picture of post-Covid syndrome, asthenia/fatigue is one of the persistent and leading symptoms in patients [3-6].

It is asthenic disorders that lead to a decrease in important parameters of quality of life, including the physical and intellectual components of quality of life, ability to work and social functioning. Sailors experience a significant decrease in quality of life and the development of persistent adaptation disorders. Regardless of the etiology of the underlying disease, asthenia itself requires timely and adequate treatment.

The use of sanatorium-resort potential in this category of patients plays an important component during the period of rest for those involved in seafaring.

**Purpose of the work:** To study the effect of complex sanatorium-resort treatment on the severity of asthenic syndrome in sailors after coronavirus infection.

**Material and methods:** To be included in the study, the diagnosis of coronavirus infection had to be confirmed within 6 months before inclusion by the result of a PCR test, discharge from the hospital or an entry in the outpatient record. Inclusion criteria: men aged 40 to 65 years; average age ( $55.6 \pm 0.7$ ) years, established diagnosis of asthenia; the presence of asthenic complaints: one and/or more of the following: general weakness, increased physical and/or mental fatigue with a decrease in activity level (lack of vigor, energy, motivation), decreased performance and concentration, the need for additional rest, decreased volume and effectiveness of usual activities, headaches associated with overwork.

The study included 30 sailor patients who received kinesiotherapy, pearl baths for a course of 10 procedures, massage of the cervical-collar area (for a course of 10 procedures), magnetic therapy for the cervical-collar area for a course of 10 procedures, hydrokinesitherapy - 10 procedures, every other day) within 18 days. The severity of asthenic syndrome was assessed using the MFI-20 (Multidimensional Fatigue Inventory) scale, which allows assessing the symptoms of general asthenia, physical asthenia, the presence of reduced activity and mental asthenia, and decreased motivation. Quality of life was assessed using the MOS SF-36 questionnaire. Also, the study of clinical course tests included: additional EuroQol - 5D (European Quality of Life Questionnaire) - quality of life questionnaire (European); the functional state was assessed using the "WAM" questionnaire (well-being, activity, mood), and the psycho-emotional state was assessed using the anxiety (HARS) and depression (HRDS) scales.

**RESEARCH RESULTS AND DISCUSSION:** Before the start of rehabilitation treatment of sailors, the mental status was dominated by general weakness, emotional lability, irritability, sleep disturbances (sleep cycles), increased fatigue, impaired attention, memory impairment, and rapid exhaustion.

After rehabilitation treatment, significantly significant ( $p < 0.05$ ) differences were obtained in such psychopathological symptoms as: general weakness, increased fatigue, irritability, cephalgia, difficulty falling asleep, anxiety, weakness (lethargy) after sleep.

Patients more often recorded general, physical and mental asthenia according to the MFI-20 scale. After 18 days from the start of sanatorium-resort treatment, sailors showed a statistically significant decrease in general asthenia by 76.3% ( $p < 0.05$ ), mental asthenia by 43.7% ( $p < 0.05$ ), and physical asthenia by 27 % ( $p < 0.05$ ), with reduced activity - by 72.4%, reduced motivation - by 4.5%. And also, 18 days after the rehabilitation intervention, the sailors showed an improvement in indicators that characterize the perception of pain and the state of physical health on the scale of the SF-36 questionnaire ( $p < 0.05$ ).

By the end of treatment, in this category of patients, according to the HARS test, the level of anxiety decreased from ( $14.0 \pm 1.0$ ) points to ( $10.4 \pm 1.3$ ) points. HADS depression level – from ( $18.3 \pm 0.7$ ) points to ( $12.4 \pm 0.9$ ) points ( $p < 0.05$ ). The quality of life, which according to the EuroQo 1 - 5D questionnaire was ( $5.7 \pm 0.4$ ) points after the use of rehabilitation treatment, was ( $2.7 \pm 0.2$ ) ( $p < 0.05$ ) points. According to the

WAM method, patients at the end of rehabilitation treatment gave a higher assessment of their well-being and mood with probable changes in indicators ( $p < 0.05$ ).

**Conclusions:** Thus, the use of an integrated approach helps to level the symptoms of asthenia, restore mental and social activity. The data from our study allow us to recommend this comprehensive approach to spa treatment for the correction of secondary caused somatogenic asthenia, namely after coronavirus infection. The use of complex rehabilitation measures is an effective method of rehabilitation for this category of patients.

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