ORIGINAL ARTICLE

A Clinical Appraisal of Patients with Psoriasis Treated in Seremban General Hospital, Malaysia

K Y Siow MBBS*, N A Mohd Safdar MRCP*, K H Chong BSc, K B Chua PhD****

*Seremban General Hospital, Jalan Rasah, Seremban, Negeri Sembilan. **International Medical University, Sesama Centre-Plaza Komanwel, Bukit Jalil, 57000 Kuala Lumpur, Malaysia

Summary

A prospective clinical study of 181 patients with psoriasis seen in Seremban General Hospital showed the incidence of psoriasis among dermatology outpatients was 2.15%. A significantly higher proportion of male patients were affected, with a male to female ratio of 1.7:1. Within the racial groups; 63 were Malays, 37 Chinese, and 81 Indians. There was a significantly higher proportion of Indians affected as compared with the races. The mean age of patients in this study was 43.7 years old but the mean age of onset of psoriasis in these patients was 33.1 years old. Thirty-one (17.1%) patients gave a positive family history of psoriasis and the mean age of onset of psoriasis was lower (29.3 years old) for patients with a positive family history. Plaque psoriasis was the commonest type of clinical presentation with the scalp being the commonest site affected. Psoriatic arthropathy was seen in 35 (19.3%) patients. Ninety-five (52.5%) patients gave a positive history of factors exacerbating their pre-existing disease and stress was singled out as the most common exacerbating factor.

Key Words: Sociodemography, Psoriasis, Malaysia

Introduction

Psoriasis is a fairly common inflammatory proliferative skin disease that affects about 0.5 to 2.5% of the population[1,2]. It is estimated that about 80 million people suffer from this disease throughout the world. The disease commonly appears as erythematous plaques of skin covered with "silvery" scales. It can affect any part of the body although the extensor of the knees and elbows and scalp are the usual sites of involvement. Irritation and pruritus may be present[1,2].

Psoriasis affects men and women in about equal proportions and may appear for the first time at any age[1,2,3-5]. It does however start more frequently between the ages of 15 and 45 years old, particularly during puberty and menopause. The disease may wax and wane and there may therefore be considerable variation in its intensity. There are also many clinical forms of manifestation of the condition with skin involvement varying from a few plaques in the majority of cases to, at its worst and very rarely, a wide-spread and serious eruption[1,2]. The rare forms that produce generalized involvement may be extremely severe and demand intensive medical and nursing care [1,2].

Approximately 10% of psoriasis patients develop a specific psoriatic arthropathy, which is generally a mild affliction of the fingers and toes and occasionally the lumbar joints causing a low backache [1,2,6-10]. Other joints may be affected in severe cases. As in skin involvement, this form of arthritis can wax and wane and in very rare occasions disappear completely. Skin

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Corresponding Author: K B Chua, Makmal Kesihatan Awam Kebangsaan (National Public Health Laboratory) Kementerian Kesihatan, Lot 1853, Kg. Melayu, 47000 Sungai Buloh, Selangor

trauma, infections, drugs, hormonal changes, seasonal variations, alcohol consumption, and psychological stress are among the environmental and behavioral factors known to aggravate the condition[1,2,11-18].

The basic cause of psoriasis is still not known[1,2,19]. Hereditary factors are thought to play an important part because of the increased incidence of psoriasis among relatives of affected patients, high rates of concordance among twins, dysequilibrium of certain HLA genes with disease expression, increased incidence in offsprings with one or both parents afflicted and geographic distribution.[1,2,20-26]

There are many sociodemography studies of psoriasis which have reported data on gender ratio, familial occurrence, geographic variations, age of onset, precipitating factors, clinical types, nail abnormalities and joint involvement in other countries[27-31]. Our objective was to examine and evaluate the sociodemographic and clinical characteristics of patients with psoriasis treated in Seremban General Hospital, Negeri Sembilan, Malaysia.

Materials and Methods

This is a prospective clinical study over a period of nine months (1st March 2002 to 31st December 2002) at the Seremban General Hospital, Negeri Sembilan, Malaysia. All patients with psoriasis who received treatment in the hospital outpatient dermatology clinic during the specified period were included in the study. The diagnosis of psoriasis was made based on the clinical findings by the attending consultant dermatologist and medical officers. A standard questionnaire was used to register the required sociodemographic data of each patient. At the end of the study period, the derived original data from each patient was transferred into a data sheet of Microsoft Excel programme for Windows. Statistical analysis was performed using the statistical software programme, Epi Info 6 (Centers for Disease Control and Prevention, USA). The results of the study were subjected to chi-square test for any statistical significant association. A p-value of 0.05 or less was taken as the level of significant association for each ordinal variable with the relevant adjusting variables.

