

Psoriasis : Clinical and Epidemiological Features in a Hospital Based Study

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Abstract

Objective: To determine the prevalence, clinical types, ethnic distribution, age at onset, familial association and precipitating factors of psoriasis in patients attending the dermatology clinic of Tribhuvan University Teaching Hospital (TUTH), Kathmandu, Nepal.

Methodology: All patients attending the dermatology clinic of TUTH from January 1996 to April 2001 for a period of five years three months, were examined for the presence of psoriasis. The diagnosis was based on clinical features in most cases, aided by histopathological examination where required. A structured format was used to record the data. The statistical analysis was done using the SPSS 10 windows programme.

Results: A total of 325 patients (Males-168; Females-157) were diagnosed to have psoriasis, with a prevalence of 3.6% in TUTH (Males- 3.2 %; Females- 4.2 %). The age distribution of patients ranged from 10 months to 80 years (mean 32.6 ± 15.3 years). The peak age at onset of disease was in the second decade (31.5%) followed by the third decade (28.2%). The difference between age at first medical visit and age at onset was 2.3 years. Majority of patients in the study belonged to the Aryan race (90%). The commonest clinical types encountered were psoriasis in chronic stable plaques (86.2%) and guttate psoriasis (21.8%). Nail involvement was seen in 13.9% of patients, articular involvement in 10.15% and familial association in 13.3%.

Conclusion: Psoriasis is common among skin diseases in Nepal, affecting mostly young adults. The Aryan race is over-represented in our study and further studies are necessary to confirm this initial impression. There is considerable delay in seeking medical assistance and further studies are needed to search for explanations.

Keywords: Psoriasis, prevalence, clinical types, ethnic distribution, age at onset, age at first medical visit, Nepal.

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Introduction:

Psoriasis is a common, disfiguring, inflammatory and proliferative disease of the skin¹. It is universal in occurrence, with considerable variations in worldwide incidence due to racial, geographic and environmental influences². In the studies of white people of Northern Europe and Scandinavia, the population prevalence was between 1.5 and 3%.¹ Studies from the US show a population prevalence of 1.4%, while a study from the Indian sub-continent reported that psoriasis constituted 2.3% of the dermatology out-patients.^{2,3} In Sri-Lanka, the prevalence in the population was estimated to be over 0.4%.⁴ The prevalence of psoriasis appears to be lower among the mongoloid races of the far east. In China, psoriasis is estimated to affect 0.3% of the population.⁵ Another nationwide collaborative survey, however, reported the population prevalence of 1.23%.⁶ The incidence of the disease has not been accurately determined in many studies. A study from the US indicated that the incidence was 60 per 100000 population per year.⁷ The etiopathogenesis of psoriasis seems to be multifactorial and still not well understood. Most probably, there is interplay of genetic and environmental factors. Climate appears to be one of the most important environmental factors, with higher rates recorded in cold countries at greater latitudes, and majority of the cases first diagnosed in winter and spring months.

Although psoriasis is not a common cause of death, its prolonged morbidity is highly disabling. Living with psoriasis, like other chronic diseases, has implications on the various dimensions of life. It affects the psycho-social well being, work and the daily activities. Krueger et al, in a large questionnaire survey, found that individuals with psoriasis believe that the disease has a profound emotional and social as well as physical impact on their quality of life.¹³

The visible lesions are esthetically handicapping and fear of contagiosity and confusion with leprosy, particularly in the Indian sub-continent, cause considerable social stigma. It has often

been referred to not as “life threatening” but as a “life ruining” condition.⁸

The most frequent symptoms experienced by patients in a survey by Krueger et al were scaling (94%) and itching (79%).¹³ In the more severe forms, there are difficulties in all types of physical activities. Patients have difficulty in using their hands, feet and there is general body discomfort. There is a clear influence in the selection of the job and productivity. Psoriatic patients report poorer health related quality of life than the general population.

