



Myeloid-Derived Suppressor Cells and Costimulatory Molecules in Children With Allergic Rhinitis

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Abstract:

Allergic rhinitis (AR) is the most common allergic disorder of the airway. It is an allergic inflammation of the mucous membranes lining the nasal cavity.^{1,2} AR is a type I allergic disease of the nasal mucosa, characterized by watery rhinorrhea, repetitive paroxysmal sneezing, and nasal blockage. AR often shares the common risk factors of bronchial asthma, especially atopy.^{1,2} Genetic and environmental risk factors are involved in the pathogenesis of AR; however, the exact etiology remains to be identified.³ Currently, AR is a major health problem affecting 10% to 40% of children globally, which has a great influence on patients' sleep and quality of life and can affect school achievement as well as increase the medical costs.^{2,3} T-lymphocytes are among the main factors that control and organize immune responses in allergic diseases. T-helper (Th)-1 T-cells release mainly interferon γ and interleukin (IL)-2 and are involved in the delayed hypersensitivity immune reactions, and Th2 T-cells release predominantly IL-4 and IL-5 and are predominantly involved in IgE-mediated allergic inflammation.

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