МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
ВИЩИЙ ДЕРЖАВНИЙ НАВЧАЛЬНИЙ ЗАКЛАД УКРАЇНИ
«БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»

ХИСТ 2016

ВСЕУКРАЇНСЬКИЙ МЕДИЧНИЙ ЖУРНАЛ МОЛОДИХ ВЧЕНИХ

ЧЕРНІВЦІ
2016

Міністерство охорони здоров'я України
Вищий державний навчальний заклад України
"Буковинський державний медичний університет"

Bukovinian International Medical Congress

ХИСТ

2016, випуск 18

Всеукраїнський медичний журнал молодих вчених
Заснований у 2000 році

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Повнотекстова версія журналу представлена на сайті: http://bim.co.ua/

Чернівці, 2016

Матеріали III Міжнародного медико-фармацевтичного конгресу студентів і молодих вчених

Материалы III Международного медико-фармацевтического конгресса студентов и молодых учёных

Abstract Book of 3rd International Medical Congres for Students and Young Scientists

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INDICES OF THE ANTIOXIDANT SYSTEM IN CHILDREN WITH FREQUENT EPISODES OF THE ACUTE RESPIRATORY DISEASES

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The peculiarities of functioning of the systems of nonspecific resistance of the organism determine the formation of the phenomenon of frequent respiratory diseases in children. Increased free radical processes are the nonspecific manifestation of membrane destruction as a result of recurrent acute inflammatory respiratory diseases. The severity of possible deviations of parameters of antioxidant system can associate with the frequency of acute respiratory infections (ARI) and concomitant diseases in children.

The main clinical group included 112 children of preschool age with frequency of episodes of ARI four or more times per year, preceding the survey (30% of patients had 7 or more episodes yearly), of which 55 were boys. The second group included 88 occasionally ill children, in whom ARI were observed less than four times a year. Lipid peroxidation was evaluated in terms of malondialdehyde (MDA), indicators of glutathione antioxidant system of red blood cells (glutathione peroxidase (GP), glutathione-S-transferase (GT) and glutathione (G) were examined in children.

More evident intensity of lipid peroxidation processes was revealed in children with frequent episodes of the ARI in comparison with children of the II clinical group. Thus, the proportion of children of the I clinical group with indicators of MDA content in serum which exceeded +1σ, was 39,4±5,0%, while among patients with episodic ARI - 22,5±5,9% (pt<0,05). No significant differences in the status of the glutathione antioxidant system in children at observation were found, except for some decrease in activity of GT. However, in children with signs of atopic reactivity that prevailed in the group with frequent ARI, GT activity in red blood cells was low - 19,9±1,2 mcM/gHb•min (pt:N<0,05), and the content of MDA in blood serum was high - 6,9±0,3 mM/l (pt:N<0,01). In the subgroup of children with the values of MDA >+2σ and <-1σ allergic manifestations (food, drug, household, atopic dermatitis etc.) were observed in 33,3±9,8% and 12,0±6,6% of children (pt>0,05) respectively, and the proportion of patients with frequent ARI was 83,3±7,8% and 48,0±10,2% (pt<0,02) in these subgroups respectively.

Significant increase of the level of malondialdehyde in serum, a slight reduction of content of glutathione and glutathione-S-transferase activity in erythrocytes were revealed in children with frequent episodes of the acute respiratory infections and allergic "background" concomitant pathology.

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FEATURES ATOPIC REACTIVITY IN SCOOL-AGE CHILDREN WITH SEVERE ASTHMA

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According to published data in 70-95% of children developing asthma that is difficult to treat. The ineffectiveness of inhaled corticosteroids, which is the basis of basic therapy of asthma, can be due, perhaps, the presence of different phenotypes of the disease, including phenotype “severe asthma”. Assigning controlling asthma therapy in children should be considered at its phenotype, characterized by different mechanisms of the disease, but, is almost identical clinical symptoms.

Aim of the work: to establish the diagnostic value of indicators atopic reactivity in the verification severe asthma phenotype to improve treatment outcomes in school-age children. 60 school-age children with asthma examined in pulmonology department of Chernivtsi Regional Clinical Hospital. Over the course of the disease patients were divided into two clinical groups. The first clinical group consisted of 30 patients who had been registered severe asthma. The second clinical group formed 30 students who have asthma defined moderate. For the main clinical signs were matched comparison group. In all children serum total immunoglobulin E (IgE), IL-4 were determined. Identification of immediate type skin sensitivity to standard Nonbacterial allergens was performed by intradermal tests.

The concentration of IL-4 in serum children I clinical group was 10,6±2,1 pg/ml, and in those of the second group - 7,2±2,5 pg/ml (P>0,05). Almost every third patient first clinical group (36,4%) recorded significantly increased content of IL-4 (more than 10,0 pg/ml), whereas in the II group surveyed - only 15,5% of cases (Pφ<0,05). Concentration of IgE, which exceeded 545,3 IU/ml, recorded in 56,6% of children I clinical group and only 43,4% of cases in the second (P>0,05) the comparison group. In patients with severe asthma cases occurred significantly more frequently increased sensitivity of the skin to household allergens relative to the second group. Thus, the amount of hyperemia more than 15,0 mm was recorded in 81,5% of the I group and only 51,9% of persons (Rφ<0,05) second.

Conclusions. The concentration of immunoglobulin E in excess of 545,3 IU/ml, in 2 times increased the chances of the presence of severe asthma in children. Increased sensitivity to domestic allergens (hyperemia over 15,0 mm) allows to verify the specificity of 81,5% severe asthma and personalize treatment policy in these patients.

Педіатрія