SSR Institute of International Journal of Life Sciences
ISSN (O): 2581-8740 | ISSN (P): 2581-8732
Vamja and Patolia, 2025
doi: 10.21276/SSR-IIJLS.2025.11.6.17

Original Article

open access

Prevalence and Patterns of Palmoplantar Dermatoses: A Prospective Observational Analysis

Chirag Jayantibhai Vamja[1], Raj Vitthalbhai Patolia[2]*

[1]Associate Professor, Dept of Dermatology, Shantabaa Medical College, Amreli, India
[2]Assistant Professor, Dept of Dermatology, Shantabaa Medical College, Amreli, India

***Address for Correspondence:** Dr. Raj Vitthalbhai Patolia, Assistant Professor, Dept of Dermatology, Shantabaa Medical College, Amreli, India
E-mail: rajpatolia@yahoo.com

Received: 17 Jun 2025/ Revised: 21 Aug 2025/ Accepted: 18 Oct 2025

ABSTRACT

Background: The following study discusses Palmoplantar dermatoses, which encompass various circumstances. It can affect the palms and soles; symptoms may include hyperkeratosis and fissures, which could severely interfere with daily life. Their etiologies include genetic, inflammatory, lifestyle, and environmental factors. An accurate clinical histopathological diagnosis is required to manage overlapping conditions such as psoriasis, eczema, and keratoderma. The objective of this study is to evaluate the frequency, demographic distribution, and clinical patterns of palmoplantar dermatoses, as well as their common symptoms and treatment procedures.

Methods: This prospective observational study was carried out during the period of one year and included 170 patients with palmoplantar dermatoses. Participants provided informed consent, and those who declined or did not approve were excluded. A complete history and clinical examination were conducted using a standardised proforma to evaluate situations with or without additional body involvement.

Results: The study highlights the demographic and clinical profiles of 170 participants with palmoplantar dermatoses. This study included those participants who were housewives and laborers, predominating. This study found the key symptoms, which included itching (69.41%) and prolonged durations, as well as it was limited treatment use. Bilateral involvement of palms and soles was common, mainly in webspaces, heels, and toes, indicating systemic or mechanical factors.

Conclusion: The study found a slight male predominance, with middle-aged individuals, housewives, laborers, and students most affected. This study showed that common symptoms included itching and peeling, often untreated. Moreover, the palmoplantar psoriasis was most prevalent, with high bilateral involvement of palms and soles.

Key-words: Palmoplantar Dermatoses, Prevalence, Bilateral Involvement, Itching, Psoriasis

INTRODUCTION

Palmoplantar dermatoses include a broad range of dermatological conditions that specifically affect the palms and soles. The earliest description of Palmoplantar dermatoses was of *Palmoplantar keratoderma*, which a Croatian dermatologist, Luca Stull, in 1826, described as “Mal de Meleda”, represented as a hereditary form [1].

How to cite this article
Vamja CJ, Patolia RV. Prevalence and Patterns of Palmoplantar Dermatoses: A Prospective Observational Analysis. SSR Inst Int J Life Sci., 2025; 11(6): 8725-8733.

Access this article online
https://iijls.com/

Later, with the advancements in genomics, the genetic links associated with keratoderma further widened the field of dermatoses conditions. Symptoms like hyperkeratosis, fissures, scaling, erythema, and even pustular manifestations are commonly reported in these conditions. As a result of these presentations, the person is often impaired in performing the daily activities that significantly affect the quality of life [2]. Due to their overlapping symptoms, it has been a challenge to diagnose and manage these conditions. Additionally, a diverse etiology further complicates the understanding as that can vary from inflammatory origins like psoriasis or eczema to genetic disorders like Palmoplantar keratoderma [3]. As a result, recent research has emphasized their understanding and their impact on the

