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# Features of the Clinical Characteristics of Patients with Bronchial Asthma Combined with Arterial Hypertension

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**Abstract:** AH in the examined BA patients is an independent disease of EAH, the severity of its course is determined by the stage of the disease, the degree of BP increase and risk factors. EAH and BA have a mutually aggravating effect. Hereditary predisposition is recognized as an important risk factor for hypertension. In the group of patients with concomitant pathology, heredity for BA is burdened in 28,76%, for EAH in 64.38% of cases. In the control groups of patients, heredity was burdened in 47,82% of cases for AH and in 30,43% of cases for BA. Being overweight is a risk factor for hypertension. In patients with concomitant pathology, overweight is found much more often (76.69%) than in the group of patients with hypertension (43,47%) and BA (30,43%).

**Keywords:** bronchial asthma, arterial hypertension, obesity, comorbidity.

In recent years, there has been a steady increase in the incidence of asthma, more and more often, the emergence of its severe forms is noted [8,13]. Growing incidence of asthma is combined with some features of its flow, complications and outcomes.

In different countries of the world, bronchial asthma is prevalent from 1 to 18%. Bronchial asthma reduces the average life expectancy in men by 6.6%, in women by 13.5% and is the cause of disability in 1.5% of patients with bronchial asthma [1].

Despite the decrease in the number of hospitalizations and deaths associated with AD, this disease still causes high damage to society and the health care system due to production losses, manifestations of disadvantage in the family, and a decrease in the quality of life of patients [2].

Increased the number of patients per stems symptoms of the disease appeared after 40-50 years [14,15]. Therefore, BA has become more often combined with diseases of the cardiovascular system, which, in turn, have become significantly younger [2,10,13]. Furthermore, structure chronic pathology is now characterized not only treatment of selected nosology, but also increase their combination of currents that mutual burden for illnesses and creates difficulties in the treatment of [5,6].

The mechanisms that determine the chronic course of the disease are common, in connection with which a greater understanding of the single links of combined pathology will allow to overcome the well-known difficulties of its therapy [11,12].

Modern medicine is losing its mononosological character, acquiring the status of comorbidity [13]. Currently, comorbidity has become a separate research area [5].

The presence of comorbidity increases the number of complications, requires non-standard approaches to treatment and worsens the prognosis [4]. In addition, comorbidity contributes to

polypharmacy, which leads to the development of undesirable drug effects and iatrogenic pathology [6].

The like hood of developing comorbidities with an increase in life expectancy increases, which can be explained by both age-related changes and negative effects of the environment and living conditions for a long time.

Concomitant diseases have a noticeable effect on the condition of patients with bronchial asthma (BA), and significantly change its course. The combination of asthma and pathology of the circulatory system is widespread. Diseases of the cardiovascular system make a significant contribution to the formation of a situation of mutual burden [9].

The possibility of combining BA and AH was first pointed out by B.G. Kushelevsky and T.G. Raneva in 1961. They considered this combination as an example of "competing diseases." Further studies showed that the prevalence of arterial hypertension in patients with bronchial obstruction averages 34.3% [9]. Bronchial asthma refers to multifactorial diseases, the etiopathogenesis of which is determined by the complex effects of endogenous and exogenous factors, among which environmental factors play a special role. In different countries of the world, bronchial asthma is spread from 1 to 18%. Bronchial asthma reduces the average life expectancy in men by 6.6%, in women by 13.5% and is the cause of disability in 1.5% of patients with bronchial asthma [7] .

