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## Peripheral Blood Lymphocyte Activation and RANTES Levels in Asthma

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**Abstract:** Aim: Bronchial mucosal inflammation is one of the major characteristics of atopic asthma. Th2 activation and the related cytokine profile, eosinophil activation and infiltration play the main role in the pathogenesis of atopic asthma. The aim of this study was to demonstrate the activation and RANTES (regulated on activation, normal T-cell expressed and presumably secreted) expression of peripheral blood lymphocytes of non-atopic and atopic asthmatic patients. Materials and Methods: CD3, CD4, CD8, CD16, CD23, CD25, CD45RA and CD45RO expressions were determined in 22 asthma patients and 20 healthy control subjects by flow cytometry, and RANTES levels were measured by ELISA. Statistical analysis was performed by using Student´s t and Mann-Whitney U test. Results: CD45RO and CD23 expressions were significantly higher in asthma patients compared to control subjects (P = 0.009 and P = 0.004, respectively), and similarly, an increase in CD25 expression was also shown in asthmatics (P = 0.004). However, there was no difference in RANTES secretion of peripheral blood lymphocytes in asthmatics compared to the control group (P = 0.08). Atopic and non-atopic asthmatics (13 vs. 9) were compared, and atopic asthmatics showed significant increase in CD25 and CD23 expressions (P = 0.009 and P = 0.02, respectively). Conclusions: These changes in the activation state of T-cells suggest an active role of T lymphocytes in the pathogenesis of atopic and non-atopic asthma.

**Key Words:** Asthma, lymphocyte activation, RANTES

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