



A STUDY ON CLINICAL PROFILE OF PATIENTS PRESENTING WITH PALMOPLANTAR DERMATOSIS

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ABSTRACT

Background: Palmoplantar dermatoses constitute a heterogeneous group of disorders affecting the palms and soles and are frequently encountered in dermatology outpatient departments. Clinical diagnosis is often challenging due to overlapping morphology and modification by environmental and occupational factors.

Objectives: To study the clinical and epidemiological profile of patients presenting with palmoplantar dermatoses in a tertiary care centre in North-East India.

Methods: A cross-sectional observational study was conducted over a period of six months in the Department of Dermatology, Silchar Medical College. Seventy newly diagnosed patients with palmoplantar dermatoses were included. Detailed history, clinical examination, and relevant investigations were performed. Data were analysed using descriptive statistics.

Results: Among 70 patients, males constituted 55.7% and females 44.3%. The most common age group affected was 21–40 years (42.8%). Pruritus was the most common symptom (71.4%). Palmoplantar psoriasis was the most frequent diagnosis (27.1%), followed by eczema (22.8%) and dermatophytosis (12.8%). Bilateral involvement of palms and soles was observed in 40% of cases.

Conclusion: Palmoplantar dermatoses are common among the working population and show diverse clinical patterns. Early diagnosis with clinic-morphological correlation is essential for appropriate management.

Keywords: Palmoplantar dermatoses, psoriasis, eczema, clinical profile, North-East India

INTRODUCTION

Skin over palms and soles is a unique site being devoid of hairs with characteristic ridges and grooves bearing the medal of individuality. There are a numerous skin disorders which affect only palms and soles and at the same time there are disease which affects other body parts and becomes clue to diagnosis.

Palmoplantar dermatoses refer to a spectrum of dermatological disorders localized to the palms and soles, characterized by varied morphological presentations such as hyperkeratosis, scaling, erythema, fissuring, and vesiculation. These disorders significantly affect quality of life due to functional impairment and cosmetic concerns.

The unique anatomical structure of palmoplantar skin including thick stratum corneum, absence of pilosebaceous units, and constant exposure to mechanical trauma often modifies the classical presentation of dermatoses. Consequently, clinical diagnosis becomes challenging.

Common aetiologies include inflammatory conditions such as psoriasis and eczema, infections such as dermatophytosis, keratinization disorders, and occupational dermatoses. Studies from different regions of India have reported varying prevalence patterns.

However, data from North-East India remain limited. Hence, this study was undertaken to evaluate the clinical and epidemiological patterns of palmoplantar dermatoses in this region.

AIMS AND OBJECTIVES

1. To study the clinical profile of patients presenting with palmoplantar dermatoses.
2. To evaluate epidemiological characteristics including age, sex, occupation, and site of involvement.

MATERIALS AND METHODS

Study Design

Cross-sectional observational study.

Study Setting

Department of Dermatology, Venereology and Leprosy, Silchar Medical College and Hospital, Assam.

Study Duration

6 months

Sample Size

Sample size calculated using the formula:

$$N = Z^2 p (1-p) / d^2$$

Taking prevalence (p) = 22%,

Confidence level = 95%,

Absolute error = 3%,

Calculated sample size $\approx$ 67, rounded to 70.

Inclusion Criteria

- Newly diagnosed cases of palmoplantar dermatoses
- Patients willing to give consent

Exclusion Criteria

- Patients already on treatment for palmoplantar dermatoses
- Patients unwilling to participate

Data Collection

A structured proforma was used including:

- Demographic details

- Clinical morphology
- Site of involvement
- Investigations (KOH mount, biopsy when required)

Statistical Analysis

Data were entered in MS Excel and analysed using SPSS version 25. Descriptive statistics were expressed as percentages and frequencies.

RESULTS

Out of the 70 patients, the most affected age group was 21-40 years (42.8%), followed by 41-60 years (31.4).

