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## METHODS FOR IMPROVING THE QUALITY OF LIFE OF PATIENTS WITH BRONCHIAL ASTHMA

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#### ✓ Resume

The article examines the effectiveness of personalized rehabilitation programs in improving the quality of life of patients with bronchial asthma. The study analyzed 120 patients divided into two groups: the first group received a comprehensive rehabilitation program, while the second group was assigned standard treatment methods. The patients' clinical condition was assessed based on the SF-36 and SGRQ questionnaires, as well as spirometry results. According to the study findings, patients in the first group showed significant positive changes in quality of life and spirometric indicators (p<0.05-0.01), whereas changes in the second group were relatively minor. The obtained results demonstrate the high effectiveness of complex rehabilitation based on a biopsychosocial approach for patients with bronchial asthma. The practical significance of the research lies in its potential to provide a foundation for developing new, effective, and individually tailored approaches to patient rehabilitation within the healthcare system.

Keywords: Bronchial asthma, chronic heart failure, treatment, rehabilitation, improvement of quality of life.

#### BRONXIAL ASTMA BILAN OGʻRIGAN BEMORLARNING HAYOT SIFATINI YaXShILASh USULLARI

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#### ✓ Rezyume

Maqolada bronxial astma bilan kasallangan bemorlarning hayot sifatini yaxshilashda shaxsiylashtirilgan reabilitatsiya dasturlari samaradorligi oʻrganildi. Tadqiqotda 120 nafar bemorlar ikki guruhga ajratilib tahlil qilindi: 1-guruhga kompleks reabilitatsiya dasturi, 2-guruhiga standart davolash usullari tayinlandi. Bemorlarning klinik holati SF-36 va SGRQ soʻrovnomalari, shuningdek spirometriya natijalari asosida baholandi. Olib borilgan tadqiqot natijalariga asosan, 1-guruh bemorlarida hayot sifati va spirometrik koʻrsatkichlarida sezilarli ijobiy natijalar qayd etildi (p<0,05–0,01), 2-guruhida esa oʻzgarishlar nisbatan kam edi. Olingan natijalar bronxial astma bilan ogʻrigan bemorlarga nisbatan biopsixososial yondashuv asosidagi kompleks reabilitatsiyaning yuqori samaradorligini koʻrsatadi. Tadqiqotning amaliy ahamiyati shundaki, sogʻliqni saqlash tizimida bemorlarni reabilitatsiyasiga oid yangi, samarali va individual yoʻnaltirilgan yondashuvlarni ishlab chiqish uchun asos yaratadi.

Kalit soʻzlar: Bronxial astma, surunkali yurak etishmovchiligi, davolash, reabilitatsiya, hayot sifatini yaxshilash.



#### МЕРЫ ПО ПОВЫШЕНИЮ КАЧЕСТВА ЖИЗНИ ПАЦИЕНТОВ С БРОНХИАЛЬНОЙ АСТМОЙ

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#### ✓ Резюме

данной будет эффективность персонализированных статье изучена реабилитационных программ с целью улучшения качества жизни больных бронхиальной астмой. В ходе исследования 120 пациентов были разделены на две группы и проанализированы: в первой группе была назначена комплексная программа реабилитации, во второй группе были назначены стандартные методы лечения. Клиническое состояние пациентов оценивалось на основании опросников SF-36 и SGRO, а также результатов спирометрии. По результатам исследования у пациентов 1-й группы отмечены значимые положительные результаты качества жизни и спирометрических показателей (p<0,05-0,01), тогда как во 2-й группе изменения были относительно незначительными. Полученные результаты свидетельствуют о высокой эффективности комплексной реабилитации, основанной на биопсихосоциальном подходе, у больных бронхиальной астмой. Практическая значимость исследования заключается в том, что создает основу для разработки новых, эффективных и индивидуально ориентированных подходов к реабилитации пациентов в системе здравоохранения.

Ключевые слова: Бронхиальная астма, хроническая сердечная недостаточность, лечение, реабилитация, улучшение качества жизни.

