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Title: Selective IgA deficiency and the risk of asthma

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Body: Introduction: Selective IgA deficiency (IgAD), the most frequent primary immunodeficiency is associated with a wide variety of clinical manifestations including an increased frequency of allergic manifestations such as asthma. Objective: To describe the prevalence of allergies and asthma in a selected population of children with IgAD. Materials and Methods: We included 27 children (15 males) with a diagnosis of IgA deficiency with a mean age of onset of symptoms 37.58 ± 29 months. Each subject was investigated about clinical presentation at the time of the diagnosis and allergic skin tests for food allergens and inhalants were performed. Results: At the beginning children with IgAD presented principally infections of the upper and lower airways, 5/27 (18,5%) had pneumonia. 16/27 (59,3%) had Prick test positivity with associated allergic diseases. Among the allergens house dust mites were the most frequent (22,2%) followed by grass pollens (11,1%). 7/27 (25,9%) presented asthma symptoms and 6/27 (22%) rhinoconjunctivitis and atopic eczema. The prevalence of asthma symptoms is more higher in our population of children with IgAD respect to the general pediatric population, respectively 25.9 vs 7.9 (Tozzi AE Pediatric Allergy Immunol 2011) and the difference is statistically significant ($p < 0,01\%$). Conclusions: Children with selective IgA deficiency seem to have an increased risk of having recurrent infections and allergic manifestations respect to general pediatric population. Observations that IgAD is associated with an increased prevalence of atopy suggest a possible role of IgA in asthma pathogenesis. The mucosal antigen exposure seems to be increased in the absence of IgA, causing an increased production of IgE against allergens.