Results

In the 9-month study period, 8432 patients (3865 males and 4567 females) with various types of skin diseases were treated in the dermatology outpatient clinic. Of the 8432 patients, 3704 (43.8%) were Malays, 2268 (26.8%) Chinese, and 2397 (29.1%) Indians. Only 181 patients were noted to have psoriasis and this accounts for 2.15% of the total. One hundred and fourteen (63%) patients were males and 67 (27%) females, with a male to female ratio of 1.7:1. There was a significantly higher proportion of males affected by psoriasis with respect to gender composition of dermatology outpatients (χ^2 = 21.20, p < 0.0001). The racial distribution of the patients are as follow: 63 (30.8%) patients were Malays, 37 (20.4) Chinese, and 81 (44.8%) Indians. There was a statistical significant higher proportion of Indians having psoriasis with respect to the racial composition of dermatology outpatients (χ^2 = 21.70, df = 2, p < 0.0001). The distribution of the patients according to age groups is shown in Figure 1. The mean age of patients is 43.7 years old (range = 1 – 91, SD = 17.1). Figure 2 shows the distribution according to the age of onset of psoriasis. The mean age of onset of psoriasis is 33.1 years old (median = 32, mode = 20, range = 0.3 – 87, SD = 15.7). More than eighty three percent (151/181) of patients had the onset of the disease between the age of 11 to 50 years old.

Of the 181 patients, a positive family history of psoriasis was obtained in 31 (17.1%) patients. The mean age of onset for patients with a positive family history was 29.3 years old (range = 8 to 61, SD = 13.4), whereas those with a negative family history had a mean age of onset of 33.9 years old (range = 0.3 to 87, SD = 16.1). Family history was positive in 14.9% (10/67) of the female patients and 18.4% (21/114) of the males. Though a higher positive family history was noted in males than in females, there was no statistical difference in this respect (χ^2 = 0.16, p = 0.6903). A positive family history with respect to various racial groups was 38.8% (12/31), 19.4% (6/31), and 41.9% (13/31) for the Malays, Chinese, and Indians respectively. There was also no significant racial difference with respect to a positive family history of similar illness (χ^2 = 0.25, df = 2, p = 0.8818).

As for the type of clinical presentation among the 181 patients, 174 presented with plaque lesion, 2 with guttate and 5 with mixed plaque and guttate lesions. Scalp (161/181, 75.7%) was the commonest site to be affected, followed by limbs (150/181, 82.9%), trunk (137/181, 75.7%) and face (28/181, 15.5%). Ninety-three (51.4%) patients had involvement of nails, 35 (19.3%) patients developed psoriatic arthropathy and

only 6 (3.3%) had involvement of their eyes. Of the 35 patients with psoriatic arthropathy, 15 patients were Malays, 6 Chinese and 14 Indians. There was no significant difference in the predisposition to develop arthritis between the racial groups (χ^2 = 1.26, df = 2, p = 0.5332). Eighteen patients had lesions affecting the scalp, limbs, trunk and face simultaneously and 7 of them also had nail involvement at the same time. Only one patient had lesions affecting all the above described parts of the body including the joints. Twenty-eight patients had severe exacerbation of their lesions that warrant of in-patient treatment and 5 needed to be admitted more than once.

Ninety-five (52.5%) patients gave a positive history of factors or situations that aggravate or exacerbate their clinical condition. Psychological stress (91.0%) was singled out as the most common aggravating factor followed by food (5.5%), sunlight (2.3%) and others (1.2%).

The following concurrent illnesses were noted in 42 of the patients with psoriasis: hypertension (17), hypertension and diabetes mellitus (10), diabetes mellitus (7), gout (2), Down Syndrome (2), autoimmune disorders (2), epilepsy (1) and lymphoma (1). The mean age of the patients with other concurrent illnesses was 51.5 years old (range = 20 to 75, SD = 12.5) whereas the mean age of the patients without other concurrent illnesses was 41.3 years old (range = 1 to 91, SD = 17.6).

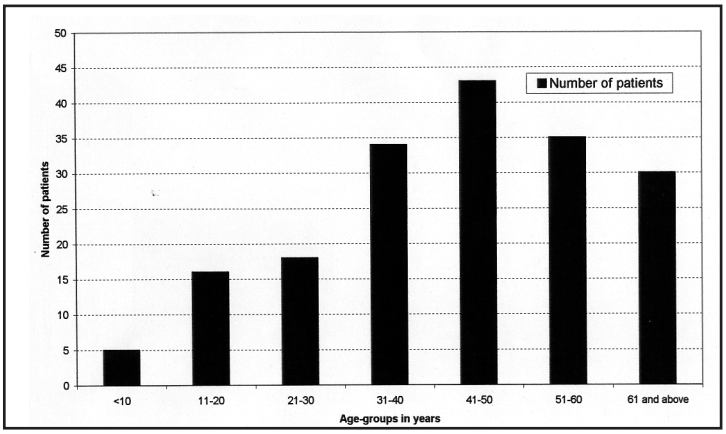

Fig 1: Distribution of patients with psoriasis by age-groups seen in the dermatology outpatient clinic, Seremban General Hospital

