# Variation of Regulatory T Lymphocytes in the Peripheral Blood of Children with Allergic Rhinitis

Khaled Saad1 · Asmaa M. Zahran2· Khalid I. Elsayh1· Abobakr Abdelmoghny3 · Mohamed Diab Aboul□Khair4

## Abstract:

The studies of T-regulatory (Treg) cells in the pediatric allergic disorders, especially allergic rhinitis (AR), are very few and still far from being elucidated. The aim of this study is to assess the frequencies of CD4+CD25+Foxp3+ (CD4+Tregs) and CD8+CD25+highFoxp3+ (CD8+Tregs) regulatory T lymphocytes in the peripheral blood of children with AR. In fresh whole blood of 60 children with AR and 40 healthy controls, the frequencies of CD4+Tregs and CD8+Tregs were examined by flow cytometry. The total IgE concentration in the serum was measured. In AR children, the frequencies of CD4+Tregs and CD8+Tregs were significantly reduced when compared to control group (p=0.041, p=0.011, respectively). Moreover, the expressions of Foxp3+ in CD4+CD25+high and CD8+CD25+high cells were significantly lower in patient group than controls. We found a significant negative correlation between the frequencies of CD4+Tregs and the total IgE concentration (p

## Keywords:

Allergic rhinitis · CD4+Tregs, CD8+Tregs · Children · Regulatory T cells.

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