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REHABILITATION MASSAGE DURING THE RECOVERY PERIOD AFTER CORONAVIRUS INFECTION

Abstract. *Pneumonia, both of a viral origin and bacterial, which develops with COVID-19 against the background of lung damage and a weakened immune system, is the most common complication. In the acute phase, as with any other disease, massage is contraindicated, but during recovery it can be of great help. The main massage technique that helps to quickly restore the lungs after inflammation is vibration. Movements that cause vibration help to improve blood circulation, stabilize breathing, and activate the process of cleansing the lungs from phlegm. The simplest option for such a massage may even be a simple pat on the back with your palms for several minutes. With a more serious approach, the masseur first works the sternum, then the back and neck, and then returns to the chest. This stimulates the drainage of fluid from the upper and lower respiratory tract. Warming massage also has a beneficial effect. [1] In any case, the basic rule here is not to overdo it, work carefully and constantly maintain "feedback" with the patient. The main goals of massage after a coronavirus infection is to accelerate the recovery of the body by: resorption of the focus of inflammation; increased blood and lymph flow; stabilization of ventilation of the lungs; stimulation of sputum outflow; strengthening the respiratory muscles. As a result of the massage, the percentage of oxygen in the blood increases, the blood begins to circulate more intensively and carries oxygen throughout the body.*

At the end of 2019, an outbreak of a new coronavirus infection with an epicenter in Wuhan was registered in China for the first time. WHO 11.02.20 has given the official name of the infection caused by the new coronavirus, COVID-19 (Corona Virus Disease-2019). It is currently known that the most common clinical symptom of this disease is bilateral pneumonia, 3-4% have registered the development of acute respiratory distress syndrome. At pneumonia at patients ventilation-perfusion disturbances, weakness of skeletal muscles, cardiovascular pathologies develop [6].

Patients who develop pneumonia due to a new coronavirus infection need rehabilitation measures to restore the body's functionality and eliminate the negative consequences of the disease. In recent years, pulmonary rehabilitation has become a standard adjunct to drug therapy for people with lung disease. Pulmonary rehabilitation improves the condition of patients, reduces respiratory distress and reduces hospital stay, as well as improves exercise tolerance; functional recovery is accelerated and the effect of bronchodilation is observed. Initially, the method of pulmonary rehabilitation was developed for patients with chronic obstructive pulmonary disease. At present, it is impossible to imagine providing full-scale medical care for lung diseases without the use of pulmonary rehabilitation [10].

The definition of pulmonary rehabilitation, presented by the Board of Directors of the American Thoracic Society (ATS) in December 2005 and the Executive Committee of the European Respiratory Society (ERS) in November 2005, is fundamental: "Lung rehabilitation involves basic treatment, including education, patient lifestyle changes, improving the physical and mental condition of patients with chronic respiratory diseases, and promoting long-term recovery [2]. Pulmonary rehabilitation programs include patient assessment, physical training, patient education, nutrition coordination, and psychological support. In a broad sense, pulmonary

rehabilitation is a series of strategies for the treatment of patients with chronic lung disease throughout life, provided active cooperation between the patient, his family and health professionals.

The most severe and dangerous consequence of coronavirus pneumonia is fibrosis. This is a pathological condition in which the lung tissue is replaced by a solid connective tissue matrix (scar). The degenerated areas of the lungs lose function, which leads to a decrease in breathing efficiency. Lung tissue can be replaced with scar tissue in one or both lungs. In this case, the pathological process is local (focal) or total (affecting almost the entire organ). Fibrosis occurs against the background of impaired bronchial patency. Due to the accumulation of inflammatory fluid in the alveoli, the airiness of the lungs decreases, the lung tissue gradually thickens, wrinkles and degenerates into a connective tissue [3,7].

It should be emphasized that COVID-pneumonia is not always complicated by fibrosis. At the same time, scars on the lungs can appear after any other infectious and inflammatory diseases of the lower respiratory tract. To avoid this, one must not rely on symptoms, but almost immediately begin measures to maintain and restore pulmonary functions. To improve lung function and increase blood oxygen saturation, special programs of physical training with respiratory complexes have been developed. They are compiled individually, taking into account the severity of the disease and the severity of shortness of breath. Early rehabilitation after coronavirus pneumonia in adults in most cases avoids tissue fibrosis. Moreover, restorative measures, begun in the intensive care unit and in the inpatient department, minimize pathological transformation [9]. To improve the blood supply to the lungs and normalize the respiratory function, treatment with position and movement (kinesiotherapy), exercise therapy, chest massage, dosed walking are prescribed, training is carried out on a bicycle ergometer and a treadmill.

It should be borne in mind that massage must be selected individually and combined with other types of rehabilitation. This will allow a more comprehensive approach to solving the problem. In this case, it is worth relying on the degree of lung damage. Helium-oxygen inhalations in combination with massage and physiotherapy exercises give tremendous results to restore the functions of external respiration, to restore the percentage of oxygen in the body [5].

Separately, it is worth noting the great benefit for patients with postresuscitation syndrome of breathing exercises, which improve ventilation of the lungs, thereby accelerating the process of their recovery, as well as calming the nervous system. In general, a rather light, relaxing and stress-relieving massage is indicated. If the patient's condition improves, the intensity of the effect can be gradually increased from session to session. So it is possible to track and prevent the occurrence of side effects and complications [8]. So far, we can state that the complex of human knowledge about COVID-19 is in the stage of active formation. This also applies to the use of massage. Specialists have to work as carefully as possible, trying in every possible way to reduce risks on the one hand and increase efficiency on the other.

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