

Clinical and Epidemiological Features of Psoriasis in Patients Visiting a Tertiary Care Centre in Eastern Uttar Pradesh

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Abstract

Background: Psoriasis is a worldwide disease and varies in its clinical profile and epidemiology in different regions of the world. In India, it is common and few epidemiological data are available in our country.

Aims: The purpose of this study was to evaluate the epidemiologic and clinical features of psoriasis in Baba Raghav Das Medical College, Gorakhpur.

Materials and Methods: A prospective investigation of a total of 400 patients visiting the Outpatient Department of Dermatology and Venereology of Baba Raghav Das Medical College, Gorakhpur, for psoriasis was done. The parameters included were age at onset of disease, current age, sex, type of disease, and distribution of lesions. Data and statistical analysis were done.

Results: The mean age of patients at onset of disease was 26.4 (standard deviation = 14.3) years. M:F ratio was 1.16. Palmoplantar psoriasis (PPP) was the most common variety of the disease. Plantar surface of the foot was most commonly involved.

Conclusion: Psoriasis is a common dermatological disease accounting 2.9% of all dermatology patients in our center. PPP is the most common clinical subtype. The disease is more frequent in the third decade of life and has a male predominance in our region. Treatment compliance has been found to be poor.

Key words: Clinical, Dermatologic, Epidemiology, Psoriasis

INTRODUCTION

Psoriasis is a common, chronic, disfiguring, inflammatory, and 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. The prevalence of psoriasis varies in different parts of the world. According to published reports, prevalence

in different populations may vary from 0% to 11.8%.^[2,3] In India, in a study by Okhandiar and Banerjee,^[4] incidence of psoriasis was found to be 1.02%. In another study by Bedi,^[5] the incidence was found to be 2.8%. A study from tertiary health care centre in north India,^[6] showed that psoriasis accounted for 2.3% of all dermatology outpatients. There are only few studies from India which have analyzed the clinical spectrum of the disease in psoriasis patients.^[7,8] In most of the studies, the most common type of psoriasis reported is chronic plaque-type psoriasis or psoriasis vulgaris. In the study conducted by Bedi,^[5] chronic plaque-type psoriasis was found to be the most common type (90% cases), followed by palmoplantar psoriasis. Chronic plaque-type psoriasis (93%) was also the most common clinical phenotype in the study conducted by Kaur *et al.*^[6] Although palmoplantar psoriasis produces considerable social and functional disability, there is a paucity of studies on the incidence of palmoplantar psoriasis. Palmoplantar psoriasis is shown to

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constitute 3–4% of all psoriasis cases in most of the studies conducted.^[9] Our study is the first of its type done in North India to find the incidence of palmoplantar psoriasis and compare its incidence with other forms.

The current study presents the clinical and epidemiological features of psoriatic patients attending the Dermatology Outpatient Department (OPD) of Baba Raghav Das Medical College, Gorakhpur, which is a 700-bedded multispecialty hospital in the urban area of Uttar Pradesh, India.

MATERIALS AND METHODS

All patients diagnosed with psoriasis from the OPD of Dermatology and Venereology of College were selected for the study. Their records were reviewed retrospectively. Patients visiting from June 1, 2016, to March 1, 2018, were included in the study.

Sociodemographic data and subtype of disease were studied. The descriptive statistics such as percentage, proportion, mean, and standard deviation were calculated. Statistical significance was analyzed at $P < 0.05$.

All the cases included were newly diagnosed cases. The study did not include palmoplantar pustulosis. Proper history taking at the first visit regarding onset, duration, progression of disease, and complains was done, and data regarding age, sex, family history, nail involvement, morphology of lesions, exacerbating or relieving factors, and histological findings in cases where biopsy was required were collected in each case. This was followed by thorough dermatological examination by the trained dermatologists before putting up the diagnosis of palmoplantar psoriasis. Diagnosis of psoriasis is usually clinical as characterized by typical scaly patches with silvery scales which is accentuated on scratching. Involvement of instep region over the soles is characteristic of psoriasis. However, diagnosis was doubtful in 12% cases; all these cases were subjected to biopsy and scrapping for fungus to rule out other dermatoses. Collected data were classified, tabulated, and analyzed using appropriate statistical tools (percentages and ratios) as per the requirement of the present study and interpretations/conclusions were made accordingly patients of eight districts visited our hospital (namely, Gorakhpur, Maharajganj, Deoria, Kushinagar, Azamgarh, Mau, Basti, and Gopalganj).

Most patients (40.2%) visited from Gorakhpur where the medical college is located.

