

Increasing the Quality of Life of Patients with Cardiovascular Diseases with Bronchial Asthma

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Abstract:

The combination of bronchial asthma and cardiovascular diseases is considered one of the most common combinations in the general structure of comorbidity. The problem of comorbidity is becoming one of the main problems of modern medicine. This article provides a review of modern literature on the course of bronchial asthma and coronary heart disease. Data on the prevalence in patients with bronchial asthma associated with coronary heart disease were analyzed. The results of the work reflecting the relationship of bronchial asthma with the risk of developing coronary heart disease are presented. Particular attention is paid to their influence on clinical and functional features, on the course and prognosis of the comorbidity under consideration and improving the quality of life of patients.

Keywords: comorbidity, bronchial asthma, cardiovascular diseases, coronary heart disease, heart rhythm disturbances. prevention, improving quality of life.

Relevance: Bronchial asthma is one of the most common diseases of the bronchopulmonary system, the incidence of which is steadily increasing throughout the world. At the same time, the frequency of the combined course of bronchial asthma (BA) with other diseases, including cardiovascular diseases, is also increasing [1]. In the modern world, bronchial asthma (BA) is a common chronic disease that has important medical and social significance. The negative dynamics of the prevalence of BA is associated with factors such as the deterioration of the environmental situation, an increase in the frequency of genetic defects, poor nutrition, smoking and alcohol consumption by the population, irrational consumption medications, self-medication, occupational

hazards [2]. Respiratory diseases lead in prevalence among other diseases. There are many aspects of this pathology, of particular importance is the altered reactivity of the bronchi, caused by specific immunological mechanisms, such as sensitization and allergy. Unfortunately, the modern lifestyle leads to a significant loss of health reserves and contributes to the occurrence of chronic diseases. Currently, the data available in the literature indicate that ischemic heart disease is one of the main cardiovascular diseases combined with asthma.

Available literature data indicate that in patients with obstructive pulmonary diseases, various heart rhythm disturbances are quite common comorbid conditions and are found in 40–90% of cases. More recent research suggests that allergic symptoms are associated with the prevalence and risk of developing coronary artery disease. [3]

The aim of the study: The purpose of the study is to study the incidence of cardiovascular diseases (CVD) in patients with bronchial asthma (BA), the impact of CVD diseases on the course and severity of BA and their impact on quality of life to improve the effectiveness of prevention and treatment measures. It has been revealed that CVS pathology is more often registered against the background of existing BA [4]. Of particular interest at the present stage in the era of comorbidity are works devoted to the study of the relationship between asthma and the prevalence of coronary artery disease. Published data included 8653 observations, which indicate a higher prevalence of IHD in the group of people with signs of atopy (4.8%) compared to the group of people without atopy (3.9%). It is important to study the characteristics of the course of ischemic heart disease in patients with asthma and identify the common pathogenetic mechanisms of these diseases. At the present stage, the mechanisms of formation of ischemic heart disease in asthma have not been sufficiently studied. Bronchial obstruction and bronchial hyperreactivity are pathogenetically associated with a chronic inflammatory process in the mucous membrane of the respiratory tract [2,3]. Today there is no consensus on the features of the clinical course of asthma when combined with cardiovascular diseases. Published data show that in patients with a combination of BA and coronary artery disease, a high incidence of non-painful myocardial ischemia (10–15%) was determined [5]. According to other data, painless and painful myocardial ischemia occurred with equal frequency in moderate BA, and, on the contrary, in severe BA, painful forms predominated. Timely correction of risk factors for coronary artery disease in patients with asthma can increase survival after exacerbations of bronchopulmonary disease [6]. Diseases of the cardiovascular system occupy a leading place in the structure of general morbidity and disability of the population.

It has been established that 33–80% of patients with coronary artery disease experience mental changes, among which anxiety and depressive-hypochondriacal disorders, loss of self-identity, and fear of death predominate. Decreased quality of life, social adaptation, and depression significantly worsen the effectiveness of therapy for cardiovascular pathology, affect the course of the post-infarction period and lead to increased mortality [2,6]. Identification of the relationships of the cardiovascular system in bronchial asthma, comorbidity is about 70%, which actualizes this problem. It is important to know about such a new concept as the cardiorespiratory system, since the processes of respiration and blood supply are inextricably linked. According to various researchers, approximately 30% of patients with asthma are diagnosed with concomitant cardiovascular diseases. According to available literature data, on average, after 30 days from the onset of myocardial infarction, exacerbation of bronchial asthma was diagnosed in patients (in 25% of patients). However, in none of them it was possible to establish the iatrogenic nature of the exacerbation of the bronchopulmonary process; the patients did not suffer intercurrent viral respiratory diseases during hospitalization, and the usual anti-asthmatic therapy did not change. It is assumed that exacerbation of bronchial asthma in the late stages of myocardial infarction is a symptom complex of allergic origin (transient blood eosinophilia is observed before exacerbation of asthma). In approximately every third patient with asthma, myocardial infarction was the first clinical manifestation of IHD, which can be explained by a subjective factor: in patients in this

category, the pain syndrome is often masked by shortness of breath and, on the contrary, shortness of breath is the clinical equivalent of angina. In the literature, there is isolated information about a relatively high frequency of atypical, in particular without pain, forms of MI in patients with concomitant asthma [4,7].

