

BRONXIAL ASTMA BILAN KASALLANGAN BEMORLARDA KLINIKO-ANAMNESTIK KOʻRSATKICHLARINI VA XAVF OMILLARINI OʻRGANISH



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Annotatsiya Ushbu maqolada bronxial astma bilan og'rigan bemorlarda tashqi xavf omillari va anamnez asosiy klinik simptomlarni bo'yicha statistik ma'lumotlar va xalqaro markazlarning ilmiy tadqiqotlari natijalari keltirilgan.

Kalit so'zlar: nafas qisilishi, gemoptiz, obstruktsiya, bronxial shilliq qavatning shikastlanishi. ИССЛЕДОВАНИЕ КЛИНИКО-АНАМНЕСТИЧЕСКИХ ПОКАЗАТЕЛЕЙ И ФАКТОРОВ РИСКА У БОЛЬНЫХ БРОНХИАЛЬНОЙ АСТМОЙ

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Аннотация: В данной статье представлены статистические данные и результаты научных исследований международных центров по внешним факторам риска и основным клиническим симптомам в анамнезе у больных бронхиальной астмой.

Ключевые слова: одышка, кровохарканье, обструкция, повреждение слизистой оболочки бронхов.



STUDY OF CLINICAL AND ANAMNESTIC INDICATORS AND RISK FACTORS IN PATIENTS WITH BRONCHIAL ASTHMA

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Abstract: This article presents statistical data and the results of scientific research conducted by international centers on external risk factors and the main clinical symptoms in the medical history of patients with bronchial asthma.

Key words: dyspnea, hemoptysis, obstruction, bronchial mucosal damage.

Chronic bronchitis. Bronchial asthma is a widespread chronic respiratory disease characterised by inflammation of the airways, reversible airway obstruction and bronchospasm. It affects people of all ages and significantly impacts quality of life and healthcare systems worldwide. The prevalence of bronchial asthma varies considerably by region. In developed regions such as North America and Europe, prevalence is approximately 10% of the population. This high rate is partly associated with lifestyle factors such as increased awareness, improved diagnostic capabilities, and exposure to indoor allergens. Conversely, in developing countries in Asia and Africa, the prevalence is lower, typically ranging from 2 to 4%. Rapid urbanisation and lifestyle changes are leading to an increase in asthma cases in these regions.

In Latin America, a variety of patterns of disease spread are observed: in some countries, the indicators are comparable to those of developed countries. There is also a significant difference in the prevalence of asthma between urban and rural areas. Higher rates have been recorded in cities, which is associated with factors such as increased air pollution and the diversity of allergen exposure. This urban-rural disparity illustrates the impact of environmental factors on the spread of asthma. Another important genetic factor contributing to asthma susceptibility is related to the regulation of immunoglobulin E (IgE) levels. IgE is an antibody that plays a central role in allergic responses. It has been found that certain genetic variants affect the production of IgE and the response to it, which in turn influences the likelihood of developing allergic reactions closely associated with asthma. For example, polymorphisms in the gene encoding the β-chain of the high-affinity IgE receptor (FcεRIβ) have been found to be associated with increased IgE levels and a higher risk of asthma. In addition, recent genome-wide association studies (GWAS) have identified numerous other genes related to asthma. These genes are involved in regulating the tone of airway smooth muscles, controlling mucus secretion, and maintaining epithelial integrity — all of which play a crucial role in the pathogenesis of asthma. For example, the ORMDL3 gene located on chromosome 17q21 has been repeatedly identified as a risk factor for asthma in various populations. These gene variants are believed to influence the risk of developing asthma by regulating inflammation in the airways[8].

Research objective. The indicators of statistical data on external risk factors and history based on the main clinical symptoms were studied in 120 patients suffering from bronchial asthma.