Nepal is a Himalayan kingdom located 28°N, 84°E in the Indian sub-continent¹⁰. Having a population of 24.1 million (2001 census), it is a conglomeration of numerous caste and ethnic groups, mainly belonging to the Tibeto-Burman and Indo-Aryan races. The country comprises of the mountains in the north, the central hills, and the southern terai plains, with tropical climate in the south and arctic type in the north.¹¹ This study presents the clinical and epidemiological features of psoriatic patients attending the dermatology clinic at the Tribhuvan University Teaching Hospital (TUTH). TUTH is a 444 bedded, multi-speciality hospital located in the capital city, Kathmandu and serves as the major national referral center.

Materials and Methods

All patients attending the dermatology clinic of TUTH between January 1996 and April 2001, for a period of five years three months were examined for the presence of psoriasis. A structured format was used to record the data, which included demographic data, characteristics of skin lesions, sites involved, clinical types, characteristics of nail changes, articular involvement, age at onset, age at first medical visit, familial occurrence, precipitating and/or aggravating factors, other associated skin and systemic diseases and therapy received. The statistical analysis of the data was done using the SPSS 10 windows programme.

Original Article**Results:**

A total of 325 patients (Males –168; Females –157) were diagnosed to have psoriasis, with a prevalence of 3.6% in TUTH (Males–3.2%; Females – 4.2%). The age distribution of patients ranged from 10 months to 80 years (mean 32.6 ± 15.3 years); the age at onset of disease ranged from 3 months to 75 years (mean 25.9 ± 14.3 years); and age at first medical visit ranged from 6 months to 75 years (mean 28.2 ± 14.8 years). The mean age at onset for males was 27.63 ± 14.6 years and that for females was 23.39 ± 13.89 years ($t = 2.44$; $P = 0.015$). The mean age at first medical visit for males was 29.52 ± 15.18 years and that for females was 26.31 ± 14.79 years ($t = 1.699$; $P = 0.091$). The peak age at onset of disease was in the second decade (31.5%) followed by the third decade (28.2%). In females (39.2%) it was in the second decade and in males (30.6%) in the third. The difference between age at first medical visit and age at onset was 2.3 years ($P < 0.001$); males ($t = 1.04$; $P = 0.31$); females ($t = 2.92$; $P = 0.09$). A comparison of age of the patient, age at onset and age at the first medical visit is presented.(Fig.1)

Majority of patients in the study belonged to the Aryan race (90%) and were also mostly affected (Brahmins – 29.8%; Newars – 28.6%; Chhetris – 24.3%). The commonest clinical types encountered were psoriasis in chronic stable plaques (86.2%) and guttate psoriasis (21.8%), followed by pustular (1.5%), flexural (1.5%) and erythrodermic psoriasis (0.6%) (Fig.2). The most frequently involved sites were the extensor sites (83.4%), followed by the scalp (58.5%). Involvement of the hands and feet were seen in 25.5% of patients, face in 11.7%, genitals in 2.8% and mucous membranes in 0.6% of patients. Nail involvement was seen in 13.9% of the patients with subungual thickening (5.8%), discolouration (4.9%) and pitting (4.3%) being the most common alterations. Onycholysis was observed in 3.1% and oil drop signs in 0.3% of patients. Articular involvement was present in 10.2% of patients, most commonly distal interphalangeal arthritis (3.7%) and peripheral mono or asymmetrical oligoarthritis (3.4%). There was evidence of RA

factor negative arthritis in 3.1% of patients, arthritis mutilans in 1.2% and psoriatic spondylitis and/or sacro-ilitis in 0.9% of patients (Fig.4). Familial association was seen in 13.3% of the patients, the nearest kins being mostly effected; disease in mother (4%), father (2.8%), brother (2.8%), daughter (2.2%), sister (1.5%), and son (1.2%). One or more precipitating factors were identified in 50.6% of patients. The most common were cold (36.1%), sun (9.9%), bacterial laryngopharyngitis (4.3%) and mechanical trauma (3.4%). Physical stress appeared to be related to precipitation of disease in 2.2% and psychological stress in 1.9% of patients. In about 0.6% of patients, intake of aspirine like drugs could be attributed to precipitation of disease.

