



doses of rapidly relieving drugs should be recommended in the first three days of treatment, and the volume of therapy should be reviewed more often.

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THE EFFECT OF OXIDATIVELY MODIFIED PROTEINS IN REMODELING OF THE RESPIRATORY TRACT IN SCHOOL-AGE CHILDREN WITH BRONCHIAL ASTHMA

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Goal of research is to study in the dynamics the informative value of the oxidatively modified proteins level in a pulmonary expirate of the school-age children with bronchial asthma, depending on the degree of bronchial remodeling.

49 schoolchildren suffering from persistent bronchial asthma (BA) were examined at the Pulmoallergologic Department of the Municipal Medical Establishment "Regional Pediatric Clinical Hospital" in the town of Chernivtsi. On the basis of the content of such respiratory tract remodeling marker in the sputum supernatant as vasoendothelial growth factor (VEGF) two clinical groups of observation were formed. The first (I) group consisted of 24 patients with VEGF level in sputum exceeding 80.0 ng/ml and reaching 193.71 ± 12.94 ng/l on average. The second (II) group included 25 children with average VEGF level in sputum was less than 80.0 ng/ml (49.55 ± 1.24 ng/ml).

In children from the I clinical group level of the extracellular eosinophilic cationic proteins in sputum averaged 2.78 ± 0.24 pg/ml, while in the comparison group it was 1.77 ± 0.21 pg/ml ($P < 0.05$). Results of the dynamic evaluation of total protein level, aldehyde and ketone derivatives of dinitrophenylhydrazones levels in exhaled condensate of BA patients indicating the predominance of protein oxidative modification processes in patients with high level of bronchial remodeling markers in sputum. In the dynamics of anti-inflammatory treatment there were discordant changes in these indices of exhaled condensate, which reflected the higher effectiveness of the standard anti-inflammatory therapy in children I group, possibly due to the eosinophilic nature of airway inflammation. However, in the dynamics of 3-year observation, activity of the oxidative processes in patients from the I group decreased, while in patients from the II group with normal indices in the condensate of exhaled air at the beginning of observation, activity of the oxidative modification increased in the dynamics with the highest level after 1.5-2 years from the beginning of monitoring observation. At the same time, during the period of dynamic observation of the bronchial lability index gradually reduced from year to year only in children from the I group: at the initial examination – 22.14%, and at the final one – 13.28% and the representatives of the II clinical group had an average Bronchus Lability Index (BLI, %) of 18.55% and 23.89% respectively. Thus, it can be assumed that in children with high level of bronchial remodeling marker in sputum, despite the decrease in the activity of inflammatory process, apparently there was a realization of the risk of structural changes in the airways, as evidenced by the signs of protein release and formation of the bronchial wall rigidity.

Examination of the condensate of pulmonary expirate at the beginning of observation give reason to suggest that in children with high level of bronchial neoagogenesis biomarker (VEGF) in sputum the standard control treatment causes a decrease in the severity of the protein oxidative modification, but at the same time protein release increases and bronchial lability decreases. In the process of dynamic observation in children with asthma from the reference by the parameters of bronchial remodeling group the activity of protein oxidation as well as bronchial lability increases in spite of the standard treatment.