# Level of immunoglobulin A, M and G in mixed saliva of children 6-11 years with chronic sensorineural hearing loss

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It is known that 60% of children with chronic sensorineural hearing loss increased antibody titers to myelin proteins and neurospecific enzyme enolase (Elies, 1983; Arnold, 1985; Zolotova, 1984; Melnicov et al., 2003; Chasheva, 2007). Moskalenko (1989) found in serum antibodies to the antigen of the inner ear. This is due to an inadequate process of permeability of the blood-brain barrier and the release of neuro - specific proteins (Reddy, 2005; Tan, 2006).

Inhibition of cellular and humoral immunity, low levels of bactericidal activity of neutrophils occurs in acute sensorineural hearing loss (Samsigina, Minasian, 2007; Belicheva, 2008), reducing the production of antibodies (sIgA) mucosa and increased immune complexes on the mucous membrane of the tuba auditoria (Melnicov et al, 2000).

The level of IgG in the contents of the sinuses of the nose and the blood is proportional to the severity of the disease at a time when inflamed inner ear (Drozdova, 2006).

Study of humoral immunity in patients with chronic neurosensory hearing loss we have not found at the scientific sources. We believe possibility study of secretory immunoglobulin levels as an indicator of the general state of the immune system.

We conducted a study of the level IgA, IgM and IgG in mixed saliva in children 6-11 years old with hearing loss using a test system ELISA (Ukraine).

The experimental group was characterized by the following parameters:

- children have hearing loss I-III stage (Neyman, 1961);
- hearing loss was the first year of life or congenital;
- lag behind their peers in terms of physical development (Karpuhina, 2003; Gasiuk, 2004);
- this children after 4 stage of critical development of the immune system and before the onset of puberty (Kornev, 2000; Titov et al, 2009).

We have identified high levels of IgG and low IgM in saliva of children with chronic neurosensory hearing loss compared with the control group (statistically confirmed).

A low level of polyvalent sIgM indicates a decrease in efficacy of complement-dependent cytolysis.

It is known, that IgG is a marker of "trace reaction". Raising sIgG indicates that children of experimental group were under antigenic pressure, or have an autoimmune reaction.

The phenomenon of reduction of synthesis of sIgM explained by suppression of the sIgG, which is a marker of secondary immune response.