Table 1: Distribution of cases based on age

Age Group	Number	Percentage
<20 yrs	8	11.4%
21–40 yrs	30	42.8%
41–60 yrs	22	31.4%
>60 yrs	10	14.2%

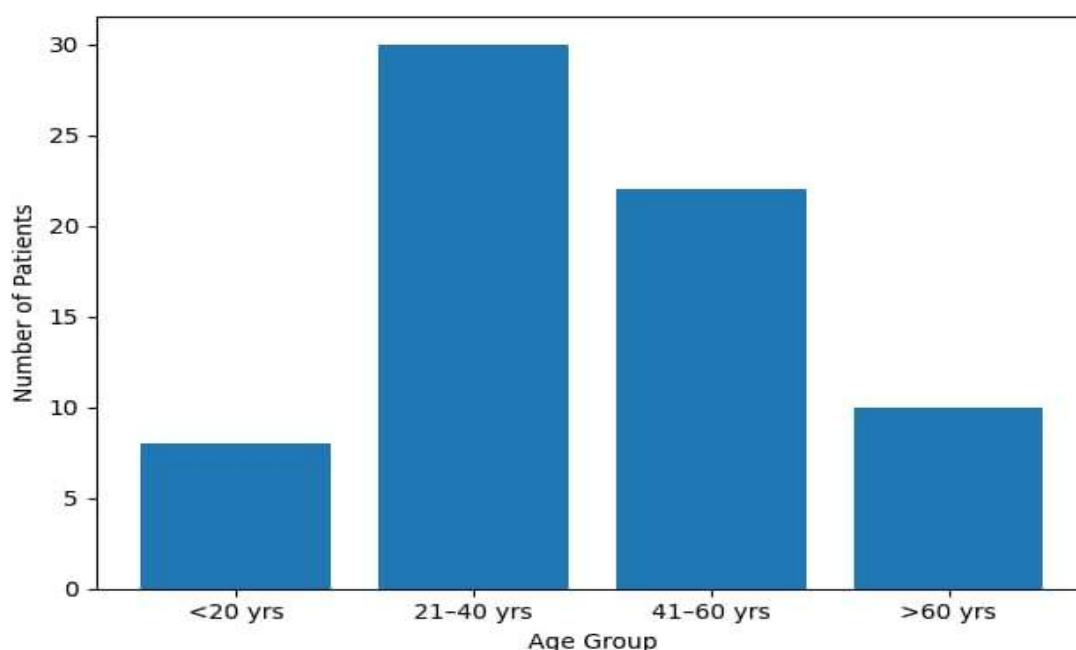


Fig 1 – Age distribution of cases

Table 2: Distribution of cases based on gender

Gender	Number	Percentage
Male	39	55.7%
Female	31	44.3%

Most affected were Males (55.7%) followed by females (44.3%).

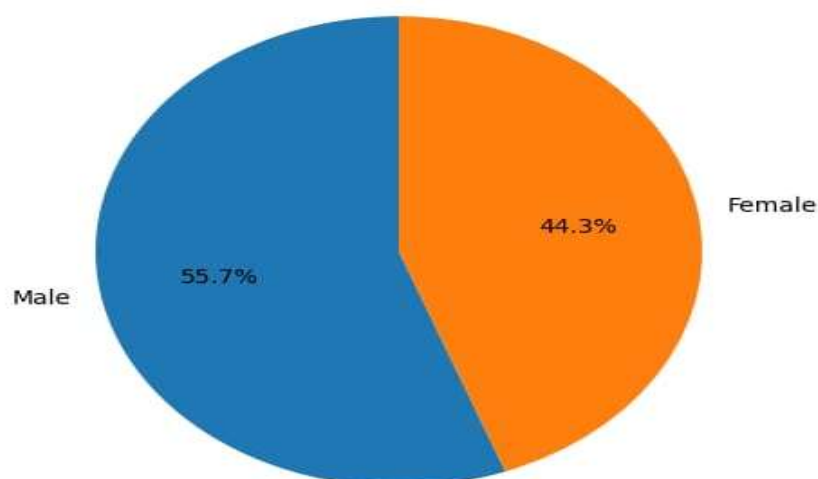


Fig. 2 Gender distribution of cases

Table 3: Distribution of cases based on occupation

Occupation	Percentage
Manual labourers	28.5%
Housewives	25.7%
Students	18.5%
Office workers	15.7%
Others	11.4%

