

PRESENCE OF CIRCULATING AUTOANTIBODIES AGAINST INTEGRIN ALPHA-6 IN PSORIASIS VULGARIS

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Introduction:

Psoriasis is a chronic inflammatory disease affecting the skin and the joints. We hypothesized that the abnormal laminin integrity described in psoriatic uninvolved skin may result in insufficient binding of integrin α -6 to its ligand (laminin) resulting in autoantibody production. The primary function of the α 6 β 4 integrin heterodimer is to anchor the basal epithelial cells to the basement membrane zone. Antibodies against integrin α -6 can disturb the dermal-epidermal association *in vitro* that may contribute to the sustained chronic inflammation seen in psoriasis.

Methods:

Serum samples of 62 patients with psoriasis vulgaris and 36 patients with psoriatic arthritis and 20 healthy persons as controls were collected. Four different antigenic epitopes of integrin α -6 were defined with the use of PeptideStructure and PlotStructure softwares. The presence of anti- integrin α -6 antibodies in the serum was determined by using ELISA methodology. Ten control samples were always used per microplate, in order to determine the optimal cut off value on the basis of their optical densities.

Results:

Circulating antibodies against at least one recombinant epitope of integrin α -6 protein were found in 54.8% and 55.6% of patients with psoriasis and psoriatic arthritis, respectively. Eighteen psoriatic patients and 13 patients with psoriatic arthritis presented autoantibodies to more than one antigenic sites of integrin α -6. Sixty-four percent of the patients received some form of systemic treatment. However, there was no correlation between the occurrence of these autoantibodies and the ongoing treatment.

Discussion:

Our study provides evidence for the presence of anti- integrin α -6 antibodies in psoriasis vulgaris and psoriatic arthritis that may cause structural abnormalities, therefore in the skin contribute to micro-wounds and the characteristic wound-healing phenotype in psoriasis.