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The impact of pulmonary rehabilitation on the quality of life of patients with respiratory dysfunctions (chronic obstructive pulmonary disease and bronchial asthma) aged 50-70 years hospitalized in the Pulmonary Rehabilitation Ward in the Pulmonary-Cardiological Spaecialistic Hospital in Torzym

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Key words: quality of life, pulmonary rehabilitation, chronic obstructive pulmonary disease, bronchial asthma.

Abstract

A comprehensive look at bronchial asthma and COPD is closely related to determining the quality of life of patients. This is especially important in chronic respiratory diseases. Recently, the physical, psychological and social problems that patients with these disease entities are facing more and more often. Scientific reports focus primarily on the impact of these chronic diseases on the

mental state of patients, their emotions, personality changes, changes in the value system and cognitive function impairment. The artillery describes the results of a study conducted on the SF-36 quality of life questionnaire on pulmonary patients on the day of admission to a pulmonary rehabilitation ward and after 21 days of rehabilitation. The quality of life of patients has changed significantly.

Introduction

In many countries of Europe and North America, the concept of quality of life is often an element in assessing the patient's well-being. It has also become an important element of modern definitions of health. The definition of health recognized by the World Health Organization defines health as a state of complete physical, mental and social well-being. [1] The quality of life according to the World Health Organization is expressed by the sense of satisfaction of individuals or social groups, resulting from the awareness of satisfying their own needs and perceiving possibilities of individual and social development.[2] Quality of life (QL, quality of life) is an ambiguous concept, which is why there are many difficulties associated with defining this term. Initially, QL was defined as a human-made assessment of life position at a given time. [3] With the development of research on QL in medicine, there was a need to clarify and at the same time narrow the concept to health problems. At that time, the concept of health-related quality of life (HRQL) was created, defining it as a functional effect of the disease and treatment perceived by the patient. [4] Otherwise HRQL can be defined as an assessment of one's life situation made by the patient during the period of illness and treatment. [5]

It covers the following areas [3]:

- physical condition and mobility;
- mental state;
- social situation and economic conditions;
- somatic experience.

Initially, this approach to assessing the patient's well-being was used only and exclusively in oncological diseases, but over time it began to affect more and more diseases, especially chronic ones. [6,7] Currently, the issue of quality of life is an important element of assessment in people with chronic respiratory diseases. Symptoms that accompany them, such as shortness of breath, coughing, frequent expectoration of sputum or poor tolerance of effort, can lead to limiting the patient's life activity. Some symptoms, for example paroxysmal dyspnoea or hemoptysis, can cause increased anxiety related to a threat to life, which, unfortunately, significantly impairs the quality of life of patients. [8]

Chronic obstructive pulmonary disease (COPD) is one of the most common causes of morbidity, hospitalization and disability. It is estimated that in Poland, 8-15% of men and 3-5% of women suffer from COPD and this disease is the fourth most common cause of death in our country. [9]
Its chronic, progressive character and periodic exacerbations have a significant adverse effect on the quality of life of patients and their prognosis. In recent years, the role of rehabilitation has significantly increased in the treatment of patients with COPD. Physiotherapeutic management was perceived as an integral component of the treatment of patients and was treated equally with pharmacotherapy and oxygen therapy.[10]
Bronchial asthma is a chronic disease of the airways that is a serious public health problem around the world. It affects people of all ages and can have a heavy, and sometimes fatal, course. It is a long-lasting, incurable disease which despite diagnostic and therapeutic progress remains a source of numerous difficulties for some patients, limiting their optimal functioning and satisfying their needs. It also significantly affects the quality of life of patients. [11,12]

Methods

The study involved 18 patients staying in the pulmonary rehabilitation ward for 21 days. Their rehabilitation program included 5 group exercises every day, such as morning gymnastics, breathing exercises, cycloergometers and treadmills, walking training and relaxation training. Classes were held before and after the southern one.
In addition, on the order of the doctor, patients had a chest massage, drainage and chest pats, and kinesiology taping.

Quality of life assessment:

The SF-36 questionnaire was used to assess the quality of life. Each patient completed the questionnaire twice. First time on the day of admitting the patient to the ward and the second time on the last day of rehabilitation. The SF - 36 questionnaire is a general questionnaire, used to assess the quality of life of people over 18 years of age. [13] The current questionnaire is the second version, created in 1998 on the basis of the SF-36v.1 questionnaire, used for the first time in 1988, to correct the shortcomings observed during its use (lexical changes, increasing the number of possible answers from 2 to 5 in terms of "the impact of physical functioning on daily life" and "the impact of emotional state on daily life", reducing the number of possible answers from 6 to 5 in the categories "vitality" and "mental health"). Thanks to these changes, the questionnaire is characterized by better accuracy, reliability and is easier to understand and complete. [14] The SF-36v.2 questionnaire consists of 36 questions, which are divided into 8 categories: physical functioning - limitations due to physical health (PF - physical functioning), the impact of physical

functioning on daily life (RP - physical role) , pain (BP), general health perception (GH), the influence of emotional state on everyday life (RE), social functioning - limitations due to emotional problems or physical health (SF - social functioning), mental health (MH - mental health), vitality (VT - vitality); Question 2 is separately assessed as so-called "Reported health transition" (HT), which is the assessment of the current state of health in comparison to the health status of the previous year. SF-36 is one of the most frequently used questionnaires. [15,16,17]

Results

Table 1: Eight parameters defining the quality of life.

