Original Article

Psoriasis

The Analysis of Clinoepidemiological Variables of Psoriasis in a Tertiary Care Hospital in Karachi, Pakistan

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ABSTRACT

Objective: Psoriasis is a chronic inflammatory skin disease of unknown origin. Different factors might be influencing its course. The aim of our study was to observe and analyze different clinoepidemiological variables of psoriasis in patients reporting to a tertiary care hospital in Karachi.

Study Design: Prospective study

Place and Duration of Study: This study was conducted at Jinnah Postgraduate Medical Centre, Karachi, Pakistan from January 2014 to December 2014.

Materials and Methods: 200 patients (116 Males and 84 females) ages 18 and above with mild to severe psoriasis were selected and assessed on one occasion which included detailed history and examination. All data was documented on completion of study.

Results: A total 200 cases were studied. 90% had chronic plaque psoriasis. There was male preponderance with a male to female ratio of 1.38:1. Mean peak age of onset was 11-20 years of age and was earlier in females than males. More than two-third of patients had onset of psoriasis before or at 40 years of age. Familial occurrence was present in 38% of patients and 35% had first degree relative involvement. Psoriatic arthropathy was present in 35% of patients. 86.36% of the patients with arthropathy had onset of psoriasis before 40 years of age. 21% of patients reported worsening of their psoriasis with sun. 32% of the patients in this study were smokers and most of them were males.

Conclusion: The findings of this study done in Karachi, Pakistan correlates with previous hospital-based studies done in different parts of the world.

Key Words: Clinoepidemiological variables, Psoriasis, Pakistan

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INTRODUCTION

Psoriasis is a common, chronic, genetically determined, intractable inflammatory skin disease characterized clinically by well-circumscribed erythematous plaques bearing large adherent silvery scales involving particularly extensor prominence and the scalp and having a significant negative impact on the physical, emotional, and, psychosocial wellbeing of affected patients.[1] It affects around 2% of the population in the world.[2]

Morphological variants are common but chronic, symmetrical, erythematous, scaling papules and plaques being the commonest type.[3,4] In approximately 6% to 42% there may be associated mild to severe inflammatory arthritis of peripheral and/or axial joints usually with a negative rheumatoid factor.[5] The activity of psoriatic arthritis may correlate with the activity of the cutaneous disease.[6]

Psoriasis can present at any age but usually it has bimodal peaks.[7] Both genders are affected in about same proportion. Psoriasis runs highly unpredictable courses with variable periods of waxing and waning causing great disability in some patients.[8] Psoriasis aggregates in families and family history is positive for the disease in approximately one third of cases. It not only favors the early development of psoriasis, but also increases the probability of its being severe.[9]

Age of onset has been shown to affect the course of psoriasis and psoriasis vulgaris has been divided into an early onset group (Type I) and a late onset group (Type II). Patients with an early onset of psoriasis followed an irregular course with frequent relapses, whereas late onset psoriasis had sporadic courses with less chance of becoming generalised[10]

Sun-light has a beneficial effect on psoriasis in the majority of patients. However it may actually worsen psoriasis in a certain percentage of patients.[11]

Prevalence of smoking has been found to be high in psoriatics as compared to the control population. Furthermore it was the cause and not the effect of the disease because analysis done in case control studies demonstrated a high prevalence of smoking in psoriatics before the onset of their disease as compared to controls at the same point in time.[12]

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Despite of vast research the exact pathogenesis is still not known. However there is genetic predisposition with environmental factors playing an important role. There is currently no cure for psoriasis. The aim of treatment is therefore to induce remissions and to minimize the patient`s disability.[13]

In the past many studies on epidemiological and clinical variables of psoriasis have been done in different countries[14,15,16,17]. Since we work in a tertiary care hospital in Karachi Pakistan we share our experience of 200 patients reporting to our hospital with psoriasis.

Our aim was to analyze different cliniepidemiological variable of psoriasis in patients treated in Jinnah Postgraduate Medical Centre Karachi, Pakistan.

MATERIALS AND METHODS

This was an open prospective study of 200 patients ages 18 and above, male and female suffering from psoriasis, who were randomly selected from the Dermatology Out-patient Department and the Dermatology ward of the Jinnah Postgraduate Medical Centre Karachi, Pakistan. Ethical approval was sought. Information leaflet were distributed and informed consent taken. Patients were assessed on one occasion. Detailed history was taken which includes questions regarding general data, age of onset of disease, presence or absence of family history of psoriasis, smoking habits, previous treatments received. Then subjects were examined to note the type of psoriasis and any involvement of the joints. All data was documented on completion of study.

RESULTS

200 patients, 116 males and 84 females were recruited from the out-patient (76%) and in-patient (24%) Departments of the Dermatology of Jinnah Postgraduate Medical Centre Karachi. Their ages range from 21-62 years (Mean 49.82± 17.67) with a history of psoriasis ranging from 1-40 years (Mean 20.4± 15.92) (Table-1).

