

CLINICO-DEMOGRAPHIC STUDY OF PSORIASIS IN PATIENTS VISITING A TERTIARY CARE CENTRE OF BIHAR, INDIA

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Abstract

Background: Psoriasis is a chronic papulosquamous disorder most characterised by discoid plaques with silvery scales mainly on the elbows, knees, scalp, genitals, and trunk. Information regarding its clinical and demographic profile and associated comorbidities varies from place to place. This study was conducted to determine the types, risk factors, and comorbidities in psoriasis among patients in Bihar, India. **Materials and Methods:** A hospital based cross sectional study was conducted in Dermatology outpatient department at a tertiary hospital in Bihar. Written informed consent was taken from all patients. Detailed clinical evaluation and relevant investigations were done for all patients. Data was analysed using SPSS software ver. 22. **Results:** 233 patients were included in the study. The median age was 38 years. Male to female ratio was 1.2:1 with 126 (54%) male and 107(46%) females. Chronic plaque type also known as psoriasis vulgaris of psoriasis was the most common morphological form 181 (77.6%). Nail involvement was seen in 43(18.4%) patients and psoriatic arthritis (PsA) was present in 24 (10.3%) patients. Most common symptom noted was pruritus and pain in 162 (69.5%) of patients. Dyslipidaemia was the most common comorbidity associated with the disease 66 (28.3%). **Conclusion:** Psoriasis is a common skin disorder associated various comorbidities. Psoriasis affects quality of life. Proper counselling of the patients and family members about the disease course can be very effective for patients to come forward for early treatment which can provide to a good control of the disease.

INTRODUCTION

Psoriasis is a common, chronic, non-contagious, immune mediated proliferative condition of skin in which both genetic and environmental influences play a critical role. Apart from skin, it affects nails, joints and is now being described as a metabolic disorder.^[1]

The characteristic lesions consist of red, scaly, and well-demarcated plaques mainly over extensors and scalp. Psoriasis is considered as an immune-mediated inflammatory disorder alongside other entities such as rheumatoid arthritis, Crohn's disease and multiple sclerosis.^[2] Despite their distinct clinical presentation, these diseases share common features such as chronic course, inflammatory nature and several pathogenetic mechanisms, including a so-called Th1-like cytokine milieu in the affected tissue, dominated by interferon alpha and gamma along with TNF-alpha, interleukins (IL)- 2, 22 and 17.^[3]

The classification of psoriasis according to age of onset are Type I psoriasis with age of onset before

40 years, is often associated with positive family history, and Type II psoriasis with age of onset after 40 years.^[4,5] The classification according to morphology are chronic plaque psoriasis, guttate psoriasis, pustular psoriasis (generalized/ localized), erythrodermic psoriasis, and psoriatic arthritis; according to psoriasis affecting specific sites are scalp, palmoplantar, genital, nail, inverse/flexor and scalp psoriasis.^[6]

According to published reports, prevalence Indian different populations may vary from 0.4% to 11.8%.^[7,8] Patients with moderate to severe psoriasis mostly have a low quality of life and they present with multiple significant co-morbidities besides significantly increased mortality rates.^[9,10] So, in this study, we evaluated the socio-economic and demographic characteristics of patients with moderate to severe plaque The current study presents the clinical and epidemiological features of psoriatic patients attending the Dermatology Outpatient Department (OPD) of a tertiary care centre of Bihar.

MATERIALS AND METHODS

The present study was a hospital based cross sectional study carried out from March 2020 to February 2022 for duration of two year. in patients attending outpatient department of dermatology. The study was started after obtaining approval from the research ethics board of the institute. A total of 233 patients were enrolled after obtaining written consent from them. The patients were examined by the same dermatologist and the diagnosis of psoriasis was made according to clinical finding. Detailed disease and family histories were recorded from all patients in predefined Performa. Various demographic data were recorded, including age, gender, skin phototype, seasonal exacerbations, and provoking factors. Patients who were not willing to participate or did not give their consent were excluded. A detailed history was taken and a thorough clinical examination using magnifying glass and dermoscopy was done along with a pre-structured proforma. Investigations such as KOH mount, routine blood tests, and skin biopsy were done when required. The data was analysed using IBM statistical package for the social sciences (SPSS) statistics 22 for Windows.