Eight parameters:	At the beginning of the research	At the end of the research
Physical functioning	39%	55%
Limitation due to physical health	40%	60%
Feeling pain	39%	72%
General sense of health	35%	67%
Vitality	40%	67%
Social functioning	39%	55%
Emotional functioning	39%	50%
Sanity	40%	67,00%

Physical function:

- At the beginning of the research, in over 39%, it was poor, much worse than a year ago,
- At the end of the research in over 55%, he was excellent, much better now than a year ago.

Restriction due to physical health:

- At the beginning of the research, in more than 40%, it limited a lot or a little.
- At the end of the research, over 60% and 100% were not limited at all.

Feeling of pain:

- At the beginning of the study, in over 39%, the patients' pain was strong or very strong.
- At the end of the study, there was no pain in over 72%.

General sense of health:

- At the beginning of the study, over 35% of patients poorly assessed their health and believed that they were more likely to get sick than others.
- At the end of the study, over 67% of patients rated their health well and claimed that they were ill.

Vitality:

- At the beginning of the study, more than 40% of the patients were more upset and were mostly exhausted.
- At the end of the study, over 67% of patients were calm, unruly and had a lot of energy.

Social functioning:

- At the beginning of the research, over 39% of patients responded that they had a more positive influence on social activity.
- At the end of the study, over 55% of patients claimed that social activity did not affect them at all.

Emotional functioning:

- At the beginning of the research, over 39% had quite a significant impact on emotional functioning.
- At the end of the study, over 50% did not affect emotional functioning.

Sanity:

- At the beginning of the study, over 40% of patients' mental health was depressive and depressed.
- At the end of the study, over 67% of patients were happy.

Table 2

Eight parameters:	At the beginning of the study, Asthma	At the end of the research Asthma	At the beginning of COPD research	At the end of COPD research
Physical functioning	44%	72%%	40%	80%
Limitation due to physical health	55%	40%	70%	30%
Feeling pain	66%	33%	55%	22%
General sense of health	29%	55%	34%	60%
Vitality	38%	58%	30%	50%
Social functioning	32%	77%	61%	88%
Emotional functioning	30%	68%	55%	72%
Sanity	39%	63%	37%	68%

Discussion

One of the first studies on the assessment of the quality of life among patients with chronic respiratory diseases was conducted in 2004 by Dębska at the Department of Bronchiology and Cystic Fibrosis at the Institute of Tuberculosis and Lung Diseases in Rabka. According to collected data from these studies, people with asthma showed a higher quality of life than those suffering from COPD. Our study confirmed these results**.** [18] On the basis of Bak-Drabik it has shown that the assessment of the health of people affected by COPD compared to the control group was significantly lower, especially in the area of physical functioning. Our study compared the quality of life of people suffering from asthma is confirmed in the following dimensions: physical, health

perception, vitality and mental health. [19] Similar conclusions drew Swedish researchers - Stahl et al. They noted that - regardless of the severity of the disease process in patients diagnosed - is reduced subjective assessment of quality of life. [20] The Włodarczyk-Sporka trials conducted on a group of 99 patients in the Department of Lung Diseases and Tuberculosis in Zabrze also confirmed a significantly worse general assessment of the quality of life in patients with COPD. [21] Carrasco Garrido et al. Spain also confirmed negative assessment of the quality of life in a stable and mild COPD. [22] In 2002, Wilson et al. Published a study on the assessment of the quality of life of patients with asthma in South Australia. The analysis of the data showed a worse score in all the dimensions of the - in both the physical and mental - than the control group.[23] It has been found that nocturnal dyspnoea, typical of asthma, occurs in many patients who develop a depressive injury associated with the feeling of "rubbing for death". These conditions are usually accompanied by reduced self-esteem, pessimism and a decrease in motivation to participate in therapy. [24]

Conclusion

Currently, both the health care system and the patient are expected to care for a good quality of life, because not survival, but a good quality of life has become a measure of the success achieved in treatment especially of chronic diseases such as COPD or asthma. The quality of life in patients suffering from these diseases is impaired, and it is influenced by both physiological and psychological factors, as well as confirmed in only part of the research, socio-economic determinants. Pharmacological and non-pharmacological treatment aims to reduce the symptoms associated with the disease, improve exercise capacity and exercise tolerance, improve the psychological state and improve the way the patient deals with the disease, all of which affects the quality of life. As demonstrated by the study, all patients who underwent rehabilitation, defining 8 aspects of quality of life, confirmed that their quality of life has significantly improved.

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