Patients who were maximally affected were Manual labourers (28.5%) by occupation followed by housewives (25.7%)

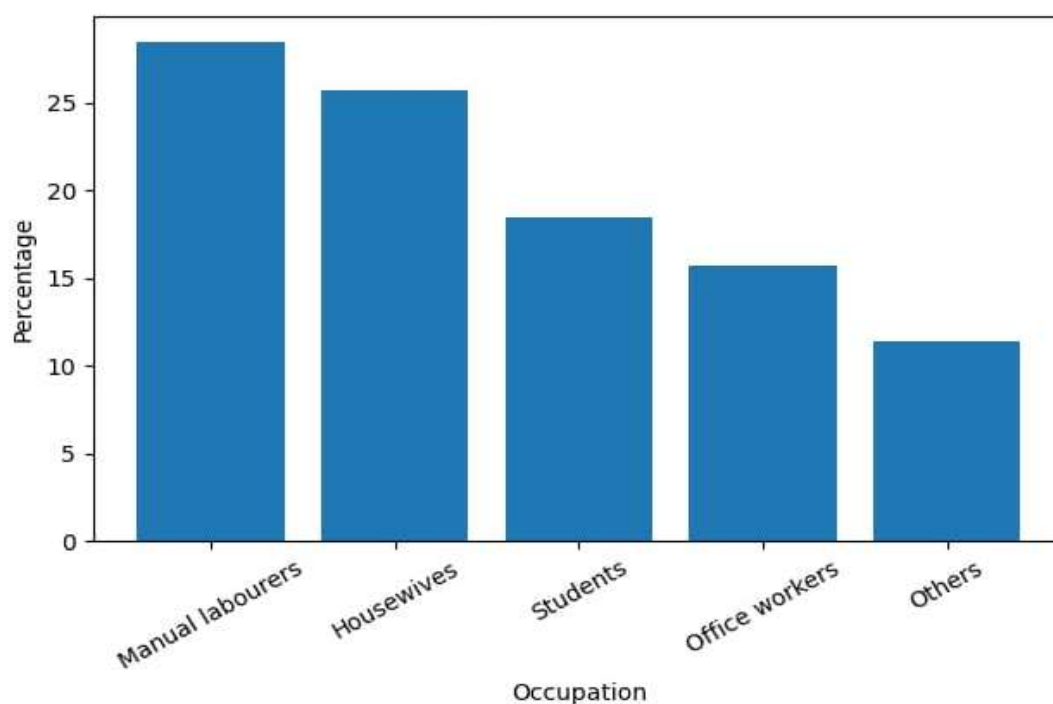


Fig. 3 – Distribution of cases based on occupation

Table 4: Distribution of cases based on symptoms

Symptom	Percentage
Itching	71.4%
Scaling	60%
Fissuring	42.8%
Pain	30%

Most common symptom being itching (71.4%) and scaling (60%) was the second most common complaint

Table 5: Distribution of cases based on site of involvement

Site	Percentage
Palms only	28.5%
Soles only	31.4%
Both	40%

In most of the cases both palms and soles (40%) were affected.

Table 6: distribution of cases based on clinical diagnosis

Diagnosis	Percentage
Palmoplantar psoriasis	27.1%
Eczema	22.8%
Dermatophytosis	12.8%
Keratoderma	10%
Pitted keratolysis	8.5%
Verruca	7.1%
Others	11.7%

Palmoplantar psoriasis (27.1%) was the most common diagnosis followed by eczema (22.8%) and verruca (7.1) being the least common

