PSORIASIS

STUDY ON THE INTERFERENTIAL AND REGULATIVE ROLE OF CHEMOKINE-LIKE FACTOR 1-C-TERMINAL PEPTIDES IN PSORIASIS

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Psoriasis is a common chronic autoimmune skin disorder in which T cell infiltration plays a critical role in initiation and maintenance of psoriatic inflammation. Many chemokines participate during the course of T cell homing to skin. Chemokine-like factor 1 (CKLF1) is a new cytokine displaying remarkable chemotactic activities on neutrophils, monocytes and lymphocytes.

Objective: To find out whether CKLF1 is involved in T cell recruitment and C19 has protective effect in psoriasis.

Methods: In this study, CKLF1 expression in psoriatic lesions and peripheral blood lymphocytes was investigated by immunohistochemistry and flow cytometry. T cell chemotaxis of CKLF1 was also evaluated by chemotaxis assay. And we also explored the roles of CKLF1-derived peptides C19, C27 in the pathogenesis of psoriasis.

Results: Notably, CKLF1 expression increased significantly in lymphocytes infiltrating in psoriatic lesions and peripheral blood lymphocytes of psoriasis vulgaris patients. C19 could inhibit CD4+ T cells migration induced by endothelial cells. Moreover, the primary umbilical vein endothelial cells exhibited higher proliferation ratio under C27 stimulation and C19 could attenuated this effect. In addition, such effect of C27 was mirrored by imiquimod application in BALB/c mice that were intradermal injected with the two peptides. However introduction of C27 peptide enhance the acanthosis and neutrophils and CD3+ T cells infiltration. Also this effect can be inhibited by C19 intervention.

Conclusion: This study demonstrates CKLF1 may be involved in psoriasis by taking part in T lymphocytes infiltration and C19 may be an ideal peptide for the improvement of psoriasis.