#### Relevance

In recent years, the issue of improving the quality of life of patients is becoming increasingly relevant in the development of pulmonology. The increasing number of patients with chronic somatic diseases, the necessity of long-term basic therapy and rehabilitation measures for patients, and special attention to quality of life in modern medical approaches have become one of the pressing issues of today [14,16]. According to World Health Organization sources, quality of life is currently understood as a multifaceted category that includes physical health, mental state, social environment, and the patient's level of satisfaction with their condition [WHOQOL Group, 1995].

Currently, in many foreign and domestic studies, it is necessary to identify factors affecting the quality of life of patients and develop treatment methods aimed at improving the quality of life. Foreign researchers A. Smith and her colleagues (2020) in their study among patients with chronic heart failure found that personalized psychosocial support programs improved the quality of life indicators of some patients to a certain extent [3,4,8,11,12]. Similarly, in some clinical and practical studies conducted in our republic, it has been scientifically proven that the quality of life can be stabilized by increasing patients' psychological motivation for treatment and focusing on a healthy lifestyle. Furthermore, in scientific works conducted by researchers, based on the analysis of the psycho-emotional state of individual patients, the possibility of improving the effectiveness of medical rehabilitation through an individual approach has been justified. The above and other studies serve as a scientific basis for improving strategies aimed at improving the quality of life of patients with pulmonary diseases. Under the influence of etiological factors in bronchial asthma, respiratory tract function is disrupted and the amount of air remaining in the lungs is preserved - what is called a "trap" for the respiratory system, which mainly determines the clinical manifestations of the disease [1,2,13]. Medications used for treating patients with bronchial asthma (BA) should effectively eliminate dynamic hyperinflation, and this requirement is met by modern long-acting inhaled bronchodilators (anticholinergic drugs and β2-agonists) [56]. Inhaled glucocorticosteroids are effectively used as part of combination therapy in patients with bronchial hyperreactivity, high levels of nitric oxide in exhaled air, and eosinophilic sputum (>3%) [9,10]. When selecting medications for treating BA in combination with chronic heart failure, reliable information about the safety of respiratory drugs in relation to cardiovascular risk should be available.

The above-mentioned studies show that the rehabilitation of patients with bronchial asthma during the remission of the disease is becoming a pressing problem of our time. Based on these works, we decided to develop new principles for improving the quality of life of patients with bronchial asthma. Specific aspects such as the type of disease, age, psychological state, level of social support, and factors related to the quality of medical services will be thoroughly analyzed. Based on previously conducted scientific research, effective approaches that can be applied in practice will be developed.

#### **Research Materials and Methods**

To assess the effectiveness of rehabilitation measures in patients with bronchial asthma, 120 patients aged 18 to 78 were selected, who were divided into two groups: the main group consisted of 60 people (n=60) - patients with bronchial asthma who, in addition to standard medications, participated in an individual rehabilitation program and received psychological support. The control group also included 60 patients (n=60), who received only standard treatment. The study used the widely used SF-36 questionnaire (Short Form-36 Health Survey) to assess the quality of life of patients. In addition, the ACT questionnaire (Asthma Control Test) was used to determine the severity of bronchial asthma attacks and the degree of their control. To determine the clinical condition of patients, bronchial permeability was studied using standard diagnostic spirometric equipment (BTL, Great Britain). All data obtained during the study were processed and analyzed using the SPSS 26 statistical software. The statistical analysis employed means, standard deviations, t-test, Pearson's correlation, and ANOVA. Statistical results were considered significant at p<0.05. The study was approved by the ethics committee, and written informed consent was obtained from all patients for participation in the study.

#### Research results and their discussion

Based on the results of our research, it was established that the main quality of life indicators of patients in the main group according to the SF-36 questionnaire were significantly higher than in patients in the control group (Table 1).

