UDC 616.5-002.2-056.3-053.2-07-036.22: 616.248

FEATURES OF MANAGEMENT OF CHILDREN WITH ATOPIC DERMATITIS IN DIFFERENT COUNTRIES

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Annotation: *The article presents the features of managing children with atopic dermatitis (AD) in different countries - in Uzbek-speaking (first group) and English-speaking families (second group) in comparison with healthy children. Online questionnaires of mothers with children with AD were analyzed. It was noted that in families from Uzbekistan and the United States, allergists most often observed children, patients with AD from the first group were born in most cases from the first birth, food allergy in them was mainly regarded as a manifestation of a skin symptom, in contrast to children from the second group, where along with skin manifestations of food allergy, symptoms such as an asthma attack, the appearance of blisters on the skin, diarrhea, and others were noted.*

Key words: *atopic dermatitis, food allergy, therapeutic mixtures, topical therapy, psychosomatics.*

INTRODUCTION

Atopic dermatitis (AD) is a common chronic inflammatory skin disease characterized by a violation of the barrier function of the skin, often intense itching and impaired quality of life. AD is a multifactorial disease, with a variety of factors involved in its development.

Different groups of doctors, allergists, dermatologists and pediatricians involved in the treatment of children with AD may have different treatment strategies.Allergists more often than dermatologists prescribe elimination diets and allergen-specific vaccination as therapy [1], dermatologists insist mainly on the treatment of AD with external glucocorticosteroids [2]. Today we have a common name for the same nosology, so we have the opportunity to compare variants of the course of the disease and evaluate the strategy of managing patients in different countries.

Various approaches to the management of children with AD, strategies for treating patients depend on national and regional health care characteristics [3]. It is known that in Uzbekistan a pediatrician quickly transfers a child with AD onset to specialists [4], while in the United States, for example, a specialist consults a patient most often already with a progressive course of the disease [5, 6]. It is known that the strategy of managing patients with AD depends on the primary care physician [7]. It is his recommendations and supervision that influence the overall strategy for the treatment of this disease and the effectiveness of the chosen path of disease control.

Objective. The purpose of this work was to evaluate the influence of some risk

factors for the development of AD on the onset of the disease and to study the features of managing patients by doctors in Uzbek-speaking and English-speaking families living in different countries. Materials and methods. We conducted a survey among Uzbek-speaking and English-speaking mothers whose children suffer from AD. We used allergy-themed social media groups as a platform for conducting the survey. An anonymous questionnaire was created in Uzbek and English based on Google Forms. It was proposed to fill out this form to mothers with children with a verified diagnosis of AD, registered in thematic groups. All mothers who filled out the questionnaire were divided into three groups.

The main group (Group 1) included 127 Uzbek-speaking mothers whose children suffer from AD (mean age of children 7.1±2.0). All children from the 1st group received medical care in Uzbekistan or the CIS countries. The comparison group (Group 2) included 34 English-speaking mothers (average age of children 3.5±1.5), mostly living in the USA (more than 50%). The control group (group 3) included 25 Uzbek-speaking mothers of healthy children (mean age 4.7±1.7) from Uzbekistan (table).

Table. Demographics of patients

Patients (n)	Patients with AD			
	Group I	Group II	Control group	Total
Gender	127	34	25	186
Boys, n (%)	71	19	14	
Girls, n (%)	56	15	11	
Age (years)	7,1	3,5	4,7	
(95% CI)	(5,1 – 9,1)	(2,1 – 5)	(3 – 6,5)	

Factors that were assessed in the study groups: demographic indicators (age, gender of the child, order of birth of children), allergic diseases in the family history of a patient with AD, the nature of childbirth in children with AD (natural or perative delivery), breastfeeding at the onset of AD and the use of therapeutic milk formulas based on highly hydrolyzed cow's milk protein, the age at which the first symptoms began, etc.

The obtained results were processed by the methods of variational statistics of the Microsoft Excel package and the programs Statistica 6.0, WINSTAT 4.3, as well as the Student's t-test traditionally used in biomedical research for normally distributed variables.

Results and discussion. In Uzbek-speaking families, the majority (more than 50%) of children are of early and preschool age (from birth to 5 years). In English-speaking families, the percentage of schoolchildren was even lower (75% of the survey were children under 5 years old). Among children suffering from AD, there were the same number of boys and girls.

Patients with AD in the 1st group were more often born first in the family (73% versus 52% in the 2nd group), in the 3rd group of healthy firstborns there were 58%. The debut of AD most often occurred in the first six months of life - 67.3% in the 1st group and 78.5% in the 2nd group. In

most cases, AD began in the first 6 months of life (more than 62%). The debut of AD after 1 year of life was observed in 16.1% of children from Uzbekistan versus 4% of patients from English-speaking families. Thus, the first manifestations of AD were more common in the first year of life, regardless of the country of residence. According to a study conducted among children with AD from Sweden and Denmark, the debut of AD also occurred in most cases at an early age, usually before the 1st year of a child's life [8].

Undoubtedly, hereditary burden is a significant risk factor for the development of AD, and the risk of developing the disease increases if both parents have allergic pathology [3]. According to our survey, an equal frequency of hereditary burden for allergic diseases and AD was noted in the father and mother in the first two groups, less often parents had AD (about 20% of cases).