Table No.1: Demographic data

	Number	Age		Status		Duration of disease	
		Range	Mean	Out-patient	In-patient	Range Years	Mean
All patient	200	21-62	49.82± 17.67	76% (n=152)	24% (n=48)	1-40	20.4±15.92
Male	116	21-62	50.38±19.43	36% (n=72)	22% (n=44)	2-40	21.59±17.03
Female	84	21-60	49.05±15.35	40% (n=80)	2% (n=4)	1-38	18.76±14.47

Most of the patients had chronic plaque psoriasis (90%), Next in frequency were guttate 6%, erythrodermic 2% and palmoplantar pustular psoriasis 2%. 30% of patients had a history of systemic illnesses.

58% of patients were never admitted to the hospital for psoriasis and in 54% of patients disease was controlled with systemic treatment.

21% of patients reported worsening of their psoriasis with sun. All others had either beneficial effect (21%) or no effect.

Onset age of psoriasis in this study ranged from 3-60 years, with males having a range of 5-58 years and females a range of 3-60 years. The peak age of onset was earlier in females (11-20) than in males (31-40). More than 40% of patients had onset of disease before or at 20 years of age and more than 70% had onset before or at 40 years of age (Table-2). The mean age of onset in females was 28.79±21.27 where as in males it was 30.43±17.61.

Table No.2 Distribution of age of onset in both sexes

Onset age (Years)	All patients	Males	Females
0-20	48%	44.82%	52.38.% .
21-40	30%	27.58%	35.71%
41-60	22%	27.58%	11.90%

38% of patients had a family history of psoriasis and in 35% of patients first degree relatives were involved. When relationship of family history with age of onset of psoriasis was looked into, it was found that 82% of patients who had a history of first degree family member involvement, had onset of psoriasis at or before 40 years of age.

35% of patients had one or more joint involvement. 58.82% were females and 41.18% were males. Most of the patients with arthropathy had onset of psoriasis before 40 years of age (86.36%). 52.94% of patients with psoriatic arthritis had also a family history of psoriasis as compared to 47.06% of patients who had arthritis but no family history.

Smoking: The prevalence of smoking in this study was 32 % (50.86% in males and 5.95% in females) and the ranges of pack years were 0-50 in all patients.

DISCUSSION

Although psoriasis one of the common skin diseases occurring worldwide, its prevalence varies among different countries and races considerably. The results from the systematic review done by Rosa Parisi et al confirmed that psoriasis was more in adults as compared to children and that there was worldwide geographic variation in its prevalence influenced by both genetic and environmental factors with populations located closer to the equator (Egypt, Tanzania, Sri Lanka, Taiwan) were less affected by

psoriasis compared with countries more distant from it (Europe and Australia).[18]

Our study showed a higher proportion of males affected by psoriasis, which is similar to finding by Kaur et al.[19] however some studies showed equal distribution in both genders while others found higher prevalence of psoriasis in females [4,17,20,19]

Sun exposure has beneficial effect in Psoriasis in majority of patients through its immunosuppressive effect[22,] however some patients report worsening with it[11]. We found worsening of psoriasis with Sun exposure in 21% of cases.

Although psoriasis can start at any age but majority of patients develop it before 40 years of age. The present study found the peak age of onset to be 11-20 years of age and this was found to be earlier in females (11-20) than in males (31-40). These findings are in accordance with the findings of Holgate MC and others.[23,24] More than three quarters of patients in our study developed disease before 40 years of age, corresponding to the figure found by Tilo Henseler and Enno Christophor.[10]According to Lomholt, age of onset was an important piece of information to know the effect of environment. Presumably an earlier age of onset of psoriasis is manifested in those with a strong genetic tendency for developing psoriasis and environment acts as a cofactor in the precipitation of the disease.[7]

More than one third of our patients had a history of first degree relative involvement with psoriasis in accordance with the findings of others.[20] Another study done found family history positivity in 10% of cases.[24] Most of the patients in our study who had a positive family history also had an earlier onset of psoriasis (<40 years). Farber and Nall[20] almost found same figure with approximately three quarter of their patients with family history had an onset of psoriasis before 30 years of age. These findings support that psoriasis has a strong familial tendency.

Most of our patients had plaque psoriasis in accordance with the findings of others.[4,24]

This study demonstrated a prevalence of 35% of psoriatic arthritis as found by others[,25,26] However some studies have demonstrated low prevalence rates[,27,28] Since all patients in this study were recruited from a referral hospital this might have led to high proportion of psoriatic arthropathy.

Almost 32% of the patients in this study were smokers and most of them were males. This prevalence of smoking is high as compared to the prevalence of 26% in general population of Karachi.[29,]Several studies in the past have also demonstrated a high prevalence of smoking among psoriatics than non-psoriatics.[30]

CONCLUSION

Though this was a small prospective study, the results were similar to previous reports published in Pakistan and other countries.

Conflict of Interest: The study has no conflict of interest to declare by any author.

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