

# FOOD ALLERGY IN INFANTS RESIDING IN GRODNO REGION

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**Introduction.** Food allergy is an adverse immune response that occurs reproducibly upon exposure to a given food. It can be classified into 2 categories: IgE-mediated type and non IgE-mediated type [1]. Allergic diseases in infants have increased in recent years up to 10%. The most common food allergens in early infancy are cow's milk, hen's eggs, and wheat [2].

**Aim of the study.** To assess frequency of food allergy to common food allergens in 2-year-old children, residing in Grodno region and determine clinical manifestations of food allergy.

**Materials and methods.** 379 infants residing in the Grodno Region were enrolled in our study (were included family interested in pediatric allergist follow up). Clinical symptoms, allergic family history and obstetric anamnesis were clarified by using a questionnaire for parents. In the first phase of diagnostic approach, infants who were admitted with suspicion of food allergy, were restricted for elimination diet for 2-3 weeks or 3-4 weeks depending on features of clinical manifestation. Serological tests to confirm sensitization were performed by ImmunoCap.

**Results and discussion.** The study included 379 infants. 30% of examined children had mother with positive allergic history and about 20% of fathers were with positive anamnesis for allergic diseases. 212 (55,9%) were boys and 167 (44,1%) were girls ( $p>0,05$ ). 58 infants were clinically diagnosed with food allergy. In the group of examined children, the burden of heredity was slightly higher than in the general population, so the frequency of food allergies was higher than expected – 15,3%. The most children were breastfed (63-65%) in first 3 months after birth and born by the vaginal delivery and C-section 54% and 46% accordingly ( $p>0,05$ ).

Allergic reaction to milk in 75.8% (44/58) of cases was diagnosed. In 61.4% (27/44) of children the reaction to milk manifested with skin symptoms, in 11.4% (5/44) – symptoms from the gastrointestinal tract, in 2.3% (1/44) – respiratory symptoms, in 25% of children (11/44) – combined clinical signs from different organ system were diagnosed. In all cases the first clinical symptoms appeared in the first year of life.

44.8% (26/58) of children had allergic reactions to egg: in 84.6% (22/26) cases allergy manifested with skin symptoms and in 15.4% (4/26) there were combined cutaneous-intestinal or cutaneous-respiratory symptoms. In 84.6% (22/26) of cases symptoms appeared at the end of the first year of life, only in 15.4% (4/26) – in the second year of life.

25.9% (15/58) of children were diagnosed with allergies to both food allergens egg and milk, and only 3.4% (2/58) of children were allergic to wheat.

sIgE levels (kUA/l) in children with clinically confirmed reactions to food allergens were examined. Median levels of sIgE in children with clinically confirmed reactions to milk was 0,09 [0,01; 0,27] kUA/l, to egg white – 0,25 [0,04; 1,92] kUA/l and to wheat – <0,01 (max 0,19) kUA/l. Median sIgE concentration was higher diagnostic level 0,1 kUA/l only to egg allergen. It means that 50% infant who clinically diagnosed with food allergy will have negative serological test. Presented data of sensitization in children of this age are consistent with the literature. The described results, on the one hand, are determined by the age of the child – it takes time from the onset of antibody production to reaching the level of detection using laboratory methods; on the other hand, in children of this age, the percentage of non-IgE-mediated allergic reactions is quite high.

**Conclusion.** Diagnosing food allergies in children in the first years of life is not an easy task, primarily due to the lack of sufficiently reliable tests. Serological diagnosis is an additional confirmatory criterion, while clinical data are of paramount importance. Most often, children had milk allergy, followed by food allergy to eggs. Hypersensitivity to wheat allergens is much less common. Serological confirmation of sensitization in children of this age group is not sufficiently reliable: the early tests remain negative in a large percentage of cases (~60%).

#### ЛИТЕРАТУРА

1. Nagakura, K. et al. Effect of maternal egg intake during the early neonatal period and risk of infant egg allergy at 12 months among breastfeeding mothers // JAMA Network Open – 2023.- Vol 6(7). – P.45-49
2. Annesi-Maesano, I. et al. Allergic diseases in infancy: I – epidemiology and current interpretation // World Allergy Organization Journal – 2021. – Vol.14(11) – P. 100591. doi:10.1016/j.waojou.2021.100591

## VISUALIZATION OF VESSELS AND BONES OF LOWER EXTREMITY DAMAGED IN DIABETES MELLITUS PATIENTS ON THE STAGES OF SURGICAL TREATMENT

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**Introduction.** Diabetic foot syndrome is the most common complication associated with diabetes and a common cause of non-traumatic lower extremity amputations. The main risk factor associated with it is peripheral arterial occlusive disease [1]. In order to precisely diagnose lower limb ischemia, we use different instrumental methods. Computer tomography angiography, magnetic resonance