

## Epidemiological Profile and Clinical Pattern of Psoriasis Patients

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### ABSTRACT

**Background:** Psoriasis is a global disease that exhibits different clinical characteristics and epidemiology across various regions of the world. In India, the prevalence is high and there is a scarcity of epidemiological data in our country.

**Aims:** The objective of this study was to assess the epidemiological and clinical characteristics of psoriasis at Nalanda Medical College and Hospital in Patna.

**Materials and Methods:** A prospective investigation of a total of 100 patients visiting the Outpatient Department of Dermatology and Venereology of at Nalanda Medical College and Hospital in Patna, 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 2.41:1. Chronic plaque-type psoriasis was the most prevalent, accounting for 81% of cases. 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. Chronic plaque 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 prevalent, persistent, disfiguring, inflammatory, and proliferative skin condition in which both genetic and environmental factors have a significant impact. In addition to the skin, it also impacts the nails and joints, and is currently being characterised as a metabolic disorder.[1] The defining features of the lesions are red, scaly, and clearly defined plaques primarily found on the extensor surfaces and scalp. The occurrence of psoriasis varies across different regions of the world. Based on published reports, the occurrence of a certain condition in different populations can range from 0% to 11.8%.[2,3] The study conducted by Okhandiar and Banerjee[4] in India revealed a psoriasis incidence rate of 1.02%. Bedi [5] conducted another study, which revealed an incidence rate of 2.8%. A study conducted at a tertiary health care centre in northern India [6] revealed that psoriasis constituted 2.3% of all patients seeking dermatology services. Only a limited number of studies conducted in India have examined the clinical range of the disease in patients with psoriasis.[7,8] The prevailing form of psoriasis observed in the majority of studies is chronic plaque-type psoriasis, also known as psoriasis vulgaris. In Bedi's study[5], chronic plaque-type psoriasis was identified as the predominant form, accounting for 90% of cases, with palmoplantar psoriasis being the second most common type. The study conducted by Kaur *et al.* found that chronic plaque-type psoriasis was the most prevalent clinical phenotype, accounting for 93% of cases.[6] Despite causing significant social and functional impairment, there is a lack of research on the frequency of palmoplantar psoriasis. Most studies indicate that palmoplantar psoriasis accounts for approximately 3-4% of all cases of psoriasis.[9] Our study is the inaugural investigation conducted in North India to determine the prevalence of palmoplantar psoriasis and compare it with other manifestations of the condition.

This study examines the clinical and epidemiological characteristics of psoriatic patients who visit the Dermatology Outpatient Department (OPD) at a tertiary care centre in central India.

Materials and Methods.

The Descriptive study comprised of a 100 newly diagnosed psoriasis cases visiting the inpatient and outpatient Department of Nalanda Medical College and Hospital, Patna. 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 clinically diagnosed new cases of psoriasis in the age group of 18-75 years were included while Patients below 18 years of age and above 75 years of age. Patients with a past history of systemic or topical treatment for psoriasis. Patients not willing to take part in the study or unwilling to give their Written consent for the study were excluded. 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.

Results- table 1 depicts the socio-demographic characteristics of study participants most common age of presentation between 18-43 years, there was a predominance of males, with a male-to-female ratio of 2.41:1, service class affected most followed by business people and house wives respectively. addiction present in 80% cases and family history positive in 28% subjects.

Table-1 socio-demographic characteristics of study participants			
Particular	Sub- Particular	N	%
<b>AGE</b>	18-30	29	29%
	31-43	29	29%
	44-56	20	20%
	57-69	13	13%
	>69	9	9%
<b>Gender</b>	Male	71	71%
	Female	29	29%
<b>Occupation</b>	Business	18	18%
	Student	10	10%
	Service	19	19%
	House wife	18	18%
	Farmer	11	11%
	Labour	13	13%
	Not working	11	11%
<b>Addictions</b>	Yes	80	80%
	No	20	20%
<b>Family history</b>	Positive	28	28%
	Negative	72	72%

Table- 2 depicts Distribution of cases according to type of Psoriasis Vulgaris is most common type followed by guttate 6%, scalp 5%, nail psoriasis 3%, linear psoriasis 2% palmoplantar 2% while Erythrodermic is least i.e. 1 % only.