doi: 10.21276/SSR-IIJLS.2025.11.6.17

physical as well as emotional well-being of the person suffering from the conditions [4]. Particularly among the manual laborers and housewives, the impact of palmoplantar dermatoses is profound and significantly affects their livelihood [2]. A recent study from Elinkichari *et al.* has reported high Dermatological Life Quality Index (DLQI) scores in the affected individuals, which indicates the level of their physical and emotional distress [4]. Therefore, improved diagnostic and therapeutic approaches are being explored to necessitate their clinical management. A multifactorial etiology of palmoplantar dermatoses that encompasses genetic predisposition, lifestyle, and inflammation to environmental factors contributes to its varied prevalence patterns across the globe. Among the lifestyle-related causal factors, smoking has been identified as a significant risk factor, particularly for palmoplantar pustulosis [5]. Whereas the palmoplantar keratoderma is due to mutations in the gene desmoglein 1, which highlights the genetic or hereditary etiology of the condition as well [6]. These dermatological conditions are prevalent in diverse populations where they affect a broad age range, with palmoplantar psoriasis and eczema being the most common subtypes, ranging from 20-40% prevalence rate in specific cohorts [2,3]. Additionally, the patterns of the Palmoplantar pustulosis and keratoderma also vary in severity as well as distribution [7]. Although the precise data on the economic loss in figures due to dermatoses are scarce, dermatological conditions in general account for billions in annual healthcare costs worldwide [8]. The diagnosis of these disorders requires a combination of clinical, histopathological, and dermatoscopic examination to rule out the overlapping symptoms between eczema and keratoderma [9,10].

Table 1: Types of Palmoplantar dermatoses, their diagnosis, prevalence, symptoms and commonly targeted populations.

Type	Diagnosis	Treatment	Prevalence Rates	Symptoms	Commonly Affected Populations	References
Psoriasis	Clinical examination, biopsy	Topical treatments, systemic therapies	20.7%	Itching, painful fissures	Housewives, manual laborers	Prasad *et al.* [11]; Hongal *et al.* [12]
Eczema	Clinical examination, patch testing	Topical steroids, emollients	23%	Pruritis	17-40 years age group	Wali and Mrudula [8]
Fungal Infections	Microscopic examination, KOH test	Antifungal medications	12.5%	Itching, scaling	Both genders, various occupations	Wali and Mrudula [8]
Palmoplantar Keratoderma	Clinical examination, genetic testing	Retinoids, symptomatic relief	0.15%	Hyperkeratosis, fissures	Males more than females	Raut *et al.* [6]; Lovgren *et al.* [13]
Palmoplantar Pustulosis	Clinical examination, biopsy	Biologics like Gulselkumab	Lower prevalence in Western countries	Vesicles, pustules	More common in Japan	Murakami and Terui [14]
Lichen Planus	Clinical examination, biopsy	Methotrexate,topical steroids	0.1% to 2%	Itching, burning pain	More common in men	Covington *et al.* [15]
Mycosis Fungoides	Histochemical and immunohistochemical analyses	Photochemotherapy	Rare	Broad clinical variation	Adults with chronic eczema	Spieth *et al.* [16]

doi: 10.21276/SSR-IIJLS.2025.11.6.17

The management of Palmoplantar dermatosis is challenging due to its chronic as well as recurrent nature. Meanwhile, the treatment strategies often focus on mitigating the individual and severity-specific application of topical and systemic therapies to improve the overall quality of life [17]. Due to their irregular prevalence, diverse etiology, diverse clinical presentations, and profound impact on the quality of life [17], Palmoplantar dermatosis presents a significant dermatological concern that warrants understanding in terms of their prevalence patterns as well as targeted therapies to improve the outcomes of the affected individuals. In this study, we aim to prospectively study the patterns of Palmoplantar dermatoses along with their prevalence rates.

MATERIALS AND METHODS

Research Design- This is a prospective observational study, which was conducted during the period of one year in Shantabaa Medical College, Amreli, Western India. This study was conducted among 170 patients from the initial 200 patients, and the study period was 1 year. This study included participants who gave informed written consent. This study included palmoplantar dermatoses with or without other body part involvement, age, and sex. Patients unwilling to participate or without formal consent were excluded from the study. A comprehensive history was obtained, and a thorough clinical examination was conducted following an established proforma.

Inclusion and Exclusion Criteria

Inclusion Criteria

1. Participants were diagnosed with palmoplantar dermatoses, with or without the involvement of other body parts.
2. Patients of any age and sex.
3. Patients who provided informed written consent to participate in the study.

