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

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摘要: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+ Tcells play an important immunoregulatory role in the etiology of CU, we determined the frequencies and functions of circulating CD4+CD25+ and CD4+CD25- Tcells 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+ Tcells were detected by real-time PCR. Furthermore, the suppressive function of CD4+CD25+ Tcells was analyzed. Additionally, the Th1/Th2 cytokine secretory profile in mitogen-stimulated CD4+CD25- Tcells was measured by ELISA. Results: An increased frequency of CD4+CD25+ T cells was observed in CU patients (n = 19) compared to control subjects (n = 7). No significant difference was detected in the expression levels of FOXP3 or TGF-β between CU patients (n = 14) and control subjects (n = 7). Strikingly, the suppressive capacity of CD4+CD25+ Treg cells from 2 of 5 CU patients was partially defective. We also found that cytokine

production from CD4+CD25- Tcells was significantly reduced in CU patients (n = 9) compared to healthy donors in = 11). Conclusions: Our data demonstrate that CD4+CD25+ and CD4+CD25- Tcells in PBMCs exhibit defective functions in CU patients.