Patients in our study came from 50 of the 75 districts of Nepal. There were 121 (37.2%) patients from kathmandu valley, where TUTH is located.

The total number of patients from the mountain regions were 58 (17.8%), the hills 220 (67.7%) and the terai (southern plains) 37 (11.4%).

Discussion:

There are only few epidemiological studies of psoriasis from the Indian sub-continent. It is generally thought that the prevalence is higher in the cold countries and Caucasians. In our study the prevalence is 3.6% in the dermatology clinic of TUTH and it is one of the most common skin problems in our clinic. We are convinced that the above prevalence also reflects partly the national prevalence, as the study was done in a national referral hospital. The actual prevalence in the Indian sub-continent is not known mainly due to the lack of large scale epidemiological studies.

The mean age of disease onset in our study was 25.9 years and the peak age of disease onset was in the second decade, in concordance with similar other studies.²⁻⁷ The difference between age at first medical visit and age at onset was 2.3 years ($p < 0.001$) in our study. Factors like low socio-economic status, geographical barriers like having

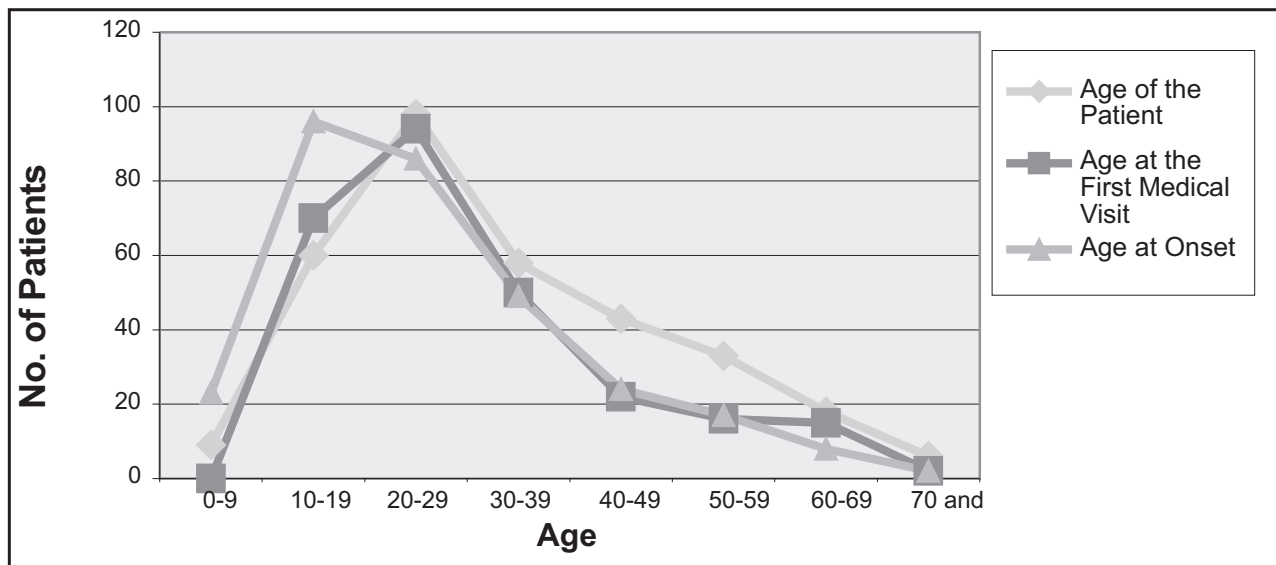


Figure 1. Comparison of Age of the Patient, Age at Onset & Age at the First Medical Visit