Exclusion Criteria

1. Patients were unwilling to participate in the study.
2. Patients who did not provide formal written consent.
3. Patients with dermatoses confined exclusively to body parts other than the palms and soles.

Statistical analysis- Statistical analysis was performed using SPSS version 25 and Microsoft Excel. Excel was used for data organisation and calculation of descriptive statistics. In SPSS, appropriate tests were applied based on variable type. ANOVA was used to compare mean differences among multiple groups, while t-tests were performed for comparisons between two groups. Results were summarised as frequencies, percentages, and means, with statistical significance set at $p<0.05$. Findings were presented in tables and charts for clarity.

RESULTS

Table 2 provides a demographic overview of the participants (N=170). The majority decline within the 17–40 age group (42.35%), followed by those aged 41–60 (30.59%), indicating that the study predominantly involves middle-aged adults. Males (53.53%) slightly outnumber females (46.47%). In terms of occupation, housewives represent the largest group (30.00%), followed by laborers (26.47%) and students (25.29%), with smaller proportions engaged in jobs (11.76%), business (4.71%) or other activities (1.76%). Educationally, nearly half (49.41%) have attained a secondary school certificate (SSC), while 20.59% are illiterate, and 10% hold higher secondary certificates. A smaller proportion have completed graduate (13.53%) or postgraduate (6.47%) studies. This demographic distribution highlights a diverse sample, predominantly younger adults, moderate gender balance, and varied occupational and educational backgrounds.

Table 2: Demographic details of patients

Category	Number (%)
Age group (in years)	
5-10	11 (6.47%)
11-16	21 (12.35%)
17-40	72 (42.35%)
41-60	52 (30.59%)
>60	14 (8.24%)
Sex	
Male	91 (53.53%)
Female	79 (46.47%)
Occupation	
Laborer	45 (26.47%)
Housewife	51 (30.00%)
Job	20 (11.76%)

doi: 10.21276/SSR-IIJLS.2025.11.6.17

Business	8 (4.71%)
Student	43 (25.29%)
Others	3 (1.76%)
Education	
Illiterate	35 (20.59%)
Secondary school certificate (SSC)	84 (49.41%)
Higher secondary certificate (HSC)	17 (10%)
Graduate	23 (13.53%)
Postgraduate (PG)	11 (6.47%)
Total	170

Table 3 outlines the clinical profile of the participants (N=170) and highlights their primary complaints, duration, aggravating factors, and treatment approaches. The most commonly reported symptom was itching (69.41%), followed by peeling of the skin (27.65%) and pain (24.71%), while redness (8.24%), edema (1.18%), and burning sensation (1.18%) were less frequent. Regarding the duration of symptoms, a notable proportion had experienced dermatoses for less than one month (31.76%), with others reporting durations of 1–3 months (20.59%), 3–12 months (21.76%), and over a year (25.88%). Seasonal variation was the most cited aggravating factor (29.41%), followed by contact with allergens or irritants (15.29%), while 48.82% reported no identifiable trigger. In terms of treatment, most participants (65.88%) had not sought any intervention, whereas 23.53% used topical treatments, 6.47% combined topical and systemic therapies, and 1.76% relied solely on systemic treatments. These findings emphasise the prevalence of prolonged dermatoses and the underutilisation of medical interventions.

Table 3: Clinical profile of patients

Category	Number (%)
Complaint	
Itching	118 (69.41)
Redness	14 (8.24)
Pain	42 (24.71)
Peeling of skin	47 (27.65)
Edema	2 (1.18)
Burning Sensation	2 (1.18)
Duration	
<1 Month	54 (31.76)
1-3 Months	35 (20.59)
3-12 Months	37 (21.76)
>1 year	44 (25.88)
Aggravating Factor	
Seasonal variation	50 (29.41)
Trauma	8 (4.71)
Drugs	3 (1.76)
Contact with any allergen or irritant	26 (15.29)
No	83 (48.82)
Treatment Taken	
Topical	40 (23.53)
Systemic	3 (1.76)
Both topical and systemic	11 (6.47)
No	112 (65.88)
Others	3 (1.76)
Total	170 (100)

