

DETERMINATION OF ADAPTIVE RESPONSES IN PATIENT WITH BRONCHIAL ASTHMA

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Abstract. *Observation of patients with progressing bronchial asthma (BA) showed that complications of BA depend not only on the reaction of the organism and treatment but also on the development of different adaptive responses (AR) of the organism.*

Keywords: *Bronchial asthma, adaptive responses, obesity.*

Bronchial asthma (BA) is one of the most widespread chronic diseases substantially influencing the patients' quality of life and being an economic and social burden for the society.

Observation of patients with progressing BA showed that complications of BA depend not only on the reaction of the organism and treatment but also on the development of different adaptive responses (AR) of the organism [1].

The aim of the research is to define the criteria of BA progression taking into account the features of lipid metabolism and adaptive responses in patient with BA and increased body weight and obesity [2].

The data got as a result of examination of 21 patients (13 women and 8 men at the age of 29-54) with increased body weight and obesity are used in the study. Verification of diagnosis was conducted by means of generally methods of patients' examination. Data of anamnesis, blood and urine tests results, daily diuresis, functional state of lungs - spirometry, peak flow monitoring, data of lipid spectrum were studied. A degree of obesity was determined according to the recommendations of WHO (2009) depending on BMI. The assessed level of total cholesterol (TC) and triglycerides (T) defined the state of lipid metabolism. Nonspecific AR were

determined on the basis of relative amount of lymphocytes and segmented neutrophils (index of adaption) and relative amount of lymphocytes in peripheral blood [3].

The conducted research demonstrated that BA course in patients with increased body weight and obesity has its features. In examined patients the level of cholesterol fluctuated from 2,80 mmol/l to 10,8 mmol/l that averaged $5,81 \pm 0,97$. Increased body weight was accompanied by the minimum level of cholesterol ($5,0 \pm 0,2$ mmol/l). In women the level of TC was higher than in men and made up $8,32 \pm 1,3$ and $6,97 \pm 1,01$ accordingly. The low level of TC was accompanied by worsening of clinical and functional indices. In patients of such a group was found elevated ESR $26 \pm 5,1$ mm/hour, reduced amount and the fall of FEV₁ to $54 \pm 3,5\%$ whereas at the high level of cholesterol that was $6,7 \pm 1,65$ mmol/l, ERS was $19,3 \pm 2,3$ mm/hour, the level of lymphocytes was $29,3 \pm 1,02\%$ and FEV₁ – $67,3\%$. The level triglycerides ranged from 0,5 mmol/l to 6,1 mmol/l and averaged $1,34 \pm 0,8$ mmol/l. The normal level was detected in 8 patients (38%), in the remaining patients hypertriglyceridemia was discovered. With the increase of BMI the number of patients with normal TG decreased and made up (23,8%). The number of patients with the high level of TG and obesity reached 6 people (28,6%) whereas with normal of increased body weight, respectively, two (9,5%) and one (4,8%) patients. In 3 patients with BA and elevated TG and obesity diabetes was diagnosed.

Analysis of adaptive responses showed that patients had different types of AR: stress (28,7%), exercise (40,7%), calm activation (18,9%), increased action (11%). In the group of patients characterized by FEV₁ less than 59,3%. The response to stress is more common than in patients of other groups. The formation of adaptive response was affected by patients' age. In young patients favourable AR training was created more often whereas in the age category – stress reaction.

Conducted research that obesity in combination with elevated TG in patients with asthma should be a predisposing factor that leads to impaired lung function and disease progression [4].

Reference.

1. . . .
// o . . . , 2008
2. /
Francesco Branca, Haik Nikogosian Tim Lobstein// ,
2009. — 408 .
3. . . , . . , . .
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. — ∴ , 1998. — 655 .
4. . . ,
/ . . , . . //
. — 2010. — 2, 11– .38-41.

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