Materials and research methods: To study the influence of medical and social factors, a group was selected that included 67 people who were under the supervision of an allergist diagnosed with bronchial asthma and a cardiologist diagnosed with coronary heart disease. When processing and analyzing research materials, standard statistical methods were used. There are known data from one of the clinical studies in which 67 patients were studied. A full analysis of the information was carried out taking into account age characteristics, gender, social status, and the nature of concomitant cardiovascular pathology. The severity of bronchial asthma, as the main disease, as well as coronary heart disease were corrected. Initially, all patients underwent a physical examination with anthropometric parameters measured and body mass index determined. The subjects underwent a spirograph test, Holter monitoring, ECG, and daily blood pressure measurement. The examination took place against the background of antihypertensive therapy. Therapy was considered ineffective or ineffective if blood pressure rose above 120/70 mm Hg. Art. at night, and during the day above 140/80 mm Hg. Art. The functional work and structure of the heart were also studied using echocardiography.

Results: The study found that the majority of patients suffered from persistent asthma. This form is most often combined with cardiac disorders. At the same time, severe forms of bronchial asthma were practically not found in patients with comorbid cardiac diseases. Research has proven that abdominal obesity affects the function of external respiration and the vital capacity of the lungs, that is, it leads to the formation of pathological changes in the ability of the lungs to ventilate. The influence of the nature of nutrition on the course of the disease showed that persons consuming products of plant origin, juices rich in vitamins, fiber, antioxidants, have a slight tendency towards a more favorable course of bronchial asthma, while consuming products of animal origin, rich in fats, proteins and refined easily digestible carbohydrates, is associated with severe and frequent disease. It was found that most of the works are devoted to the study of BA with diseases of the heart and blood vessels, and more precisely with hypertension and coronary heart disease (CHD). The small number of studies and the ambiguity of data actualize the problem of the clinical and functional influences of CVS and asthma. [4].

Research results: There are known data from one of the clinical studies in which 5 thousand patients suffering from asthma were studied. A complete and detailed analysis of information was carried out, taking into account age characteristics, gender, social status, level of material security, and the nature of concomitant cardiovascular pathology. [4].

The study found that most patients suffered from persistent asthma. This form is most often combined with cardiac disorders. At the same time, severe BA was practically not found in patients with comorbid cardiac diseases. It is also worth noting that persistent BA was more often found in combination with IHD than with hypertension. This aspect must be taken into account in the treatment of diseases with broncho-obstructive syndrome. According to A.A. Roshchina, hypertension in patients with asthma is more common than in people with essential hypertension. In asthma, hypertension is characterized by an insufficient decrease in blood pressure during night sleep. Studies have fully proven that abdominal obesity affects the function of external respiration and the vital capacity of the lungs in a restrictive way, that is, it leads to the formation of pathological changes in the ability of the lungs to ventilate. Studies of the influence of diet on the course of the disease have shown that persons consuming foods of plant origin, juices rich in vitamins, fiber, antioxidants, have a slight tendency towards a more favorable course of asthma, while consuming foods of animal origin, rich in fats, proteins and refined easily digestible carbohydrates, is associated with a severe course of the disease and frequent exacerbations.

Conclusions: Lung diseases must be considered inextricably linked with the state of the cardiovascular system. Comorbidity in people with bronchial asthma is high; in 30% of people with this pathology, concomitant cardiovascular diseases are diagnosed. In recent years, a special place has been given to the prevention of diseases of the cardiovascular system. It is necessary to choose tactics for diagnosing comorbid conditions within the pathology of bronchial asthma and diseases of the cardiovascular system. [4,6]. In addition, the high percentage of cardiovascular pathology in such patients opens up a huge problem regarding the prevention and difficulties of therapy for existing bronchial asthma. Thus, the interaction of diseases, age and drug pathomorphism significantly changes the course of the underlying disease, the nature and severity of complications, worsens the patient's quality of life, limits or complicates the diagnostic and treatment process. Lung diseases must be considered inextricably linked with the state of the cardiovascular system. Comorbidity in people with asthma is high; in 30% of people with this pathology, concomitant hypertension is diagnosed. [3,7]

1. In the structure of asthma morbidity in terms of referral rates, there is a predominance of older patients who have not only asthma, but also other pathologies, including cardiovascular diseases.
2. Dynamic follow-up of working-age asthma patients by primary care physicians is necessary for earlier detection and treatment of circulatory diseases.
3. The presence of asthma and cardiovascular diseases requires the appointment of not only adequate basic and symptomatic therapy, symptom control, elimination of risk factors that influence the exacerbation and progression of asthma, but also regular monitoring and treatment of cardiac pathology. [7]
4. Monitoring quality of life. allows you to determine how the patient tolerates the disease; it is also important for solving many issues that arise during the treatment process.

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