Table 2 Distribution of cases according to type of Psoriasis		
Type of Psoriasis	Case group	
	Number	%
<b>Vulgaris</b>	81	<b>81%</b>
<b>Scalp</b>	5	<b>5%</b>
<b>Guttate</b>	6	<b>6%</b>
<b>Nail</b>	3	<b>3%</b>
<b>Linear</b>	2	<b>2%</b>
<b>Palmo plantar</b>	2	<b>2%</b>

<b>Erythrodermic</b>	<b>1</b>	<b>1%</b>
<b>Total</b>	<b>100</b>	<b>100%</b>

## DISCUSSION

Okhandiar and Banerjee conducted a thorough study and discovered that the prevalence of psoriasis among all patients with skin conditions varied from 0.44% to 2.2%. The male-to-female ratio in our study was 2.41:1.

Our study included a total of 100 cases. Erythrodermic psoriasis accounted for 1% of the cases, while palmoplantar psoriasis and linear psoriasis each constituted only 2%. Nail psoriasis accounted for 3% of the cases, while scalp psoriasis and guttate psoriasis accounted for 5% and 6% respectively. Chronic plaque-type psoriasis was the most prevalent, accounting for 81% of cases. According to a study conducted by Bedi, chronic plaque-type psoriasis is the most prevalent type, followed by palmoplantar psoriasis. Okhandiar and Banerjee[4] gathered epidemiological data from 116 psoriasis patients across multiple medical colleges. The researchers discovered that the extensors were the predominant area affected, with the scalp being the second most frequently involved site. In our study, there was a predominance of males, with a male-to-female ratio of 2.41:1. In a study conducted by Khandpur[10] on palmoplantar psoriasis, there was a higher prevalence of male patients compared to female patients. However, Kumar *et al.*[11] and Chopra *et al.*[12] found that both men and women were nearly equally engaged in their respective studies.

The majority of patients with palmoplantar psoriasis consisted of manual labourers (32%), drivers (15%), farmers (14%), and housewives (30%).The user's text is "[12]". Nevertheless, it was intriguing to observe that a significant proportion of patients (9%) were affiliated with the office class. Approximately 10% of patients exhibited no symptoms of the disease.

Nevertheless, the majority of patients reported experiencing irritation (40%), fissuring (30%), impaired mobility (48%), reduced ability to perform manual tasks (33%), and pain (16%).The user's text is "[13,14]". Both the palms and soles were affected in 52% of the cases (123). Palmar involvement was observed exclusively in 28% of cases (66), while plantar involvement was observed exclusively in 20% of cases (47). In the study conducted by Kumar *et al.* [11], it was found that plantar involvement was twice as prevalent as palmar involvement. Approximately 18% of the patients included in our study exhibited indications of psoriasis in additional locations. Psoriasis on the palms and soles can appear as scaly patches that produce a fine silvery scale when scratched. It can also resemble hyperkeratotic eczema or pustulosis, with less well-defined plaques. Preservation of skin creases on the palms may be observed. Skin often exhibits heightened pigmentation. Approximately 39% of patients exhibited associated nail changes, including pitting, thickening of the nail plate, and subungual hyperkeratosis. Chopra *et al.* found that nail involvement was present in 23.4% of the cases.The user's text is "[12]".

It is crucial to accurately distinguish palmoplantar psoriasis from other similar conditions like hyperkeratotic eczema, dermatophytosis, and contact dermatitis, as it may often go undiagnosed. Unilateral dermatophytosis typically exhibits a favourable response to antifungal treatment. Distinguishing hyperkeratotic eczema from psoriasis can be challenging due to potential overlap between the two conditions. Typically, the lesions in question lack clear boundaries, similar to those seen in psoriasis, and exhibit a lower level of redness. The presence of hyperkeratotic lesions on the knuckles indicates a preference for psoriasis. The term psoriasiform eczema is used to describe situations where there is a clinical and histological overlap between different conditions.

## CONCLUSION:

psoriasis is a common skin condition that affects 2.9% of the patients who come to our clinic for dermatological treatment. The clinical subtype that occurs most frequently is chronic plaque. Males in our region have a higher occurrence of the disease, and it is more common during the third decade of life. The treatment had a low level of compliance.

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