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THE MARKERS OF ATOPIC REACTIVITY IN SCHOOL-AGE CHILDREN WITH SEVERE ASTHMA

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Introduction: A major challenge among modern pediatric allergic diseases is bronchial asthma. Assigning asthma control therapy to children should be considered based on the phenotype. Hence, performance of atopic reactivity in children that reflect the specific pathogenic mechanisms of asthma will personalize treatment and thus improve management of asthma.

Aim: To increase the effectiveness of treatment of severe asthma phenotype in school-age children, taking into account the diagnostic value of atopic reactivity indicators.

Materials and method: 60 school-age children suffering from asthma were comprehensively examined in the pulmonology department of Chernivtsi Regional Children's Clinical Hospital. The study involved 30 pupils with severe asthma and 30 children with moderate course. The content of serum total immunoglobulin E(IgE), IL-4 and IL-5 were determined by enzyme-linked immunosorbent assay (ELISA). Determination of immediate type skin sensitivity to nonbacterial standard allergens was performed by intradermal tests. To study atopy, standard household, epidermal, pollen and food allergen was used.

Clinical and epidemiological risks, as well as the diagnostic value of individual indicators of atopic reactivity for severe asthma phenotype verification were defined.

Results: About one in three patients (36.4%) with the phenotype of severe asthma recorded significantly increased content of IL-4 (more than 10.0 pg/ml), while only 15.5% in the second group ($P\varphi<0.05$). There was increased risk of relatively raised content of IL-4 and IL-5 in serum of patients with severe asthma. Almost every second child suffering from severe asthma noted increased concentration of IgE (>545.3 IU/ml). There were significantly more frequent cases of hypersensitivity to household allergens in the group of patients with severe asthma. Thus, a hyperaemia of more than 15.0mm was recorded in 81.5% of children of the first group and only in 51.9% ($P\varphi<0.05$) of the second.

Conclusion: The phenotype of severe asthma raises the risk of increased content of IL-4 and IL -5 in serum by 3.1 times. However, this

paraclinical test is rather suitable for verification of this phenotype (Sp – 84.6% (95% CI 75.9-91.1)) than for its detection (Se – 36.4% (95% CI 26.9-46.6)). Concentration of total IgE in serum of more than 545.3 IU/ml in children doubles the chances of severe asthma being present. Increased sensitivity to domestic allergens (hyperemia more than 15.0mm) allows severe asthma specificity verification (81.5%) and personalization of treatment policy in these patients.

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EARLY SYMPTOMS OF ACUTE LEUKEMIA IN CHILDREN

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Actuality. Acute leukemia is relating to one of the most serious and important problems of children`s hematology. Nowadays timely diagnosis of this disease is one of the main aim taking into account modern capability of chemotherapy (achieving of remission in 80% of children with acute lymphoblastic leukemia and in 45% of acute myeloid leukemia).

The aim to investigate modern peculiarities of acute leukemia manifestation in children.

Materials and methods: we analyzed the clinical data of 26 children aged from 6 months to 18 years, who were treated at the hematology department of Kharkiv City Clinical Hospital №16 with acute lymphoblastic leukemia (76.9%) and acute myeloid leukemia (23.1%).

Results: in the majority of children (57.7%) diagnosis was made in 2 weeks to 2 months from appearance of the first symptoms, in third of patients (30.7%) – in 4-6 months, and in 11.5% of patient – in 6-12 months. The most common symptoms on admission were weakness (76.9%), decreased appetite (61.5%), pale skin (61.5%), pain in bones and joints (30.8%), hemorrhagic rash (53.8%), weight loss (15.4%), enlargement of lymph nodes, liver and spleen (84.6%), increase of body temperature up to febrile figures (57.7%). These children with diagnosis of anemia, lymphadenopathy, hemorrhagic vasculitis promptly got under the supervision of a hematologist. Onset of the disease under the mask of infectious pathology significantly complicated early diagnostics. Sometimes the disease started with abdominal pain. These children were directed to the surgical hospital with a diagnosis of ""acute abdomen"" that delayed start of treatment and influenced the prognosis.

Analysis of laboratory data showed that on admission 92.3% of children had decreased level of