

# PSORIASIS IN HOSPITAL POPULATION

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## INTRODUCTION

Psoriasis has a worldwide prevalence and its incidence in the University Hospital is 4%. The pattern of psoriasis in this index population was studied and the findings, probably applicable to the rest of the peninsular Malaysia, are described and compared with the published reports from other countries.

## MATERIALS AND METHODS

Two hundred and three patients with psoriasis, seen in the University Hospital during a period of three years, were personally studied. As all the patients presented with characteristic features, the diagnosis was based solely on the clinical findings.

To test the significance of the difference between the incidence in various ethnic groups  $X^2$  (Chi) test was used.

$$X^2 = \frac{(O - E)^2}{E}$$

$$E = \frac{\text{row total} \times \text{column total}}{\text{grand total}}$$

where O is the observed number of psoriatics in each ethnic group; E is the expected number of psoriatic in each ethnic group; row total is the number of psoriatics or the number of non-psoriatics; column total is the number of all patients in each ethnic group; and grand total is the number of all patients who attended the skin clinic during the study period.

## RESULTS

During the period of study 5375 new patients were seen in the skin clinic and 203 of these had psoriasis, giving an approximate incidence of 4%. The proportions of ethnic groups were Chinese 41%, Indians 32% and Malays 27%.

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## Age of onset and distribution

The age of the patients at the first visit to the clinic is shown in Fig. 1 and the mean age was 40.5 years. The age of onset of psoriasis ranged from 5 to 79 years. The peak of the age groups for the onset of psoriasis occurs earlier than that for the age groups at which the patients first visit the clinic.

## Sex distribution

Table I shows the sex distribution in various ethnic groups. The male-female ratio in Indians and Chinese who together constitute 78% of patients is about 2:1.

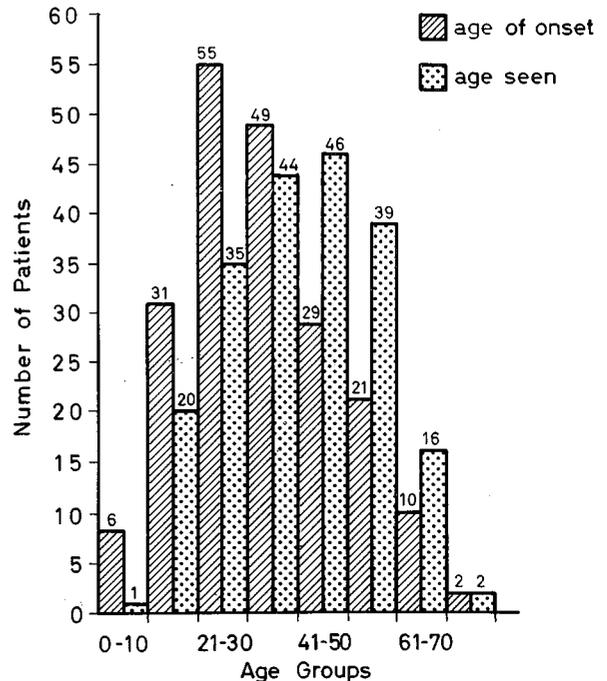


Fig. 1 Frequency Distribution of The Age of Onset and The Age First Seen.

**Table I Sex ratio in different ethnic groups.**

	Male	Female	Total	Male/Female ratio
Indians	70	29	99	2.4:1
Chinese	41	18	59	2.3:1
Malays	33	11	44	3.0:1
Others	1	—	1	
Total	145	58	203	

**Table II Ethnic distribution in the psoriatic and in all skin disorders.**

Race	Number	% in Study	% attendance in Skin Clinic
Indians	99	48.76	32
Chinese	59	20.06	41
Malays	44	21.6	27

**Table III Presenting complaints other than cosmetic awareness**

Pruritus	66 (32.5%)
Burning sensation	3
Painful	2
Hair loss	1

**Ethnic distribution**

Indians form 49% of the patients in the study group (Table II), though they are not the majority in the group of patients with skin diseases attending the skin clinic. The findings were tested for significance by  $X^2$  (Chi) test. The results were (i) amongst all ethnic groups  $X^2$  (Chi) 27.619; d.f. = 2; P 0.001. (ii) Between Indians and Chinese  $X^2$  (Chi) 24.126; d.f. = 1; P 0.001 and (iii) between Indians and Malays  $X^2$  (Chi) 13.026; d.f. = 1; P 0.001.

