PSORIASIS

EXPRESSION AND IMMUNOPHENOTYPES OF INVARIANT NATURAL KILLER T CELLS IN PERIPHERAL T CELLS OF MODERATE-TO-SEVERE PLAQUE PSORIASIS PATIENTS

Yifan Hu [(1)] - Zeyu Chen [(1)] - Yu Gong [(1)] - Yuling Shi [(1)]

Shanghai Tenth People's Hospital, Tongji University School Of Medicine, Dermatology, Shanghai, China [(1)]

Psoriasis is a high-incident immune-mediated polygenic inherited skin disease. The pathogenesis of psoriasis mainly involves T-cell-mediated immunity. Invariant natural killer T(iNKT) cells are a unique lymphocyte subpopulation that share properties and express surface markers of both NK cells and T cells. iNKT cells are all CD1d-restricted and are involved in the development of various inflammatory diseases. Here, we detected the expression of iNKT cells and CD4+ CD25+ FoxP3+ Tregs, as well as naive and memory CD4+ and CD8+ T cells and their cytokine production, in a cohort of 40 moderate-to-severe plaque psoriasis patients with gender and age matched healthy controls. We found that the general immunophenotypes of CD4+ and CD8+ T cells and the percentage of CD4+ CD25+ FoxP3+ Tregs have no significant difference among psoriasis patients and healthy controls. But we found reduced percentages of CD8+ CD45RA+ in the PBMCs of psoriasis patients, which suggests an influx of CD8+ T cells into psoriatic lesional skin in psoriasis patients. The percentages of peripheral iNKT cells were significantly decreased in moderate-to-severe plaque psoriasis patients compared to that in healthy controls. The percentages of CD69+ iNKT cells also decreased in the PBMCs of psoriasis patients, which means activated iNKT cells in psoriasis patients are less than that in healthy controls. However, there was no significant difference in peripheral iNKT cells cytokine secretion between psoriasis patients and healthy controls. Our data suggest that iNKT cells are involved in the pathogenesis of psoriasis.

Keywords: invariant natural killer T cells, psoriasis, regulatory T cells, immunophenotypes