RESULTS

The total number of new psoriasis patients attending the OPD during this period was 400. This was around 3% of the total cases coming to the OPD [Figure 1] and included various types of psoriasis such as chronic plaque type, palmoplantar psoriasis, scalp psoriasis, pustular psoriasis, flexural psoriasis, nail psoriasis, and erythrodermic psoriasis. Among these, 59.8% (241) were male and 40.2% (159) were female, showing slight male preponderance. Around 68% patients were in 20–40 years age group and 30% patients in 40–60 years age group, remaining 2% consisted of <20 years or >60 years patients. In our study, out of total 400 psoriasis cases, palmoplantar psoriasis constituted about 59% (237) cases [Figure 2], which was a huge number, followed by chronic plaque-type psoriasis. Mean age at onset was 26.4 ± 14.3 years (29.7 ± 13.8 in male and 21.4 ± 13.1 in female).

Mean age at the first presentation to the hospital was 28.9 ± 14.8 years. The difference in the mean age at onset of



Figure 1: Well defined erythematous plaque with deep fissuring



Figure 2: Well defined erythematous plaque with fissuring and scaling



Figure 3: Similar involvement of palm in a patient of palmar psoriasis

disease and that at the first hospital visit was statistically significant ($P < 0.05$). The lesions were bilaterally symmetrical in almost 90% patients. However, in some, there was involvement of dominant hand. Over the palms, plaques mainly present over pressure points with relative sparing of central palm. Over the soles, instep and sides of feet were characteristically involved. In most of the cases, the disease was symptomatic causing irritation, pain, difficulty in walking, or working. Involvement of both palms and soles was more common than either of them alone. The skin lesions were associated with the psoriatic nail changes in 29% patients [Figure 3].

DISCUSSION

In a comprehensive study conducted by Okhandiar and Banerjee,^[4] it was found that the incidence of psoriasis among total skin patients ranged between 0.44 and 2.2%. In our study, male-to-female this ratio was 1.48:1.

In our study, out of total 400 cases, palmoplantar psoriasis constituted about 59% (237) cases in contrast to previous studies done regarding clinical spectrum of psoriasis. Chronic plaque-type psoriasis ranked second with 38%. In a study conducted by Bedi,^[5] he concluded that the most common type is chronic plaque-type psoriasis and the second most common is palmoplantar psoriasis. Okhandiar and Banerjee^[4] collected epidemiological data of 116 psoriasis patients from various medical colleges. They found that the extensors were the most common site of involvement followed by the scalp. There was slight male preponderance with male:female ratio of 1.48:1 in our study. Similarly, male patients outnumbered female patients in a study conducted by Khandpur^[10] on palmoplantar psoriasis. In contrast, in Kumar *et al.*^[11] and Chopra *et al.*^[12] studied, both men and women were almost equally involved.

Most of the patients presenting with palmoplantar psoriasis were manual laborers (32%) or drivers (15%) and farmers (14%) or housewives (30%).^[12] However, it was interesting to see a respectable number of patients belonged to office class (9%). In around 10% patients, the disease was asymptomatic.

However, most patients complained irritation (40%), fissuring (30%), difficulty in walking (48%), difficulty in manual work (33%), and pain (16%).^[13,14]

Both palms and soles involvement was seen in 52% cases (123). Exclusive palmar involvement was present in 28% cases (66) while only plantar involvement in 20% (47) cases. In Kumar *et al.* studied^[11] plantar involvement was twice as common as palmar involvement. Around 18% patients in our study showed evidence of psoriasis at other sites.

Psoriasis over palms and soles may present as typical scaly patches on which a fine silvery scale can be evoked by scratching or as less well-defined plaques resembling hyperkeratotic eczema or as pustulosis. Sparing of skin creases over palms may be seen. Increased pigmentation of skin often accompanies. Associated nail changes in the form of pitting, thickening of nail plate, and subungual hyperkeratosis were seen in about 39% patients. Nail involvement was present in 23.4% of the cases by Chopra *et al.*^[12]

The diagnosis of palmoplantar psoriasis may be missed, its differentiation from other morphologically similar conditions such as hyperkeratotic eczema, dermatophytosis, and contact dermatitis, is of prime importance. Dermatophytosis is usually unilateral and responds easily to antifungals. Hyperkeratotic eczema sometimes poses difficulty to distinguish and may overlap with psoriasis. Usually, the lesions are not well demarcated as in psoriasis and degree of erythema is also less. Presence of hyperkeratotic lesions over the knuckles favors psoriasis. The term psoriasiform eczema is applied when conditions overlap clinically and histologically.

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Gupta, *et al.*: Clinical and Epidemiological Features of Psoriasis in Patients Visiting a Tertiary Care Centre in Eastern Uttar Pradesh

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