Allergic diseases in the mother or father of the child in the 1st group were noted in 40 and 37% of cases, respectively. In group 2, mother and father had allergies in 48% and 50% of cases. The frequency of threatened abortion was higher in group 1 (25.7% versus 11.4 in group 2), which can be explained by the peculiarities of obstetric and gynecological care in Uzbekistan, the trend towards inpatient management of pregnant women in the 1st trimester and the preservation pregnancy.

The caesarean section rate was about a quarter of all births in all groups. There are conflicting reports about the risk of allergies.

in children after operative delivery. Thus, in a prospective cohort study conducted in Greece, it was shown that caesarean section increased the risk of food allergies, but the incidence of AD remained unchanged [8]. According to other data, operative delivery may increase the risk of AD, bronchial asthma and other allergic conditions [9].

In our study, children from Uzbekistan were more likely to be breastfed when the first symptoms of AD appeared (71% versus 49% in group 2). It is interesting to note that formulas based on complete protein hydrolysis were used 10 times more often when artificially fed (11.3% versus 1.2% in the 2nd group) and amino acid mixtures were used 2 times less often (2.8% versus 6, 3% in the 2nd group). Mothers from Uzbekistan noted positive dynamics of the skin syndrome twice as often after transferring the child to a formula based on goat's milk (4.1% versus 2.7% in the 2nd group).

The higher frequency of breastfeeding in Uzbek-speaking families, compared to English-speaking families, may also be related to the traditions of feeding and caring for infants in Uzbekistan, as well as social factors. Mothers in Uzbekistan consider breastfeeding to be the key to caring for their child, and are also less likely to go to work in the first year of a child's life.

The frequent use of mixtures based on complete hydrolysis of cow's milk protein, amino acid mixtures and mixtures based on goat's milk in Uzbekistan may be associated with regional features of managing patients with AD, where much attention

is paid to the search for triggers, food allergens, which are associated with the development and exacerbation of skin syndrome . Uzbek-speaking mothers are more willing to transfer children with AD to therapeutic formulas or formulas that do not contain cow's milk protein. We can assume that this fact may be the result of the medical strategy of pediatricians and allergists in Uzbekistan.

According to the results of the survey, in Uzbekistan, children with AD are most often observed by specialist doctors starting from the onset of the disease, mainly by an allergist (47.4%), less often by a dermatologist (10%) and a pediatrician (20%). In English-speaking countries, a child with AD was more often seen by a dermatologist (48.1%), less often by an allergist (12.6%) and a pediatrician (25%). Perhaps the doctor's first recommendations are important for the further treatment of AD, and are also important for the mother and her actions during the treatment of the child in the future [3,7]. Australian doctors draw attention to the key role of topical glucocorticosteroids in the treatment of children with AD, and already at the first stage, when the patient's parents turn to a general practitioner or family doctor [7]. The same recommendations are given by American and European experts [5]. It can be assumed that the doctor's first recommendations at the onset of the disease are related to the regional peculiarities of the AD treatment strategy, the priority of medical care by one or another specialist. In English-speaking countries, children with this disease are mainly treated by dermatologists, therefore, much attention is paid to local therapy of skin syndrome in AD [1], while in Uzbekistan, allergists, who are more likely to search for allergens provoking the syndrome - food at an early age and household - in adolescents and adult patients [7].

According to our survey, food allergy in the 1st group was more often associated with an exacerbation of the skin symptom, 68.9% versus 55.7% in the 2nd group. The appearance of urticaria/angioedema as a symptom of food allergy was more often noted in the 2nd group in 48% of cases versus 20% in the 1st group. English-speaking mothers more often noted that the child had never had a food allergy (24% versus 10% in the 1st group). Thus, mothers receiving medical care in Uzbekistan more often associated the presence of food allergies with exacerbations of the skin syndrome in AD. English-speaking mothers in 48% of cases define food allergy as the appearance of blisters or angioedema on the skin after eating food allergens.

Mothers of the 1st and 2nd groups found it difficult to take care of the skin of the child, they often took the children to their bed during the period of exacerbation of AD or slept with them all the time, regardless of the condition of the child. The practice of co-sleeping is also associated with nighttime itching in children with AD, as well as with the psycho-emotional state of the mother and her increased anxiety [6].American authors note that co-sleeping with a child with AD worsens the quality of life of parents, and counseling on improving sleep may be useful in the complex treatment of the disease [7].

Interestingly, the practice of co-sleeping is culturally determined. In some countries, co-sleeping with children is practiced universally. It is known that AD can become the first link in the development of the “atopic march” [9]. Analysis of the appearance of other diseases on the background or after remission of AD showed rare cases of bronchial asthma, about half of children with AD had seasonal allergic rhinitis, and a quarter had epidermal allergy.

Thus, children with AD in Uzbekistan are seen more often by allergists. In English-speaking countries, it is more common for children with AD to be seen by a dermatologist. They are usually the firstborn in the family. The debut of the disease in both groups falls on the first months of life. In Uzbekistan, children are more often breastfed, they are quite often transferred to therapeutic mixtures based on complete cow's milk protein hydrolyzed.

Uzbek-speaking mothers note the presence of food allergies in children in the form of a skin symptom, exacerbation of blood pressure. English-speaking mothers are more likely to experience guilt towards their child. The frequency of co-sleeping with the child is high in both groups.

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