

Respiratory infections

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IgG subclass deficiency in children with recurrent respiratory tract infections and history of allergy

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Recurrent respiratory tract infections (RTIs) are one of the most common diseases in childhood. An additional component in the form of allergies is conducive to their occurrence. Frequent infections adversely affect the development of the child and may lead to suspicion of immunodeficiency. We analyzed 524 children hospitalized in the Department of Clinical Immunology. This group was divided in children with recurrent respiratory tract infections (394) and children with history of allergy (130). Comparing groups of children with RTIs and children with allergies it was found that a higher percentage of children with elevated IgG4 levels would be found in children with allergies. Analysis of IgG subclass deficiency in both groups showed a significantly higher percentage of children with IgG4 deficiency in the recurrent respiratory tract infections group than in the allergic group. In the case of deficiencies in the other subclasses, there were no significant differences between the groups. In both groups, the majority of children in the study demonstrated a subclass-compliant level.

Statistical analysis revealed a statistically significant effect of children's gender on IgG, IgG1 and IgG3 deviation in children with RTI. This effect was not observed in children with allergies. In both groups demonstrated a statistically significant effect of children age on the deviation from IgG1 and IgG4.