

PSORIASIS - A CLINICAL AND SOME BIOCHEMICAL INVESTIGATIVE STUDY

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Summary

135 cases of Psoriasis were studied. They represented 0.8% of the patients seen in Medical College Hospital, Rohtak. 122 cases were between the ages of 11-40 years. Ratio of males to females was 4:1. 10 cases gave positive family history, 12 patients had psoriatic lesions over the face and one patient had lesion over the shaft of the penis. Mucous membrane involvement was seen in 7 cases. Hypercalcaemia was seen in 10% of the cases, and hypocalcaemia in 15%. High serum magnesium levels were observed in 40% cases. High serum uric acid levels were seen in 26.6% and diabetes was detected in none.

Psoriasis is a chronic inflammatory disease of the skin of unknown etiology characterised by well defined pink or dull red lesions with silvery white scales.

A few studies of clinical pattern of the disease have been reported from India^{1,2,3,4,5,6}.

The object of this paper is to present clinical patterns of this disease and also certain laboratory findings.

Observations

The present study consists of 135 patients with psoriasis attending the Skin and V. D. Department of Medical

College, Rohtak (Haryana) between March, 1975 and December, 1977. All the patients were subjected to detailed history and physical examination, especially with reference to cutaneous distribution of the lesions. Besides routine investigations, serum calcium, serum magnesium, serum uric acid and blood sugar estimations were done in some of the patients.

Incidence

Incidence of psoriasis in Medical College Hospital, Rohtak, the only one in the State of Haryana, is 0.8% of all dermatological patients. Sharma et al² from Indore reported an incidence of 0.84% and Bedi⁶ from Chandigarh 0.8%. Lal³ in his study of 25 cases from Amritsar (Punjab) found an incidence of 1.25%, Mehta et al⁵ from Bombay an incidence of 1.5%, and Ambady et al¹ from Trivandrum an incidence of 5.6%.

Age and Sex

Maximum number of patients, 114 out of 135 were between the ages of 11

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TABLE 1
Showing age and sex of patients

	Age in years						Total
	0-10	11-20	21-30	31-40	41-50	<50	
Male	5	25	52	14	12	—	108
Female	2	5	14	4	2	—	27
Total	7	30	66	18	14	—	135

to 40 years. The youngest was 6 years of age and the oldest 50 years. There were 108 males and 27 females giving a M:F ratio of 4:1, which is different from the common observation of 2:1 ratio by many other workers (Awachat et al⁷, Lal³, and Sehgal et al⁴). However Ingram⁸ reported the sex ratio as about equal, and Mehta et al⁵ from Bombay as 4:1.

TABLE 2
Showing the age of onset

Age of onset in years	No. of cases
0-10	7
11-20	40
21-30	69
31-40	13
41-50	6

Majority had onset of the disease between 11-30 years of age. Okhandiar and Banerjee⁹ reported the age of onset for majority of their patients between 20-29 years. Lal³ observed the age of onset between 11-30 years in most of his cases. Farber et al¹⁰ also reported that half of the cases experienced onset of the disease between 10-30 years. Psoriasis is reported to be rare in children. In our series 5 male and 2 female children had this disease. Mehta et al⁵ in a series of 300 cases observed it in 9 children; 4 males and 5 females.

Family History

10 out of 135 cases (7.4%) gave a positive history of psoriasis in the family. Ambady¹ observed familial incidence as 4.1% and Sharma et al²

as 13.33%. Lal³ found a positive family history in 12% among his series of 25 cases. Bedi⁶ also reports a positive family history of psoriasis in 13.6% cases.

Seasonal Variation

55% of the cases gave history of aggravation of the disease in winter, while 30% observed no change in cold weather and the remaining 15% gave definite history of worsening in summer. Similar observations have been made by other Indian authors, whereas the experience in the Western countries is that in more than 80% of cases, there is aggravation in winter. This difference is probably due to climatic variations.

Itching

Mild to moderate itching was present in all the cases.

