CLINICAL AND ANAMNESTIC ASPECTS OF ATOPIC DERMATITIS IN CHILDREN

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Atopic dermatitis is an actual problem of pediatrics, because in most cases its debut occurs in early childhood and in 60–70% of children itdevelops in the first year of life [1].

Atopic dermatitis is one of the prevalent allergic diseases of childhood, it occurs in interval from 10 to 28% among children of economically developed countries, the fraction of atopic dermatitis in the structure of allergic diseases is 50–70%. The steady progressive increase of children's atopic dermatitis sickness rate in recent years, the unfavorable pathomorphism of its clinical process, the increase in the number of disabling forms are just some aspects that determine the high relevance of the problem [2, 3].

Atopic dermatitis (AtD)in children is the beginning of the "atopic march". Thus, 40-50% of children with atopic dermatitis develop bronchial asthma, pollinosis and / or allergic rhinitis in after years [4].

Currently, there has been some success in studying of etiology and pathogenesis of atopic dermatitis. However, many aspects of this pathology remain unclear. The studying of various aspects of atopic dermatitis' formation and the prognostic significance of risk factors in children is relevant, timeous and perspective in further improvement of the diagnosis, treatment and prevention of this pathology [5].

The object of research is evaluation of the anamnestic data and disease clinic of atopic dermatitis in children.

We explored the clinical data of AtD for 80 medical historiesof early and preschool age children, who received hospital treatment and examination in allergology'sdepartment of N.N. Silischeva Regional Children's Clinical Hospital in 2017–2018. Complaints, anamnesis, clinical characteristics and comorbidities were inspected. The diagnosis of atopic dermatitis was established on the basis of clinical and diagnostic criteria, including the SCORAD index (scoring of atopic dermatitis), which considers the extension of skin rashes, their morphology, the severity of symptoms andgravity of the patient's subjective feelings:

$$SCORAD = A/5+7B/2+C,$$

where A — the sum of skin lesions' severity scores, B — the sum of the intensity scores of AtD's symptoms, C — the sum of subjective symptoms (itching, sleep disturbance) scores.

Criteria for inclusion of patients in research: children, age from 1–6 years, atopic dermatitis, voluntary informed written consent of the parents to participate in research.

Exception criteria: therapy with systemic and / or topical corticosteroids for 14 days before the date of inclusion in research; having of chronic diseases in the stage of decompensation or incomplete remission; past illnessesof infectious and inflammatory genesis for the last month. If necessary, all examined children were received the gastroenterologist consultation.

Statistical processing of the results was done by using the Microsoft Excel and Statistica 6.0 applied statistical programs. In each group of homogeneous data, the mean value (M) and the mean value error (m) were calculated. The degree of veracityin differences of indicators was determined using Student's t-criterion. The studying of relation between the signs was done by calculating of Spearman rate correlation coefficient (r). Differences in averages and correlations were considered veraciouswith $p < 0.05$.

Analysis of the perinatal factors of children showed that pregnancy in mothers was with gestosis (59 children — 73.7%), threat of abortion (62–77.5%), ARVI (28–35%), using of antibiotics (12–15%). During pregnancy and after, there was vaginal candidiasis in mothers, in the treatment of which local antifungal therapy was used.

All children were from wealthy families. Both girls and boys had AtD, but the proportion of girls was some more (48 girls — 60% and 32 boys — 40%, accordingly), what is explained by the ontogenetic internals of the organism.

Bottle feeding was at most of children (48 children — 60%), and breast-feeding — at 32 children (40%).

Atopic dermatitis occurs more often among the country population (62.5%) than among the urban population (37.5%). This trend allows tosay, that number of diseases in the country population is associated with specific lifestyle, insufficiency of medical information and prophylactic activity in patients with chronic dermatoses, for the development of special preventive programs for complex health improvement.

Diffuse AtD was in 45% of children, local — in 55%. According to the gravity of AtD: a mild — 12.5% of children, middle severity — 77.5%, grave — in 10% of children.

Allergological anamnesis revealed a heritable burden of allergic diseases at both of the mother's and father's lines (and their relatives), and was noted in 72 interviewed parents (90%). In anamnesis of the examined children quite often was allergy 77.5% in the form of spots, papules, urticaria, erythema on the skin, on antibacterial drugs: penicillins — 18.7%, cephalosporins — 10%; vitamins — 15%; antihistamine drugs — 5%. Food allergies were detected in 35% of children, the most significant of which were proteins of cow's milk, chicken eggs, cereals and fish. Some children have hypersensitivity not to one, but to several food allergens.

Frequent complaints of patients with AtD were: itching of the skin and skin rash with varying expression (in 100% of patients). Rash was characterized by dry skin (95% of children), skin hyperemia, often on the cheeks — in 80% of children, peeling — 95%, soaking — 5%, cracks and scratching on the skin — in 97.5% of children, little edema on the face — 80% and hands — 20%, accordingly. Frequent localizations of changes on the skin were: face (60%), superior and inferior extremities (12.5% and 10%), less frequent changes were observed in the skin of the body and the whole body (9% and 8.5% accordingly).

Other related allergic diseases were identified in 25% of children: bronchial asthma — 7% of children, allergic rhinitis — 12%, allergic rhinoconjunctivitis — 1% of children. 35% of children had a varying degrees of gastrointestinal dysfunction in anamnesis, which were classified as *irritable bowel syndrome*, 15% of children had biliary dyskinesia, 15% had gastritis, gastroduodenitis, 3,7% had reactive pancreatitis, 2,5% — reactive hepatomegaly, in 2,5% — hepatosplenomegaly, giardiasis — in 3,7% of children, amebiasis — in 6,2% of children, helminthic invasions in 31,2% of children. We suspect, that a comorbid pathology of the digestive tract disrupts the digestive processes of substances with intact antigenic properties, and determines the development of food sensitization and the progression of the disease. Diagnosis of atopic dermatitis in children causes serious difficulties. Correct interpretation and scrupulousevaluation of anamnesis, clinical symptoms, laboratory methods of research, allow to detect the allergic nature of the disease.

Absolute eosinophilia was detected in 80% of the examined children, andinmore young childrenit was determined more often. The analysis of total IgE in the serum showed that it was noticeably elevated in children with AtD (110.7 ± 111.2 IU/ml), while in healthy children it was 34.1 ± 27.6 IU/ml ($p < 0.001$). The levels of several cytokines (IL–4 and IFN2) were analyzed for verification of Th2-dependent immune response. Thus, in children with AtD, veracious increase in serum of IL–4 (10.8 ± 5.9 pg/ml, $p < 0.05$) and decrease IFN2(14.6 ± 3.4 pg/ml, $p < 0.01$) were established, in comparing with healthy children (serum IL–4 is 6.9 ± 1.27 pg/ml; IFN2 — 17.9 ± 2.6 pg/ml).

Next research in this way will optimize the criteria for prognostication the risk of atopic dermatitis and the search for optimal treatment and rehabilitation technologies, will allow to carry timely correction of disorders and dynamic monitoring of patients, considering individual medical, social and psychological characteristics of patients, risk factors of their vital activity.

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