RESULTS

Total 233 cases were included in the study. The age range of psoriasis patients in the study spanned from 3 to 86 years. The maximum number of patients belonged to age group of 31-40 years with 61(26.2%) followed by age group of 41-50 years with 54 (23.2 %) psoriasis patients with the median age of 38 years.

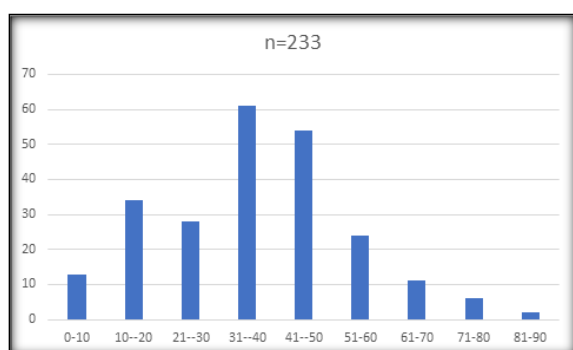


Figure 1: Diagram showing distribution of patients in different age group

The distribution according to gender showed 126 (54%) male and 107(46%) female psoriasis patients. The male: female ratio was approximately 1.2:1. Out of 233 patients, there were 27 (11.6%) smokers, 21(9.3%) consumed alcohol, 192(82.2%) were non-vegetarian and 41(17.6%) patients gave history of diabetes mellitus. 146 (62.8%) were taking oral and topical medication and 31(13.3%) were under only topical medication. 8 (3.4%) had

any family history of the psoriasis. Among the patients, 22 (9.4%) reported exacerbation of the disease during winter. General signs including scales, plaques, and erythema were present among 214 (91.8%), 173(74.2%), and 124 (53.2%) patients, respectively. Other signs of psoriasis seen among the patients were scaly plaques on the scalp in 48 (20.6%), hyperpigmentation of the skin in 41(17.5%), the Auspitz sign in 19 (8.1%), exfoliation in 18(7.7%), hyperkeratosis 14(6%), pustules 13(5.6%), papules 176(75.5%), the Koebner phenomenon 26(1.1%), scaly plaques 198 (84.9%), and skin excoriation in 22 (9.4%). Pruritus and red skin patches were present among 181(77.6%) and 38 (16.3%) patients, respectively. The various types of psoriasis that were noticed among the patients were chronic plaque psoriasis 181(77.6%), guttate psoriasis 24(10.3%), palmoplantar psoriasis 84 (36.0%), erythrodermic psoriasis 9(3.8%), psoriatic arthritis 13(5.5%) generalized pustular psoriasis 7(3.0%), and pustulosis palmaris et plantaris 4 (1.7%).

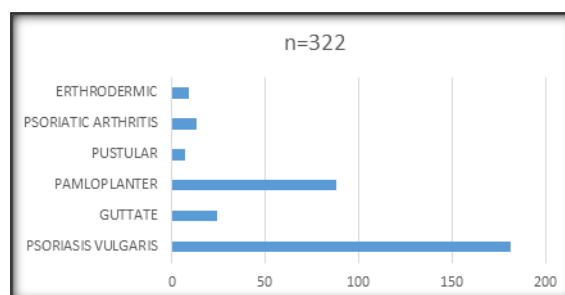


Figure 2: Distribution of morphological form of Psoriasis

It was observed that nail was involved in 43(18.4%) and scalp involvement was seen in 79 (33.9%) of cases. Disease duration for more than 6 months was present in 296 (92 %) of patients. Among 233 psoriasis patients, 123(52.8%) patients showed seasonal variation in the form of exacerbation of the lesions in winter whereas 110 (44.2%) patients had no seasonal variation of disease. The most common initial sites of involvement of psoriasis were the legs (23%), hands (21.8%), scalp (19.3%), and trunk (14.6%). Typically, psoriasis involvement was most prominent in the hands (82.6%), legs (74.2%), trunk (67.8%), and scalp(53.2%). Six patients complained of ocular difficulties. On ocular examination, four patients showed conjunctivitis, and in two patient blepharitis was present. The commonest comorbidity found in our study was dyslipidaemia 66(28.3%), an increased prevalence of hypertension 37 (15.9%) was also seen. Other co-morbid conditions observed were diabetes 41(17.6%), metabolic syndrome 33(14.2%) and cardiovascular disease 13(5.6%).