SF-36 Parameters

**Table – 1.** 

SF-36 Parameters	Main group (n=60)	Control group (n=60)	p
Physical activity	83,5±7,3	72,0±8,1	<0,01
Mental health	76,6±6,7	67,8±7,5	<0,01
General satisfaction	82,4±5,6	71,05±6,7	<0,01

The comparative results of the quality of life indicators of patients with bronchial asthma in the main and control groups, assessed based on the SF-36 questionnaire, are presented in Table 1. According to the results of our study, the individual rehabilitation method and the psychological assistance provided showed that the physical activity of patients in the main group was  $83.5\pm7.3$  points, mental health -  $76.6\pm6.7$  points, and the general level of life satisfaction -  $82.4\pm5.6$  points. It was statistically significantly confirmed (p<0.01) that these indicators significantly exceed the corresponding indicators of 60 patients in the control group, which amounted to  $72.0\pm8.1$ ;  $67.8\pm7.5$  and  $71.05\pm6.7$  points respectively.

Table 2 presents a comparison of spirometric data between patients in the main group (Group 1) and the control group (Group 2) with bronchial asthma. Results after rehabilitation and standard treatment showed that all spirometry indicators in patients of the main group were statistically significant: FEV1% - 79.5±6.8; FVC% - 89.3±5.4; FEV1/FVC% - 79.2±5.3; and PEF - 384±39;



p<0.05-0.01. In the control group, no significant positive changes (p>0.05) were observed. These results confirm the high effectiveness of the comprehensive treatment program in improving airway permeability in patients (Table 2).

The objective condition of patients in both groups was evaluated using the SGRQ questionnaire.

Table - 2

Some spirographic data.

Indicators	Groups	Before treatment	After treatment	p
FEV1 (%)	1- группа	72,2±5,6	79,5±6,8	<0,05
	2- группа	70,6±6,3	71,6±7,2	>0,05
FVC (%)	1- группа	83,7±6,4	89,3±5,4	<0,05
	2- группа	82,9±6,1	83,3±6,1	>0,05
FEV1/FVC (%)	1- группа	73,5±5,4	79,2±5,3	<0,05
	2- группа	71,8±5,6	72,4±6,1	>0,05
PEF (L/min)	1- группа	315±42	384±39	<0,01
	2- группа	312±44	325±47	>0,05

Table - 3

Results of the SGRQ questionnaire

Indicators	1 – group (n=60)	2 – group (n=60)	p
Symptoms	72,9 [72,5-74,6]	68,1 [62,0-74,3]	< 0,05
Activity	12,5 [12,5-12,6]	12,5 [12,2-12,6]	< 0,05
Influence of disease	23,8 [21,6-24,9]	23,8 [22,7-24,9]	< 0,05
General data	28,0 [26,9-29,1]	27,7 [26,4-29,0]	< 0,05

Based on the results of completing the aforementioned questionnaire, certain data were identified for bronchial asthma (BA) indicators such as "symptoms," activity, and disease impact. The parameters "Activity" and "Disease Impact" showed low values. According to the results of the statistical analysis, no differences were found between the groups.

Our studies have demonstrated that personalized rehabilitation and psychological assistance for patients with bronchial asthma have positive efficacy as an important component of the overall treatment strategy. In the first group, quality of life indicators measured by the SF-36 questionnaire were significantly higher than in the control group (p<0.01). It is particularly noteworthy that substantial positive changes were observed in physical activity, mental health, and overall satisfaction. Implementing an individualized approach to patients, taking into account their psychosocial state, contributes to improving not only the symptoms of the disease but also the quality of life.

Based on spirographic indicators, it can also be concluded that a significant improvement in indicators was observed in patients of the 1st group (p<0.05-0.01). In the 2nd group, no substantial changes in these indicators were observed (p>0.05). The obtained results highlight the clinical significance of comprehensive rehabilitation measures in alleviating respiratory insufficiency associated with bronchial asthma.

Based on the results of the SGRQ questionnaire, an improvement in indicators for "symptoms," "activity," and "disease impact" was observed in the main group. Positive dynamics (p<0.05) were found for all three parameters in the main group, indicating the importance of considering not only functional indicators but also patients' conditions associated with the disease.

#### Conclusion

The research results can serve as an important scientific basis for the healthcare system, demonstrating the need for a comprehensive approach to the rehabilitation of patients with bronchial

asthma. In particular, individual programs developed considering key factors of psychological support not only facilitate the course of the disease but also improve the patient's quality of life, increase patients' social activity, and stabilize control over the disease.

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