Among allergic diseases, bronchial asthma (BA) is one of the most common. According to epidemiological data, over the past 10 years, 4-10% (about 300 million people) of the world's population suffer from this disease [7]. Ras tuschaya incidence of asthma is combined with some features of its Techa Niya, complications and outcomes. Increased the number of patients per stems symptoms of the disease appeared after 40-50 years [14,15]. Therefore, asthma began to be more often combined with diseases of the cardiovascular system, which, in turn, became significantly younger [2]. In addition, structure Dr. chronic diseases are now characterized not only by In addition, the structure of chronic pathology is currently characterized not only by an increase in the spread of individual nosologies, but also by an increase in their combined course, which mutually aggravates the course of diseases and creates difficulties in treatment [16,17]. The mechanisms that determine the chronic course of the disease are often common, in connection with which a greater understanding of the single links of combined pathology will allow to overcome the well-known difficulties of its therapy [5].

In recent years, increased attention has been paid to the combination of BA with arterial hypertension (AH) due to the connection between each other, which is often noted in clinical practice. According to various authors, the frequency of hypertension in BA patients fluctuates in a rather wide range - from 6.8 to 76.3%, averaging 34.3% [3].

High blood pressure is often quite common in patients with asthma and may be the result of chronic thrust poxvirus, treatment of β - adrenergic agonists and corticosteroids, and other reasons. In the literature there is no consensus on the causes of changes in arterial pressure in patients with airflow obstruction [9]. On the other hand, an exacerbation of bronchial asthma provokes desstabilization of hemodynamics in such patients, which leads to an increase in blood pressure and entails a deterioration in well-being.

To study the features of the clinical characteristics of patients with bronchial asthma combined with arterial hypertension.

## MATERIAL AND RESEARCH METHODS

The study was conducted on the basis of the regional multidisciplinary medical center in Bukhara since January 2018 to February 2020.

The study included 110 patients who were inpatient treatment in the pulmonary and therapeutic departments.

All patients underwent a generally accepted clinical study:

a) collection of anamneses;

b) inspection;

c) physical examination;

d) laboratory research methods:

- general analysis of blood;
- general urine analysis;
- general analysis of sputum with Gram stain;

e) fluoroscopy, radiography or fluorography of the chest organs in two projections;

f) electrocardiography;

g) consultation with an ophthalmologist.

There were examined 73 patients who were in hospital -term treatment in the pulmonology department.

The patients were hospitalized due to BA exacerbation. The average age of the patients was 52.95 ± 3.02 years (from 39 to 68 years). Among the surveyed 19 men (26.0%), 54women (73.97%).

**RESULTS AND DISCUSSION**

The patients were distributed according to the form of bronchial asthma, taking into account the etiopathogenic of the disease: in 1 3 patients (17, 80 %), allergic form of asthma was diagnosed, in 4 (5,47 %) - non-allergic, in most of the mixed form - 5 6 patients (76,71%), and 4 of them had a combination of allergic and aspirin asthma, and 5 2 had allergic and endogenous forms. The examination included patients with different degrees of severity of asthma: mild persistent current was in 12 patients (16,43%), y remaining 61 (8 3,56 %) - moderate severity.

The severity was determined based on the recommendations of the Global Strategy for the Treatment and Prevention of Bronchial Asthma (VSA, 2002). BA duration ranged from 1 year to 20 years and averaged 5,75 ± 2.8 years. All patients had concomitant arterial hypertension, in 23 (31.50%) - grade II, in the rest - 50 ( 68,49 %) - grade I. The degree was determined on the basis of the classification proposed in the European recommendations of the EOG-EOK, 2003. I degree (soft) - SBP of 140-159 mm Hg, diastolic blood pressure. 90-99 mm.hg. Art., II degree (moderate) - SBP 160-179 mm Hg. Art., DBP-100-109mm hg. Art. The duration of hypertension ranged from 1yearto15years and averaged 4.8±1.1years. The distribution of patients depending STI from the time of occurrence of the first symptoms of asthma, and hypertension are shown in Table 1.