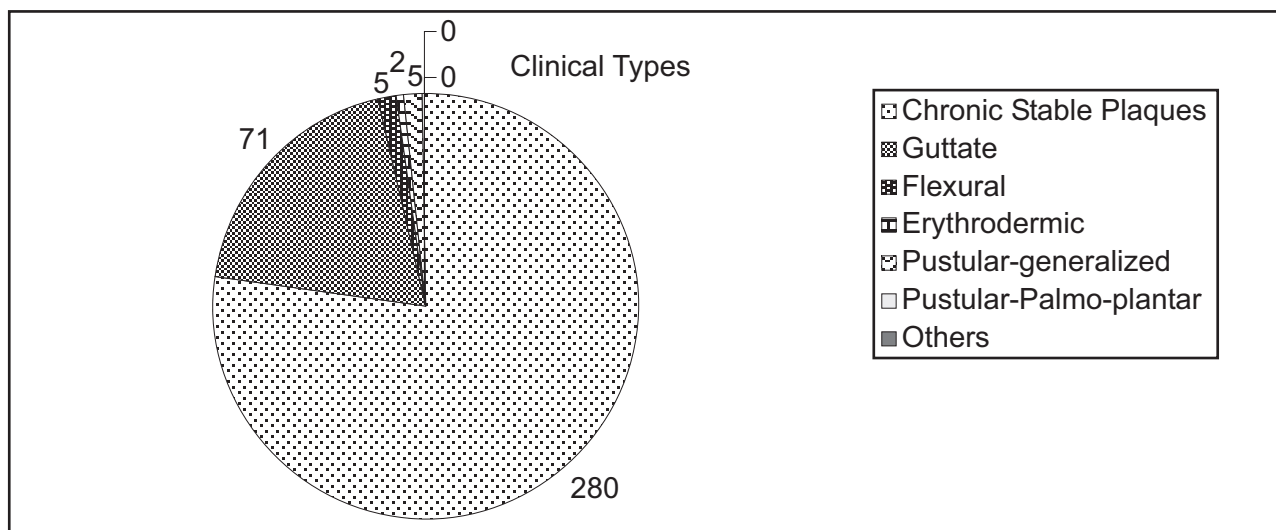


Figure 2. Clinical types of Psoriasis

to travel long distances to seek health care and inadequate health infrastructure for the diagnosis and management of skin diseases, probably result in delay in seeking medical attention.

Most studies report higher incidence of disease among first-and second-degree relatives of patients. There was a familial association of disease in 13.3% of our patients, the nearest kins being mostly being affected.

It has been observed that psoriasis appears to be less common among mongoloid races and the disease has not been observed in Samoans.^{2,5}

Majority of the patients in our study belonged to the Aryan race and were also mostly affected. This may be an over-representation, and further studies are required to confirm this.

Environmental factors play an equally important role as precipitating/aggravating factors. One or more precipitating factors were identified in 50.6% of our patients, where the majority reported precipitation of disease with cold weather.

Until now there is no effective cure for this disease. Like any other health problem, due to lack of health facilities in Nepal, psoriasis is either not

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treated or undertreated. The therapies currently available are very costly. It is unaffordable to most, as the treatment has to go for years, if not the whole life. Due to the necessity of prolonged treatment, frequent relapses and high cost, there is very poor compliance with the treatment. In one study, the rate of non compliance with the treatment regime was around 39%.¹² Many patients with psoriasis, particularly those with severe disease, are frustrated with the management of their disease and the perceived ineffectiveness of their therapies.

It is our general perception that psoriasis, due to its high morbidity and high prevalence, is one of the most important skin problems in Nepal, second only to Hansen's disease, allergic disorders and skin cancer.

Conclusion:

Psoriasis is one of the most common among skin diseases in Nepal, affecting mostly young adults. This disease has profound effect on the quality of life of the patient, which needs to be better assessed. Although patients in our study came from 50 of the 75 districts of Nepal, the Aryan race is over represented in our study and further studies are necessary to confirm this initial impression. There is considerable delay in seeking medical assistance and further studies are needed to search for explanations.

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