Skin Eruption

Typical lesions varying from pin head sized papules to nummular, discoid, annular and circinate plaques were observed in the common areas of distribution. Four patients developed psoriasiform erythroderma. Guttate psoriasis was seen in 2 children, one of whom developed erythroderma during treatment.

Involvement of unusual Sites

Psoriasis on the face is reported to be rare in U. K. (Rook et al¹¹). Probably the face is spared because it is exposed to sunlight. In our series face involvement was seen in 8.8%. Fig. 1 illustrates the extensive involvement of



Fig. 1 Showing typical Psoriatic lesions over face with the involvement of the lip.

TABLE 3
Showing sites of involvement

Sites involved	Number of cases
Scalp	80
Face	12
Trunk	94
Upper extremity	92
Lower extremity	86
Palm and soles	12
Genitalia	1
Mucous membrane	7

face and lip. One case showed lesions on the shaft of the penis. Mucous membrane was involved in 7 cases who had associated cutaneous lesions, Fig. 2 illustrates involvement of the tongue.

Nail Involvement

Calvert et al¹² observed that 55% cases with psoriasis has nail involvement, whereas Bedi⁶ reports these changes in 74% of the cases. In our

series nail changes were present in 40% cases. Mehta et al⁵ observed nail changes in 30% cases. The commonest abnormality seen in our series was pitting of the nails seen in 30 cases (22.2%). Other changes seen were subungual hyperkeratosis, discoloration of the nails and onycholysis. 4 cases showed nail changes and no cutaneous involvement. Fungal infection was ruled out in these patients with appropriate tests.

Precipitating factors

Anxiety and emotional factors did not seem to play any role in precipitating the disease.

Joint Pain

16 patients complained of pain in the joints but with no evidence of arthritis.

Systemic Involvement

No clinical evidence of any systemic involvement was observed.

Biochemical Investigation

Serum Calcium

TABLE 4
Showing serum calcium estimation.

	Total No. of cases.	High levels > 11 mg%	Normal levels (9-11 mg%)	Low levels < 9 mg%
Number of cases	60	6	45	9
Percentage of cases	—	10	75	15

High serum calcium levels were seen in 10% cases, low in 15% and normal values in the remaining 75%. Mehta et al² report high values of serum



Fig 2 Showing involvement of the tongue. Patient had typical psoriatic lesions over other parts of the body.

calcium in 12% cases and low in 3.33% cases.

Serum Magnesium

TABLE 5
Showing serum magnesium estimation.

	Total number of Cases	High levels > 2.9mg%	Normal levels 1.8-2.9mg%	Low levels < 1.8mg%
Number of cases	60	24	36	—
Percentage of cases	—	40	60	—

High levels of serum magnesium were observed in 40% cases, while normal levels were present in the remaining patients. None of the patients had low levels of serum magnesium.

Serum Uric Acid

TABLE 6
Showing serum uric acid estimation

	Total No. of cases	High levels	Normal levels	Low levels
No. of cases	30	8	22	—
Percentage of cases	—	26.6	73.3	—

High serum uric acid levels were seen in 26.6% cases, while normal levels were present in the remaining patients. Mehra et al⁵ observed high serum uric acid levels in 20% patients while it was low in only 1% cases.

Blood Sugar

TABLE 7
Showing blood sugar estimation

	Total No. of cases	Normal levels 80-120 mg%	High levels > 120 mg%	Low levels < 80 mg%
No. of cases	60	60	—	—
%age of cases	—	100	—	—

Hajini et al¹⁸ observed abnormal glucose tolerance test in 14.3% cases, whereas Mehta et al⁵ detected diabetes in 5.33% of psoriatic cases. However, Brownstein¹⁴ and Lynch¹⁵ could detect no relationship between these two diseases either in the subjects or their relatives. All the patients studied with blood sugar estimations showed normal levels. Diabetes associated with psoriasis or otherwise may be coincidental.

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