Impact of systemic psoriasis treatment on the lesional T–lymphocyte subtypes

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Abstract

Objective In 19 patients suffering from severe psoriasis and who were treated by Cyclosporin A (CyA), CD4 and CD8 positive T-cells were studied.
Materials and methods. Skin from affected areas was examined by immunohistopathology for the presence of CD4 and CD8 positive T-cells before and 4 weeks after the start of treatment.
Results. Significant decrease in CD4 positive T-cells and a non-significant decrease in CD8 positive T-cells were observed after the initiation of treatment. CD4/CD8 ratio dropped from the values of 2.10 to 1.68. Dramatic decrease in PASI score was observed, from the average value of 23.34 to that of 11.97.
Discussion. The authors compare and discuss the results of a few similar cytophotometric studies found in the available literature. The decreases in T-lymphocyte subsets correlate with clinically well-known treatment effect of CyA and suggest underlying immunopathologic process.

KEY WORDS

psoriasis, PASI score, cyclosporin A treatment, lesional CD4, CD8 lymphocytes

Introduction

Pathogenesis of psoriasis still remains unclear. Attention has been traditionally focused on abnormalities of keratinocyte proliferation and differentiation. Inflammatory and immunological reactions in the affected skin have been proposed as a suspected trigger only recently (1). The latest knowledge in the field of immunology of psoriasis and interaction processes between the cells at the site of inflammation suggest a possible autoimmune background of this disease (2).

The cells of the immune system bear on their surfaces hundreds of molecules specific for particular development stage and functional state. Until now, more than 260 various types of molecules have been identified on the surface of human leucocytes, but only a few decades of these are associated with a known structure and function. Sets of monoclonal antibodies were produced to target antigenic glycoprotein molecules on the surface of cells involved in immune response. In 1982, the Paris nomenclature of these glycoprotein molecules, denoted as CD (cluster of differentiation) markers, was approved (3,4).

Healthy dermis contains a certain number of T-lym-