

Evaluation of immunoglobulin IgA in psoriasis

VIDUSHI BHARDWAJ AND A.S. SINGH

ABSTRACT

Psoriasis is a chronic, autoimmune disease that appears on the skin. It occurs when the immune system sends out of faulty signals that speed up growth cycle of the skin cells. In this study we find out the level of immunoglobulin IgA and concluded that level of immunoglobulin IgA was highly significant ($p < .001$)

Bhardwaj, Vidushi and Singh, A.S. (2011). Evaluation of immunoglobulin IgA in psoriasis, *Ann. Pharm. & Pharm. Sci.*, 2 (1& 2) : 52- 53

Key words : Immunoglobulin IgA, Psoriasis, Chronic, Autoimmune

INTRODUCTION

As skin is one of the largest organs of the body and an organ, which is reached and affected by every substances and is stimulus to everything coming to it form within, via blood and lymph, nerve and tissue fluids.

Psoriasis, a common papulosquamous skin disease early diagnosable in its typical form usually have chronic course with remission and exacerbation. Psoriasis is a chronic dermatosis, having a variable clinical representation and unpredictable course. It is believed to be a genetic disorder initiated and precipitated by various factors like trauma, vaccination, emotional upsets, endocrinal derangement and seasonal relations. In this study the immunoglobulin changes in patient with disease.

MATERIALS AND METHODS

Hundred patients suffering from psoriasis and fifty healthy controls comprised the clinical material for the

Address for correspondence :

VIDUSHI BHARDWAJ, Department of Applied Sciences and Humanities, Haryana Engineering College, Jagadhri, YAMUNANAGAR (HARYANA) INDIA
E-mail : dr. vidushibharadwaj@gmail.com

Authors' affiliations:

A.S. SINGH, Department of Chemistry Chinmay Degree College, HARIDWAR (UTTRAKHAND) INDIA
E-mail : dr.assingh@rediffmail.com

present study. Cases were selected from those attending the out-patient department or the ward of department of dermatology, SVBP Hospital attached to LLRM Medical College, Meerut. The estimation of serum immunoglobulin IgA was carried out in Biochemistry department of LLRM Medical College, Meerut. All the patient were divided into three age group 20-40 years, 40-60 years and 60 years and above. 55 cases were male and 45 cases were female. The controls were divided into three age groups as in the patients group. 25 control were male and 25 were female. All the controls were examined clinically to make sure that none of them had any previous or present dermatological problem.(Table 1, 2 and 3)

Table 1 : Distribution of cases in study group

	Male	Female	Total
Psoriasis	55	45	100

Table 2 : Distribution of cases in control group according to age and sex

Age group (years)	Male	Female	Total
20-40	10	10	20
40-60	10	10	20
60 and above	5	5	10
Total	25	25	50

Table 3 : Distribution of cases of psoriasis according to age and sex

Age group (years)	Male	Female	Total
20-40	25	20	45
40-60	18	15	33
60 and above	12	10	22
Total	55	45	100

Table 4 : Serum IgA level in cases of psoriasis according to age and sex

Age group (years)	Control			Patients of psoriasis			P value
	n	Range	Mean SD	n	Range	Mean SD	
20-40	20	0.93-2.8	1.86 ± 0.65	4 5	0.60 - 7.0	3.84 ± 2.07	<0.001
40-60	20	0.92-2.78	1.90 ± 0.65	3 3	0.72 - 7.0	3.24 ± 1.95	<0.001
60 and above	10	0.92-2.75	1.8 ± 0.68	2 2	0.82 - 7.0	3.54 ± 2.11	<0.001
Total	50	0.92-2.8	1.87 ± 0.64	1 0 0	0.60 - 7.0	3.58 ± 2.04	<0.001



Fig. 1 : Psoriasis on the foot



Fig. 2 : Psoriasis body

Estimation of serum immunoglobulin:

The serum immunoglobulin IgA was measured by “Single Radial Immuno- Diffusion, Direct method of Mancini and co-workers (1965)

Estimation of IgA was carried out by using tripartigen plate (immunodiffusion plates for quantitative determination), by diagnostic kit from Boehringer company (Germany) supplied by Hoechst pharmaceutical, Bombay, in control group and in patient of psoriasis.

RESULTS AND DISCUSSION

Immunoglobulin IgA was estimated in blood of normal healthy volunteers and patients of psoriasis.

As evident from Table 4, in all patients of psoriasis, the serum IgA level ranged between 0.6- 7.0 g/l(means ±SD 3.58± 2.04).This when compared to control was significantly high(p< 0.001)

In the age group 20-40 years, 40-60 years and 60 years and above , all patients the serum IgA level ranged between .60-7.0 g/l(mean± S.D 3.84± 2.07),0.72 - 7.0g/l (mean± S.D3.24 ±1.95) and 0.82±7.0g/l(Mean± S.D3.54 +2.11) as compared to healthy subject. It is significantly high. (p < 0.001)

Conclusion:

In the present study the level of IgA was found to be increased in patients. The IgA concentration values for the test group (Patients) was 0.6 -7.0 g/l (3.581 2.04) and in the control group it was 0.92-2.8 g/l (1.87 ±0.64). The level of serum IgA was elevated in psoriatic patients as compared to control group and was highly significant (p< 0.001).

REFERENCES

Amman, A.I. and Hong, R.(1970). Selective IgA deficiency and autoimmunity. *Clin Exp Immunol*, 7:833.

Chrzan, B.G., Falk, E.S., lysozyme and IgA (1992). concentrations in serum and saliva from psoriasis patients. *Acta Derm Venereol Stochh* ,72 :138-140.

Clot, Charmasson, E., Dardenne, M. and Biochier, J.(1976). Immunological aspects of Psor'as'is. *Br. J. Derm*, 95: 295.

Epstein, W.L.(1971). Immunologic factor in psoriasis. In: Farber EM, Cox AJ (eds) *Proceedings of the F' International Symposium on psoriasis*. Stanford University Press. pp. 297-303.

Mittal, R.R., Bahl, R.K., Chopra, A. and Popli, R.(1993). Immunoglobulin assay in localized pustular psoriasis. *Indian J. Dermatol Venereol Leprol*, 59: 69-70.