**Family History**

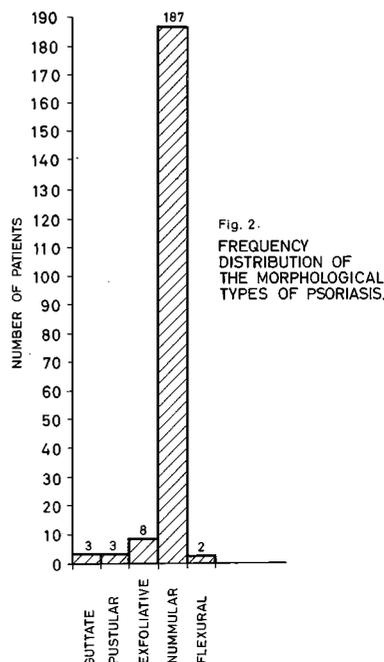
Twenty-one patients (12.5%) gave a family history of psoriasis and 14 were not sure. Father was stipulated by 2 patients, mother by 3, siblings by 11 and children by 5. One patient had 2 brothers with psoriasis and another had 2 sisters with psoriasis.

**Presenting complaints**

All the patients were cosmetically aware of their disease. The next most frequent complaint was pruritus (Table III). Burning sensation and pain were present in those with exfoliative psoriasis and when the lesions were present in the feet.

**Morphological pattern**

The pattern was broadly classified into five types (Fig. 2). The nummular type included the rupial and the geographical patterns. Nummular type was the commonest, 92%. The two patients with the flexural type had lesions confined to all or some of the following regions, groin, axilla, submammary



**Fig. 2 Frequency Distribution of The Morphological Types of Psoriasis.**

and periumbilical. All the 8 patients with exfoliative psoriasis had the nummular lesions initially, but developed the exfoliative phase after having stopped oral prednisolone therapy prescribed elsewhere. In one of the patients with pustular psoriasis it was generalised and in the rest the lesions were confined to palms and soles only. The age of the 3 patients with guttate psoriasis were 14, 19 and 21 years.

#### Sites of involvement

Scalp was involved in 172 patients (84.7%) as shown in Table IV and psoriasis started here in 84 (41.4%). Lower limb was the commonest site for psoriasis to be manifested in the study group. Hands and feet were less commonly involved.

Table IV

Site of involvement	No. of Patients	
	Male	Female
Scalp	123	49
Face	34	18
Trunk anterior	114	48
Trunk posterior	133	46
Upper limbs	111	47
Lower limbs	130	51
Groins	52	15
Hands	37	16
Feet	35	14

One hundred and ten patients (54.1%) had nail changes (Table V). Pitting was in 42.3% of the patients, the commonest of the four types of nail changes observed in the study group. The discoloration varied from yellowish to dirty brown. The dystrophy of the nail plate was usually partial.

#### Arthritis

The joint involvement was classified into four types. In the classical type only the distal inter-

Table V. Distribution of Nail Abnormalities.

Total	110	54.1%
Pitting	86	42.3%
Discoloration	16	7.9%
Dystrophy	36	17.7%
Subungual hyperkeratosis	24	11.8%

Table VI. Patterns of Arthritis

Types	No. of Patients		
	Male	Female	Total No. with nail changes
Classical psoriatic	4	—	2
Rheumatoid	8	1	8
Mutilating	1	1	1
Spondylitic	0		
Total	13	2	

phalangeal joints were involved. The patients with rheumatoid type were sero-negative and did not have rheumatoid nodules. In the mutilating type, most of the joints of the fingers and the toes and the metacarpophalangeal and the metatarsophalangeal joints were involved with disabling deformity. In the study group none of the patients had spondylitis and in the few who complained of backache, neither clinical nor radiological evidence of damage to the spine was detected. Fifteen patients (7.4%) had arthritis with 13 males and 2 females (Table VI).

