

# **Ekspresja cząsteczki adhezyjnej CD28 na subpopulacjach limfocytów przerosłych migdałków gardłowych dzieci chorych na wysiękowe zapalenie ucha**

Expression of adhesion molecule CD28 on subpopulations of lymphocytes in hypertrophied adenoids in children with otitis media with effusion

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## **Summary**

**Introduction:** The expansion of an optimal immune response requires fully activated T lymphocytes. For complete activation several signals are needed. The first signal is an antigen dependent via the TCR receptor, and the second signal is a cos-timulatory that can be delivered by the CD28 molecule after binding to their ligands. Fully activated T lymphocytes are competent to deliver activation to B cells. We suppose that this way can be important for development of immune response in hypertrophied adenoid (AH) in children with otitis media with effusion (OME). The aim of this study was evaluation of the percentage and MFI (mean fluorescence intensity) of lymphocytes CD4<sup>+</sup>, CD8<sup>+</sup>, CD19<sup>+</sup> with expression of superficial adhesive molecule CD28 in hypertrophied adenoids in children with otitis media with effusion. **Material and methods:** 37 children with otitis media with effusion and 35 children with hypertrophied adenoids were tested. Children were also divided into two subgroups: young (below 5 years) and older children (above 5 years old). Expression of adhesion molecule CD28 on lymphocytes of adenoids tissue was estimated by flow cytometry method. **Results:** This study showed significantly higher percentage of lymphocytes CD4<sup>+</sup>CD28<sup>+</sup> in children with otitis media with effusion (OME 93,87%) than in comparative group with hypertrophied adenoids (AH 91,01%). Mean fluorescence intensity CD28 was higher on subpopulation lymphocytes CD4<sup>+</sup> to children with OME (3,94) than AH (3,32). We did not find difference between OME and AH in percentages and MFI of subpopulations CD8<sup>+</sup>CD28<sup>+</sup> and CD19<sup>+</sup>CD28<sup>+</sup> lymphocytes. **Conclusions:** Adhesion molecule CD28 is very important for adenoidal lymphocytes activation and protection against apoptosis. Higher percentage of lymphocytes CD4 with expression CD28 confirms their participation in developing and forming of immunological response in otitis media with effusion.