**Table 1: Distribution of patients by the duration of asthma and arterial hypertension in their combined course.**

| Criterion | Number na cients | | The average age of the WHO penetration BA | The average age of the WHO penetration AH |
|---|---|---|---|---|
| | abs. | % | M ± m | M ± m |
| AH developed before BA manifestation | 38 | 5 2,05 | 52,58 ± 1.79 | 48,33 ± 2.9 |
| Manifestation of AH and BA at the same time | 17 | 2 3,28 | 48,2 ± 2.1 | 48,2 ± 2.1 |
| BA developed earlier than AH | 18 | 2 4,65 | 41 ± 3.17 | 50 ± 1D |

The table shows that a larger number of patients -38 people (52,05%), the first symptoms of hypertension appeared to asthma demonstrations A 18 per-sons (24,65%) of the labeled

simultaneous occurrence of asthma symptoms and hypertension, thus at the time criteria can exclude s in most of the patients with even course of BA and AAH.

They were excluded from the study patients set odds symptomatic arterial hypertension, pulmonary hypertension, severe bronchial asthma, hormone-dependent bronchial asthma, chronic pulmonary heart disease, hypertension above II-degree, failure KRO, impaired glucose tolerance.

To evaluate the clinical and functional features of the combined BA and AAH two control groups of patients were examined. The first consisted of 23 patients with EAH, the second - 23 patients with BA and normal blood pressure.

The average age of patients with EAH was 56,8 ± 3,64 years (from 47 to 69 years), 7 men (30,43%), 16 women (69,56%). Duration of EAH to on average 6,75±2,67 years. Among patients of the first group 5 (21,73%) with AHII degree, the rest- 18 (78,26%) with AH I degree. The criterion for exclusion from the group is respiratory diseases.

The average age of BA patients was 51,61±1,98 years (from39 to 69 years), 8 men (34,78 %), 15 women (65,21 %). The duration of BA is 7,18 ± 2.3 years. 4 people (17,29 %) suffered from allergic asthma, 3 people (1-3,04 %) had non- allergic asthma, 36 (69,56%) had mixed asthma. 3 persons (13,04 %) had mild persistent during BA 20 persons (86,95 %) - media therein degree of asthma severity. All had normal blood pressure levels, and there was no history of episodes of increased blood pressure.

Thus, the duration of the history of BA and AH is approximately the same in the studied group of patients and in the control groups. In addition, the distribution of patients by sex, age, form of disease and severity in all groups is quite close.

Further, the comparative clinical and functional characteristics of the studied groups of patients were studied (Table 2).

**Table 2: Clinical and functional characteristics of the studied groups.**

| Index | | AG and BA | BA | AG |
|---|---|---|---|---|
| number of patients, people | | 73 | 23 | 23 |
| gender, number of patients in% | Men | 29 | 39 | 35 |
| | Women | 90 | 80 | 84 |
| Average age, years | | 52,95 ± 3.02 | 51,61 ± 1,98 | 56,8 ± 3,64 |
| The average duration of hypertension, L is | | 4,8 ± 1,1 | - | 6,75 ± 2,67 |
| Average BA duration, years | | 5,75 ± 2,8 | 7,18 ± 2,3 | |
| BA form, number of patients in% | Allergic | 17,80 | thirteen | |
| | non-allergic | 5,47 | 4 | |
| | Mixed | 76,71 | 56 | |
| BA severity, number of patients in% | Easy | 16,43 | 12 | |
| | Average | 83,56 | 61 | |
| AH degree, number of patients in% | 1st degree | 68,49 | - | 50 |
| | 2nd degree | 31,50 | - | 23 |



## CONCLUSIONS

1. AH in the examined BA patients is an independent disease, the severity of its course is determined by the stage of the disease, the degree of BP increase and risk factors. EAH and BA have a mutually aggravating effect.

2. Among those examined, the time of manifestation of hypertension in patients with bronchial asthma and the time of the appearance of the first symptoms of hypertension are of great importance. The results showed that in a larger number of patients (54.28%), the first symptoms of hypertension appeared before the onset of AP, and 22.86% noted the simultaneous

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