Research methods and materials. The study involved 120 patients with a history of bronchial asthma in the pulmonology department of VKTTM. The patients were divided into 3 groups: the first group included 60 patients with BA and pulmonary hypertension, the second group included 60 patients with BA without pulmonary hypertension, and the third control group included 30 healthy individuals. Groups were selected randomly. The study was conducted with the consent of the



participants. Results: The leading symptoms and risk factor indicators in the patients included in the study were examined. The parameters measured in the examined patients were analysed in 3 groups. The results of the indicator analysis are presented in Table 1.

Clinical-anamnestic indicators and risk factors of BA patients and control group indicators According to the summary analysis results, patients in group 1 had an average age of 58.1 ± 6.3 years,

	1-Patients with BA +	2patients without	3-control group
	pulmonary	BA + pulmonary	(n=30)
	hypertension, (n=60)	hypertension in	
		group, (n=60)	
Average age (years)	$58,1 \pm 6,3$	$53,5 \pm 7,6$	$47,1 \pm 5,9$
Gains (E/A, abs. %)	31 (53,3%) / 28 (46,7%)	26 (43,3%) / 34	14 (46,7%) / 16
	T TIDA	(56,7%)	(53,3%)
Smooking	41 (67,1%)	35 (56,9%)	4 (13,3%)
Impact on air pollution (Aral	45 (74,2%)	37 (61,0%)	6 (20,0%)
Sea region factors)			
Weather and living	31 (50,5%)	24 (40,0%)	5 (16,7%)
conditions factors			
Occupational hazards	19 (31,0%)	17 (25,9%)	3 (10,0%)
(manufacturing, agriculture,		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
etc.)			
Genetic predisposition	13 (19,7%)	8 (13,3%)	2 (6,7%)
(family history)			
Associated comorbid	37 (60,5%)	22 (37,1%)	4 (13,3%)
conditions (hypertension,			
CHD, diabetes mellitus)			
Average duration (years of	$12,3 \pm 4,5$	$8,6 \pm 3,8$	
Average duration (years of illness) Severity of clinical signs (dyspnoea ≥2 points on the MRC scale)			
Severity of clinical signs	43 (71,0%)	28 (46,7%)	
(dyspnoea ≥2 points on the	JATEL	ALI	
MRC scale)	TE MEDIC		

which was found to be higher than in group 2 (53.5 \pm 7.6 years) and the control group (47.1 \pm 5.9 years). In terms of gender composition, the proportion of men among patients with pulmonary hypertension (53.3%) was higher than that of women, which may primarily be associated with tobacco smoking. When comparing risk factors, tobacco smoking was 66.7% in group 1, 56.7% in group 2, and only 13.3% in the control group. Additionally, environmental factors, specifically atmospheric pollution and dust exposure in the Aral Sea region, showed high figures among patients. Air pollution occurred in 74.2% in group 1, 61.0% in group 2, and 20.0% in the control group. Risk factors related to dust and home conditions were also higher in group 1 (50.5%) and showed a significant difference compared to the control group (16.7%). Occupational hazards (harmful effects in the fields of industry and agriculture) were identified in 31.0% of Group 1, 25.9% of Group 2, and 10.0% of healthy individuals. Although genetic predisposition had a relatively low value, it was recorded higher in both patient groups compared to the control group. Analysis of comorbid diseases showed that they occurred in 60.5% of cases in Group 1, 37.1% in Group 2, and only 13.3% in the control group. Particularly, arterial hypertension and diabetes mellitus were more common in the group with pulmonary hypertension. At the same time, the severity of dyspnoea also differed: dyspnoea of ≥2 points on the MRC scale was observed in 70.0% of patients in Group 1 and 46.7% in Group 2. These data indicate that patients with BA complicated by pulmonary hypertension tend to



be older and have a higher cluster of risk factors (especially smoking, air pollution, and comorbid diseases). This condition may serve as an additional factor in the development of pulmonary hypertension and can lead to a worsening of clinical symptoms.

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