

Defective functions of circulating CD4+CD25+ and CD4+CD25- T cells in patients with chronic ordinary urticaria

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摘要

Abstract

Background: Patients with chronic ordinary urticaria (CU) are divided into two groups: 30—50% have chronic autoimmune urticaria, and the remainder have chronic idiopathic urticaria. CD4+CD25+ regulatory T (Treg) cells play critical roles in maintaining

peripheral tolerance and preventing autoimmunity, but the characteristics of Treg cells have not yet been defined in CU.

Objective: To identify whether CD4+ T cells play an important immunoregulatory role in the etiology of CU, we determined the frequencies and functions of circulating CD4+CD25+ and CD4+CD25- T cells in CU patients and healthy control subjects, with special focus on the characteristics of CD4+CD25+ T cells.

Methods: Peripheral blood mononuclear cells (PBMCs) were obtained from CU and healthy controls in this study. The frequency of CD4+CD25+ T cells in PBMCs was detected by flow cytometry. The expression levels of forkhead box P3 (FOXP3) and transforming growth factor- β (TGF- β) in CD4+CD25+ T cells were detected by realtime PCR. Furthermore, the suppressive function of CD4+CD25+ T cells was analyzed.

Additionally, the Th1/Th2 cytokine secretory profile in mitogen-stimulated CD4+CD25- T cells was measured by ELISA.