TREATMENT AND REHABILITATION TECHNOLOGY FOR MILITARY PERSONNEL AND CIVILIANS WITH CHRONIC RESPIRATORY DISEASES, AFFECTED BY WAR

Yu. I. Feshchenko, N. A. Prymushko, N. V. Parkhomenko, O. I. Krylach, S. G. Opimakh

Abstract

Chronic respiratory diseases (CRD) represent a significant challenge in clinical practice. Global risk factors for CRD include smoking, environmental particulate matter pollution, household air pollution, and occupational exposure to harmful particles, gases, and fumes. All of these factors have drastically worsened during the war in Ukraine, leading to an increase in the incidence of CRD and a higher frequency of their exacerbations and complications.

The aim: to develop a technology for treatment and rehabilitation for military personnel and civilians with chronic respiratory diseases, affected by war, and determine its effectiveness.

Materials and methods. The study involved 40 chronic nonspecific lung diseases patients — military personnel and civilians, affected by war. Patients with bronchial obstruction (forced expiratory volume in 1 second < 80% of predicted values) were selected for the study. The 20 patients in the study group (15 men, 5 women; mean age 39.7 ± 4.2 years) underwent a comprehensive treatment regimen involving — in addition to standard therapy — individualized physical rehabilitation programs and the administration of mexidol (200 mg three times daily), carnitine (250 mg three times daily), and quercetin (1 g three times daily) for two months. The 20 patients in the control group (13 men, 7 women; mean age 41.9 ± 3.8 years) received standard therapy. All patients used salbutamol as needed for symptom relief. To evaluate treatment efficacy, patients maintained self-monitoring diaries, recording symptom severity and the need for symptom-relieving medications. All patients underwent spirometry, a 6-minute walk test and quality of life questionnaire before and after treatment.

Results. After 2 months of treatment, patients in both groups had improved symptoms control (cough, shortness of breath, wheezing, chest tightness, and the number of night awakenings). Accordingly, the overall symptom score and the need for medication to relieve symptoms decreased. In the patients of the main group, these results have a statistically significant difference, $p < 0.05$. After treatment, there was a tendency to improve all parameters of the spirometry in both groups due to the patients receiving basic therapy. In patients in the study group, unlike those in the control group, there was a significant improvement in dyspnea scores and the distance in the 6-minute walk test, as well as a clinically significant improvement in quality of life.

Conclusions. It has been determined that the use of combination antioxidant therapy and individualized physical rehabilitation programs led to improved symptom control (a reduction in the total symptom score from (9.2 ± 0.5) to (6.1 ± 0.3) points and in the need for rescue medication from (3.6 ± 0.4) to (2.4 ± 0.4) points; $p < 0.05$), as well as improvements in pulmonary function, exercise tolerance, and patients' quality of life. The clinical efficacy of the proposed treatment reached 90 %, and the functional efficacy — 70 % .

Key words: chronic respiratory diseases, rehabilitation, antioxidants.

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Yurii I. Feshchenko
Director of SO "National Scientific Center of Phthisiology, Pulmonology and Allergology named after F. G. Yanovsky of National Academy of Medical Sciences of Ukraine Academician of NAMS of Ukraine", professor
03038, Kyiv, 10, M. Amosova str.
Tel.: 380 44 275 0402, fax: 380 44 2752118,
admin@ifp.kiev.ua
https://orcid.org/0000-0002-4505-8287