Associated nail deformities were seen in 11 of the 15 patients.

## DISCUSSION

Prevalence and incidence of psoriasis for various parts of the world is not available though hospital incidences have been identified and then extrapolated to the population at large especially in the Scandinavian countries (Hellgren, 1967) and in England. The incidence in various centres in England is between 4 to 7% (Rook, Wilkinson and Ebling, 1972). A 4% incidence in the University Hospital Skin Clinic suggests that psoriasis is as commonly seen here as in England.

Though the age of onset of psoriasis ranged from 5 to 79 years, more than half the patients developed psoriasis between the ages of 20 to 50 years. There were only 7 patients below the age of 10 years. Though psoriasis is uncommon in the paediatric age group, the figures reported here may not be the true incidence, as the children formed a small group in the study. Some of the patients had sought treatment elsewhere and attended the hospital clinic later in the course of their disease and this may be one of the reasons for the difference between the peaks of the age groups for the onset of disease and the age groups for the first attendance to the clinic.

Sex incidence has been variously reported as either equal (Hellgren, 1967) or more common in the male (Rook, Wilkinson and Ebling, 1972). In the study males were affected twice as common as the females and similar finding had been reported in Singapore (Rajan *et al.*, 1977). Variation in ethnic distribution of psoriasis has been mentioned in many reports and it is generally thought that psoriasis is less common in the orientals. Of the three ethnic groups in our study, psoriasis was more common in the Indians and this was found to be statistically significant, similar to the report from Singapore (Rajan *et al.*, 1977). This higher incidence may be due to the close genetic relationship that exists between the Caucasians and the Indians than it does between the former and the Mongoloids and the Polynesians.

Familial aggregation of psoriasis is well known and is three times more common in siblings if one of the parents has the disease and in the study more patients reported of sibling involvement but without an associated parent involvement. The familial inci-

dence was 12.5% falling within the range reported from the West.

Though most textbooks of dermatology deny pruritus as a symptom of psoriasis it was present in 32.5% of patients. Next to the cosmetic disability, pruritus was the most frequent complaint which made the patient seek treatment. The morphological pattern of psoriasis has been subdivided into many types in most reports and the pattern seen here is grossly similar to those reported. Exfoliative psoriasis as the initial manifestation of the disease was not seen in the group. Flexural psoriasis was seen in only in obese patients. In patients with guttate psoriasis no obvious precipitating factors such as history of streptococcal sore throat was present.

Lower limbs and the scalp were the commonest sites to be involved and in 41.4% of the patients psoriasis started in the scalp. Nail abnormalities were in 54.1% and pitting of the nail plate was the commonest. Arthritis associated with psoriasis has been classified in many ways and here based on the method by Roberts *et al.*, (1976) with modification, three of the four types were seen with an incidence of 7.4%. More males were affected and the rheumatoid type was the commonest. Eleven of the 15 patients with arthritis had nail changes.

Thus there are many similarities between the pattern of psoriasis seen in the University Hospital and those in the West. Though nationwide figures for psoriasis is not yet available it may be possible that both the incidence of psoriasis and the clinical problem it presents is no different from those elsewhere.

## SUMMARY

Two hundred and three patients with psoriasis, who attended the skin clinic were studied to identify the pattern of psoriasis. The incidence was 4%. It was more common in Indians than in the other ethnic groups and this was found to be statistically significant. Males were affected twice as common, 12.5% gave a positive family history, the lower limbs and the scalp were the commonest site, and pruritus was frequent. The pattern appears similar to those in the west.

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