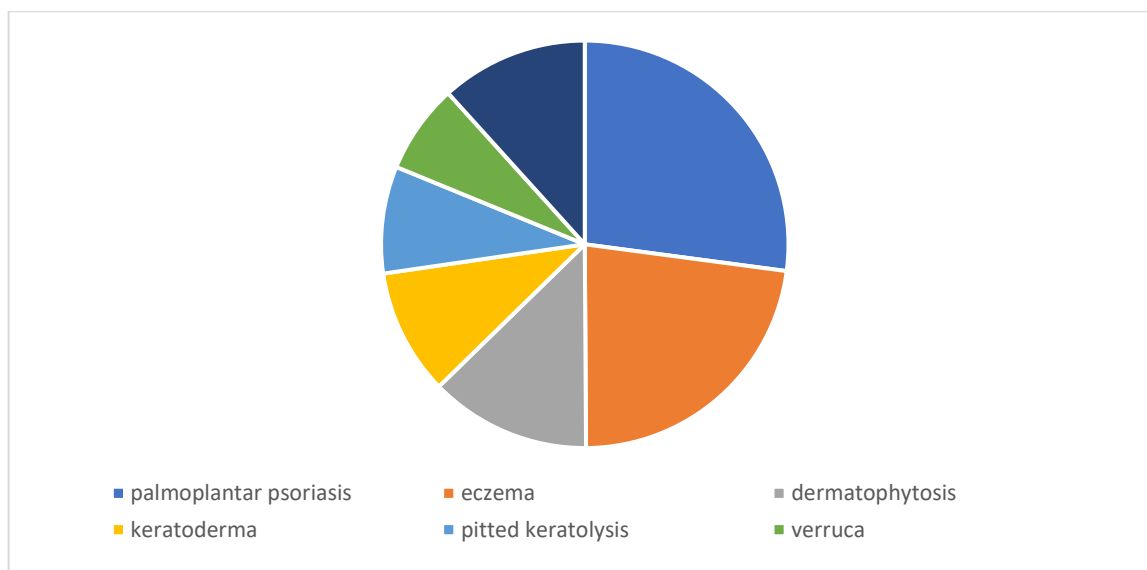


Fig 4 – distribution of cases based on clinical diagnosis

Figures 5-10 shows palmoplantar lesions of varied etiologies encountered during the study



Fig 5 shows well defined psoriatic plaque over sole of both feet



Fig 6 shows extensive involvement of both palms due to psoriasis



Fig 7 shows well defined eczematous plaque over palms



Fig 8 shows eczematous plaque spreading over dorsum of feet





Fig 10 shows punctate palmoplantar keratoderma





Fig 9 shows dermatophyte infection involving dorsum of hand



Fig. 10 shows targetoid lesions over both palms

DISCUSSION

Palmoplantar dermatoses represent a diagnostic challenge due to overlapping clinical patterns and causes significant deterioration of quality of life¹⁰.

In the present study, maximum patients belonged to the age group 21–40 years, similar to observations by Nair et al. This may be attributed to increased occupational exposure².

Male predominance (55.7%) observed in our study correlates with increased outdoor activities and mechanical trauma was in accordance with the study done by Hongal et al¹.

Pruritus was the most common symptom (71.4%), consistent with previous studies^{2,3}.

Palmoplantar psoriasis was the most common diagnosis (27.1%), similar to studies by Hongal et al and Sekhar et al. However, Sana et al. reported eczema as the most common entity, indicating regional variation³.

Bilateral involvement in 40% cases suggests systemic inflammatory conditions rather than purely localized pathology^{4,5}.

Most of the cases showed involvement of both palms and soles⁶.

In this study patients who were mostly affected were manual labourers, followed by housewives which was in contrast to the study done by Pujitha et al.⁷ where housewives were the mostly affected, although similar observation was obtained in a study done by Kodali⁹.

Psoriasis being the most common cause of palmoplantar dermatoses as found in our study along with manual labourers being the most affected study population, might indicate towards a role of occupational trauma as suggested by a study done by Kumar et al.⁸

Environmental humidity, footwear habits, and occupational exposures in North-East India may influence disease pattern.

CONCLUSION

Palmoplantar dermatoses are common dermatological conditions with varied clinical presentations.

Key findings:

- Most affected age group: 21–40 years
- Male predominance
- Pruritus as the most common symptom
- Palmoplantar psoriasis as the most common diagnosis

Early clinic-morphological correlation along with appropriate investigations improves diagnostic accuracy.

LIMITATIONS

- Small sample size
- Short duration
- Lack of histopathological confirmation in all cases

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