ADENOSINE-DEAMINASE (ADA) ACTIVITY IN PSORIASIS
(A preliminary study)

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Study of adenosine-deaminase activity in 23 patients having psoriasis compared with an equal number of healthy controls revealed significantly high ADA activity in the psoriatic patients.

Key words : Adenosine-deaminase activity, Psoriasis.

In the psoriatic lesions, there is an excessive cell multiplication in the epidermis followed by excessive and incomplete keratinization.[1,2] The increased nucleoprotein turn-over is reflected in the increased serum levels and increased urinary excretion of uric acid in these patients.[3] Also, in the psoriatic lesion, initially there is an infiltration of neutrophils in the epidermis forming subcorneal micro-abscesses, and later on, it is primarily lymphocytes and monocytes in the dermal tissues. Adenosine-deaminase is said to promote nucleoprotein synthesis by removing the inhibitory effect of adenosine in rapidly multiplying cells.[4] More specifically, its activity has been related to the process of maturation of monocytes.[5] It was for these reasons that the present study was undertaken.

Materials and Methods

Twenty three patients with psoriasis were selected at random from the out-patient department and an equal number of healthy volunteers as controls. The diagnosis was based on the clinical findings and supported by histopathological examination. The assay of ADA was performed according to the method described by Giusti.[6]

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Results

Out of 23 psoriasis patients, 16 were males and 7 females. Their ages varied from 15 to 65 years, the average age being 35.6 years. ADA activity is shown in table I. Only two patients had this activity within the normal limits and another had just a marginal rise (11.11 U/L). This patient was suffering from pustular psoriasis. In the remaining 20 patients it was high and ranged from 30 U/L to as high as 127.7 U/L, the mean rise being 52.92 U/L.

Table I. Serum adenosine-deaminase (ADA) levels in patients with psoriasis and controls.

Group	Number of patients	Mean+SD ADA (U/L) levels
Patients	23	47.0±5.84
Controls	25	9.7±0.53

Statistically significant ($p<0.001$)

Comments

Our preliminary results indicate that the activity of adenosine-deaminase is significantly high in the sera of psoriasis patients than the controls. Further work to correlate the activity of the enzyme with the activity and the duration of the disease is in progress.

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