DISCUSSION

Psoriasis is a complex disease which may present with wide ranging severity affecting different parts of the body. Mild to moderate psoriasis tends to refer to patients with relatively localized psoriasis. The moderate to severe category tends to refer to the patients with more generalized disease or disease that is otherwise disabling and according to a study by Liem W et al comprises 20-25% of all psoriatics seen in average practice.^[11] Psoriasis has traditionally been classified purely on the basis of body surface area as mild corresponding to less than 5% body surface area, moderated psoriasis equals 5-15% of body surface area and as severe psoriasis if body surface area is over 15-20%. Krueger et al revised this definition to include not only the body surface area involvement but also the quality of life issues as well as the patient's ability to withstand and deal with side effects relating to treatment.^[12]

Maximum number of psoriasis patients in our study was in 31-40 age group. Psoriasis is most likely to appear between the ages of 15 and 30 years but ranges from birth to the eighth or ninth decade with bimodal distribution.^[13] In our study the maximum number of patients belonged to age group of 31-40 years followed by 41-50 years in psoriasis patients. One study in United Kingdom showed bimodal distribution of disease, the peak being 16-22 years and 57-60 years.^[14] Our study showed that the median age of 38 years. In a study done by Solak et al the median age was 40 years.^[15] A study by Das et al showed mean age of 39.7 ± 7.3 years among psoriasis group.^[16]

In this study, 126(54%) of the study subjects were males and the remaining were females 107 (46%). The marginally higher incidence of psoriasis in males may be because of the fact that male patients usually come forward and report the symptoms and lesions while there is hesitancy because of the fear of stigma and social rejection among females. This finding is similar to the findings observed by Mehta et al and Gottlieb et al.^[17,18] The mean age of onset for males and females was 34.6 ± 13.24 and 26.54 ± 14.12 years. Gunawardena et al reported the tendency for the females to get the disease earlier than males as observed in the present study.^[19] Only 8 (3.4%) of the study subjects had family history of psoriasis in one or more members. The mean age of onset was earlier (18.23 years) in the female cases with a positive family history, as compared to males (24.36 years). Familial occurrence of psoriasis has been reported to vary from 4.4% to 90.9%. Farber and Nall reported that approximately three fourths of the patients with a family history of psoriasis were below 30 years of age when psoriasis started.^[20] The most common clinical type of psoriasis observed was chronic plaque psoriasis 181 (56.2%), followed by palmo-plantar psoriasis 88(37.7%). The finding was similar with study done in Japan by Takahasi et al who has also reported

psoriasis vulgaris as the most common type in his study.^[21] In our study, 123(52.8%), patients reported that their disease exacerbates in winter season and remits in summer season. Similar winter aggravation of psoriasis has been reported by Takahasi et al.^[21] In contrast to this winter aggravation of psoriasis has been reported by Yasuda et al.^[22] Most common symptom complained by our patients was pruritus in 196(84.1%). Degree of pruritus varies from patients to patient. There is wide variation reported in pruritus in different studies. In one study by Ramsay et al, pruritus was present in only 23% patients where as a study by Gowda et al reported pruritus to be primary symptom in 90 % of cases.^[23,24]

It is known that psoriasis is precipitated by trauma or scratch over the skin. In our study, the most common triggering factor noted in our study was trauma 42 (18%), followed by stress 28(12%), infection 19 (8%) and drugs in 7 (3%). This result was similar to a previous study done by Braun Falco et al that reported trauma as the most common precipitating factor.^[25]

The comorbidities in found in our study was dyslipidaemia 66(28.3%), diabetes 41(17.6%), metabolic syndrome 33(14.2%) and cardiovascular disease 13(5.6%). Langan et al has also reported similar associations of metabolic diseases including diabetes with psoriasis.^[26] Metabolic syndrome is the most frequent comorbidity in psoriasis and a risk factor for cardiovascular disease. Although the exact causal relationship between these two disorders is not fully established, the underlying pathophysiology linking psoriasis and metabolic syndrome seems to involve overlapping genetic predispositions and inflammatory pathways.^[27]

CONCLUSION

Psoriasis is a chronic skin disorder with remissions and exacerbations. It is commonly seen in the third and fourth decades with a male preponderance. Cutaneous lesions consisted of well-defined erythematous plaques covered with scales mostly on extensor aspect of body. Though principal manifestation of psoriasis presents in the skin, but it has been proven that psoriasis patients are more prone to develop metabolic syndrome and other comorbidities. Apart from regular screening, patients suffering from psoriasis should maintain healthy life style and diet habits to avoid these complications.

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