

SHORT COMMUNICATIONS

IMMUNOGLOBULIN ASSAY IN LOCALIZED PUSTULAR PSORIASIS

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Immunoglobulin (IgG, IgM and IgA) levels were studied in 50 patients of localized pustular psoriasis (LPP). Alteration of immunoglobulin levels was observed in 49/50 cases. IgG, IgM and IgA, all were increased in 18 cases, IgG and IgA in 16 cases, IgG and IgM in 2 cases and IgA alone in 1 case. On the other hand, IgM alone was decreased in 11 cases, IgM and IgA both were decreased in 5 patients. IgG alone was raised statistically significantly in LPP. Increase in IgG was more in LPP with duration of disease upto 2 years / with duration of disease more than 2 years and in acropustulosis (AP) / chronic palmoplantar pustular psoriasis (Ch PPP).

Key Words : Immunoglobulins, Psoriasis

Introduction

Increased levels of IgA, IgM, IgG and IgE were reported in psoriasis.¹ Humoral immunity (IgA, IgG and IgE) was raised in psoriasis.² Increased immunoglobulin levels especially that of IgA were observed in psoriasis.³ Immunoglobulin levels have not been reported in LPP and hence this study was carried out.

Material and Methods

Fifty patients of LPP and 10 healthy controls were taken. Detailed history, thorough general physical, systemic, dermatological examination and routine investigations were carried out in all the cases. Serum immunoglobulins estimation was done in all cases and controls by employing single-radial immunodiffusion technique by using tripartigen plates supplied by Hoechst pharmaceuticals. Relationship of immunoglobulins of different types were studied in relation to

types of LPP, sex, duration of disease and different age groups.

Results

Both high / low levels of one or more class of immunoglobulins were exhibited in 49 / 50 cases. 74% had raised and 32% had low levels of one or more class of immunoglobulins. All the 3 immunoglobulins were raised in 18 patients, while IgG and IgM were increased in 2 patients and IgA alone was increased in 1 patient only. On the other hand IgM alone was decreased in 11 patients, IgM and IgA both were decreased in 5 patients, IgG levels were not decreased in any patient.

The range of IgG levels in LPP were from 1678.8 mg% to 2540.0 mg%, the mean was 1978.0 mg%, while mean of controls was 1678.0 mg%. Statistically significant increase in IgG levels was observed in LPP / controls. Statistically non-significant differences were observed in the levels of IgM and IgA in LPP / controls.

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Group I had 29 males and group II had 21 females and the difference in levels of IgG, IgM and IgA were statistically non-significant in 2 groups based on sexes.

Group I with duration of disease upto 2 years had 35 cases and IgG levels ranged from 1678.8 to 2540.0 mg%, mean value was 2032.30 and SD was 252.92. Group II with duration of disease more than 2 years had 15 cases with IgG levels in the range of 1678-2260 mg%, mean value of 1850.40 mg% and SD was 162.70. On comparison of 2 groups, SE was 71.02 with T value 2.56, there was statistically significant increase in IgG levels in group I. Statistically non-significant differences were observed in the levels of IgM and IgA in these 2 groups.

Five groups were made on the basis of age. Group I with age range of 11-20 years had 8 cases, group II with age range of 21-30 had 15 cases, group III with age range of 31-40 years had 15 cases, group IV with age range of 41-50 had 8 cases and group V with age range of 51 years onwards had 4 cases. The difference of IgG, IgM and IgA in all the 5 groups was statistically non-significant.

Three groups were made on the basis of type of LPP. Group I, acute PPP had no

case, group II, Ch PPP had 43 cases and group III, AP had 7 cases. There was a statistically significant increase in the levels of IgG in the group III as compared to group II. There was no statistically significant difference in the levels of IgM and IgA in both the groups.

Comments

49 / 50 cases of LPP showed one or more class of immunoglobulins at higher or lower levels. Only IgG levels were statistically significantly raised in LPP. Levels of IgG were statistically significantly more in first 2 years of disease / group with more than 2 years of duration. Statistically significant increase in the IgG levels were observed in AP / Ch PPP. So immunoglobulins were deranged in LPP and maximum alteration was seen in IgG levels.

References

1. Gulhou J J, Meynadier J. The immunology of psoriasis. *J Clin Dermatol* 1976; 103: 509 - 23.
2. Heid E, Bigel P, Reuter G, et al. Data on cellular immunity in psoriasis. *Derm syphilis (Paris)* 1976; 103: 577 - 9.
3. Luca M, Satriano R A, Mazza M, et al. Serum immunoglobulins in psoriasis. *Dermatol / Minerva Dermatol* 1977; 112: 287 - 91.