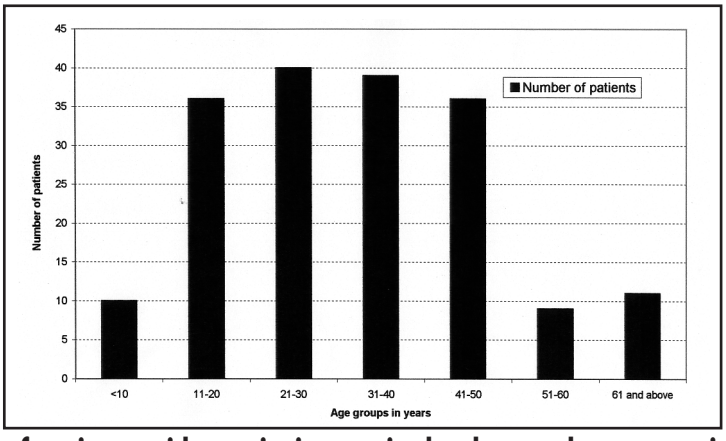

Fig 2: Distribution of patients with psoriasis seen in the dermatology outpatient clinic, Seremban General Hospital, by age of onset of psoriasis

Discussion

Psoriasis is one of the most common skin diseases affecting about 1.5% of the population in the United States of America and European countries[2,29]. The highest prevalence of psoriasis was reported in Sweden with a rate of 2.3%[1]. However, its prevalence was considered not as common in Africa and Asia[1,2]. The incidence of the disease is low in Japan and Eskimos with the lowest prevalence rate of 0.3% reported in China[1,2]. Genetic, geographical and environmental factors are thought to be responsible for such variations[1,2]. There are also variations in the prevalence of psoriasis between different races[1,2,19,20]. In our study, patients with psoriasis constitute 2.15% of dermatology outpatients seen during the study period which was lower than a previous report in Malaysia[32].

Studies by Farber, Brandrup, and Falk showed that psoriasis affected the gender equally[3-5]. A number of other studies reported a higher prevalence of psoriasis in females[30]. On the contrary, our study showed a significant higher proportion of males affected by psoriasis, which is similar to finding by Kaur et al.[12]. However, our finding may not reflect the true picture in the Malaysian population as the comparison was based on the gender composition of dermatology outpatients. In our study, Indians as a racial group had a significant higher risk of developing psoriasis. Again, the calculated risk was based on the racial composition of dermatology outpatients seen during the period. This finding is in concordance with the study by Adam in University Hospital[32].

Although the onset of psoriasis can be seen at any age, most patients develop the initial lesions of psoriasis in the third decade of life[1,2]. In our study, the mean age of initial disease was 33 years old, a median age of onset at 32, and a mode of 20 years old respectively, which is in concordance with other studies[27-30]. Recent studies have reported that the distribution of age of onset of psoriasis is bimodal with the first peak between 16 and 22 years of age, and a second peak between 57 and 60 years of age[31]. Our study did not show such a pattern of distribution. As in other studies, our study also showed that psoriasis is rarely seen in early childhood and late adulthood.

There are several studies supporting the genetic nature of psoriasis[20-24]. Familial and geographic aggregations of psoriasis were reported[25,26,32]. Approximately one-third of patients with psoriasis report some relative with similar disease. We observed that 31 (17.1%) patients had a positive family history. The mean age of initial disease in patients with a positive family was lower than those with no family history which is in concordance with other studies.

It has been stressed that genetic and environmental factors contribute to the aetiopathogenesis of psoriasis[20-26]. Several factors such as trauma, infections, endocrine factors and stress are of importance in provoking a new episode of psoriasis or exacerbating pre-existing disease[18]. Our study shows that 95 (52.5%) patients gave a positive history of factors aggravating or exacerbating pre-existing disease. Psychological stress was regarded as the most common factor, which may have important implications in view of recent findings regarding the role of nerve growth factor in the pathogenesis of psoriasis[33].

In concordance with the findings in other studies, plaque psoriasis was the commonest type of clinical presentation in our patients and scalp the commonest site of involvement[3,4,32]. Psoriatic arthropathy was found in 19.3% of our psoriatic patients, which is in concordance with other reports (10-34%)[6-10]. Though there are reports of genetic factors contributing to the predisposition to develop psoriatic arthritis,[1,2] our study did not show any significant difference in this respect within the racial group.

In summary, though this is a relatively small prospective clinical study on the sociodemographic data of psoriasis in Malaysia, the results were quite similar to a previous report in Malaysia and those reported in other countries.

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