CD4 Antibody Therapy and Cyclosporin A Differentially Affect HLA-DR and ICAM-1 Expression in Psoriatic Skin

To the Editor:
Psoriasis is a chronic inflammatory skin disease of unknown etiology. Indirect evidences, especially the clinical improvement by Cyclosporin A (CsA) treatment and by CD4 monoclonal antibody infusion [1,2], strongly support the hypothesis that psoriasis is a T-cell-mediated disease. Several recent reports suggest that the therapeutic effect of CsA in psoriasis could be mediated through the down-regulation of expression of adhesion molecules, such as the intercellular adhesion molecule-1 (ICAM-1) [3,4]. In their study [5], Dr. Petzelbauer and colleagues showed that the major morphologic/phenotypic change found in the CsA-treated patients compared to pre-treatment observations and to PUVA-treated patients, was a dramatic reduction in ICAM-1 expression by papillary endothelium. Interestingly, such treatment was not associated with any change in the density and phenotype of dermal and epidermal leukocytes, or in the number of HLA-DR+ keratinocytes, in contrast with the marked diminution of the cellular infiltrate induced by PUVA therapy (Table I).

When these results were published, we were involved in a therapeutic trial in severe psoriasis with anti-CD4 antibody, and we observed a transient but clear-cut improvement in the three treated patients [1]. We paid particular attention to ICAM-1 and HLA-DR expression in healing psoriatic plaques, 15 d after the onset of therapy. In contrast to Dr. Petzelbauer’s data using CsA, the high expression of ICAM-1 by endothelial cells of papillary and reticular dermis was not affected by anti-CD4 therapy (Fig 1). Furthermore, improvement of psoriasis in CD4 antibody-treated patients was associated with a decrease in the number of HLA-DR+ keratinocytes (Table I), which was not observed in CsA-treated patients [5]. As regards mononuclear cell infiltrates, only PUVA therapy but neither CsA nor CD4 antibody treatments could diminish T-cell accumulation in the dermis (Table I). Incidentally anti-CD4 anti-