POLYVALENT ALLERGY IN CHILDREN WITH ORAL ALLERGIC SYNDROME LIVING IN THE URAL REGION. SENSITIZATION STRUCTURE

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This research was aimed at studying the sensitization spectrum in children with polyvalent allergies, from the perspective of determining their true responsiveness and cross-sensitization for further planning of preventive and therapeutic measures. The study included 47 children with polyvalent allergy and with oral allergic syndrome to fruits (aged 2 to 16, mean age 6.34±4.2), 34 boys and 13 girls. 19 children of 47 patients (40.4%) were determined a diagnosis of bronchial asthma, 34 (72.3%) presented seasonal rhinoconjunctivitis, 17 (36.2%) with atopic dermatitis, oral allergic syndrome (100%).

The examination was conducted by means of molecular allergy diagnostics using a panel to determine the IgE antibodies level to 112 allergenic molecules (ISAC). ISAC standardized units - ISU-E.

It was found that children with polyvalent allergy the most often reveal true sensitization to main specific components of inhaled allergens, to birch rBet v1 in 80.85% (18.92±3.59) and to cat: rFel d1 in 51.06% (14.83±2.75) cases. We detected sensitization to timothy grass pollen: rPhl p1 in 23.4% (6.65±0.79) and to wormwood: nArtv1- in 19.15% (4.63±0.75) cases.

The most often sensitization to food-based allergens was: to nBosd4 in 21.28% cases (8.04±2.12), nBosd5 in 12.77% (5.32±1.19) and nBosd8 in 12.77% (12,78±2.23) cases, nGal d2 in 19.15% (1.96±0.30) and nGald1 in 12.77% (3.45±0.44) cases. True sensitization to peanuts was: rAra h1 in 19.15% (4.19±0.66), rAra h2 in 12.77% (7.58±0.93), rAra h6 in 10.64% (3.56±0.21). Sensitivity to other food-based allergens was revealed in isolated cases.

The most frequent detected proteins of cross-reacting components were the PR-10 family ones. Sensitization to hazelnut rCor a1.0401 - in 63.83% (6.87±1.31), to apple Mal d1 - in 55.32% (9.0±2.2), to peach Pru p1 - in 46.81% (4.43±0.81), to peanut rAra h8- in 42.55% (2.81±0.62), to soybeans nGly m4 – in 23.40% (2.82±0.52).

The undertaken studies resulted in our ability to identify and differentiate true IgE-mediated sensitization and cross-reactivity in children with polyvalent allergy and with oral allergic syndrome, to find and plan further most accurate allergen-specific immunotherapy for patients, to develop and correct the individual diet for each child.