INFLAMMATORY SKIN DISEASES (OTHER THAN ATOPIC DERMATITIS & PSORIASIS)

T CELL SUBSETS SHAPE THE CLINICAL PHENOTYPE IN AUTOIMMUNITY AGAINST DESMOSOMAL AND HEMIDESMOSOMAL ADHESION MOLECULES

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LP is a common chronic inflammatory disorder of skin and mucous membranes whose immune pathogenesis has been linked to T cell-mediated cytotoxicity against epidermal keratinocytes. Recently, we identified autoreactive Th1 and Th17 responses in a cohort of LP patients which recognized bullous pemphigoid antigen 180 (BP180) and desmoglein 3 (Dsg3). Of note, BP180-reactive peripheral Th17 cells were increased in LP patients. We here studied the clinical efficacy of secukinumab, in three patients with acute and chronic LP and the efficacy of ustekinumab, in a patient with mucous lichen planus. Secukinumab was applied for 12 weeks and the patients were monitored clinically and immunologically before, during and after treatment. After 12 weeks of therapy, all the three LP patients (P1-3) showed a remarkable clinical resolution of the skin and mucosal lesions with a clear decrease of the ABSIS scores (ABSIS I: P1: 5 to 0, P2: 7 to 2, P3: 3.5 to 1; ABSIS II: P1: 45 to 0, P2: 21 to 0, P3: 11.5 to 0). This was accompanied by a reduction of the inflammatory skin infiltrate and a relative decrease of lesional T cells (percentage of CD3+ cells of all infiltrating cells before therapy: 52.8%+/-15, after therapy: 39.1%+/-5.5). Although BP180- and Dsg3-specific Th1 and Th17 cells were detectable throughout the observation period, we could not detect a decrease of autoreactive Th17 cells upon treatment with secukinumab. In addition, secukinumab treatment did not affect distinct CD4+ and CD8+ T cell subsets suggesting that the observed therapeutic efficacy was related to the neutralization of soluble IL-17. Of note, ustekinumab treatment also showed remarkable clinical efficacy in a patient with oral lichen planus. These findings show for the first time that mucosal and cutaneous LP rapidly responds to therapeutic inhibition of IL-17A and of IL-23.