Table 4 presents the distribution of diagnoses by sex and site of involvement among participants with dermatoses (N=170). Palmoplantar psoriasis was the most prevalent condition, affecting 28.23% of participants, with a higher occurrence in males (19.41%) than females (8.82%), primarily involving the palms (24.12%). Keratinizing disorders were the second most common diagnosis (26.47%), more frequent in females (14.71%) than males (11.76%), and predominantly involved the soles (25.29%). Eczema (13.53%) also showed a slight male predominance (7.06%), with the palms (11.76%) being the most affected site. Viral infections (9.41%) were relatively evenly distributed between sexes and commonly involved both palms and soles (5.88%). Drug reactions (3.53%) and fungal infections (7.65%) were less frequent, with fungal infections showing a female predominance (6.47%). Other conditions like pitted keratolysis, hyperhidrosis, trophic ulcers, and miscellaneous dermatoses collectively accounted for smaller proportions, each predominantly affecting specific sites. Overall, the data highlights that dermatoses frequently affect multiple areas, with the palms (67.06%) and soles (70.00%) being the most commonly involved regions, often presenting bilaterally (42.35%).

doi: 10.21276/SSR-IIJLS.2025.11.6.17

Table 4: Distribution of palmoplantar dermatoses

Diagnosis	Sex	Number (%)	Site of Involvement	Number (%)
Palmoplantar psoriasis	Male	33 (19.41)	Palm	41 (24.12)
	Female	15 (8.82)	Sole	34 (20.00)
		48 (28.23)	Both palms and soles	30 (17.65)
Keratinizing disorder	Male	20 (11.76)	Palm	10 (5.88)
	Female	25 (14.71)	Sole	43 (25.29)
		45 (26.47)	Both palms and soles	8 (4.71)
Eczema	Male	12 (7.06)	Palm	20 (11.76)
	Female	11 (6.47)	Sole	7 (4.12)
		23 (13.53)	Both palms and soles	6 (3.53)
Viral infection	Male	9 (5.29)	Palm	15 (8.82)
	Female	7 (4.12)	Sole	9 (5.29)
		16 (9.41)	Both palms and soles	10 (5.88)
Drug reaction	Male	5 (2.94)	Palm	7 (4.12)
	Female	1 (0.59)	Sole	3 (1.76)
		6 (3.53)	Both palms and soles	3 (1.76)
Fungal infection	Male	2 (1.18)	Palm	7 (4.12)
	Female	11 (6.47)	Sole	10 (5.88)
		13 (7.65)	Both palms and soles	2 (1.18)
Pitted keratolysis	Male	1 (0.59)	Palm	0 (0.00)
	Female	1 (0.59)	Sole	2 (1.18)
		2 (1.18)	Both palms and soles	0 (0.00)
Hyperhidrosis	Male	2 (1.18)	Palm	2 (1.18)
	Female	0 (0.00)	Sole	1 (0.59)
		2 (1.18)	Both palms and soles	0 (0.00)
Trophic ulcer	Male	1 (0.59)	Palm	0 (0.00)
	Female	1 (0.59)	Sole	1 (0.59)
		2 (1.18)	Both palms and soles	0 (0.00)
Others	Male	4 (2.35)	Palm	8 (4.71)
	Female	5 (2.94)	Sole	5 (2.94)
		9 (5.29)	Both palms and soles	3 (1.76)
Total	Male	91 (53.53)	Palm	114 (67.06)
	Female	79 (46.47)	Sole	119 (70.00)
		170 (100)	Both palms and soles	72 (42.35)

doi: 10.21276/SSR-IIJLS.2025.11.6.17

Fig. 1 shows the distribution of dermatoses over the palms and soles, indicating a higher prevalence of bilateral involvement than unilateral involvement in both areas. 115 cases were bilateral for the palms, while only 19 cases were unilateral, suggesting that dermatoses in the palms tend to affect both sides of the body more commonly. Similarly, bilateral involvement was observed in 110 cases for the soles, while unilateral cases were slightly higher at 30. This pattern implies that dermatoses on the soles also show a strong tendency to be bilateral, which could reflect systemic factors or more generalised skin conditions. Moreover, the data emphasises that dermatoses affected both palms and soles, which could reveal the underlying states that symmetrically affect both areas.

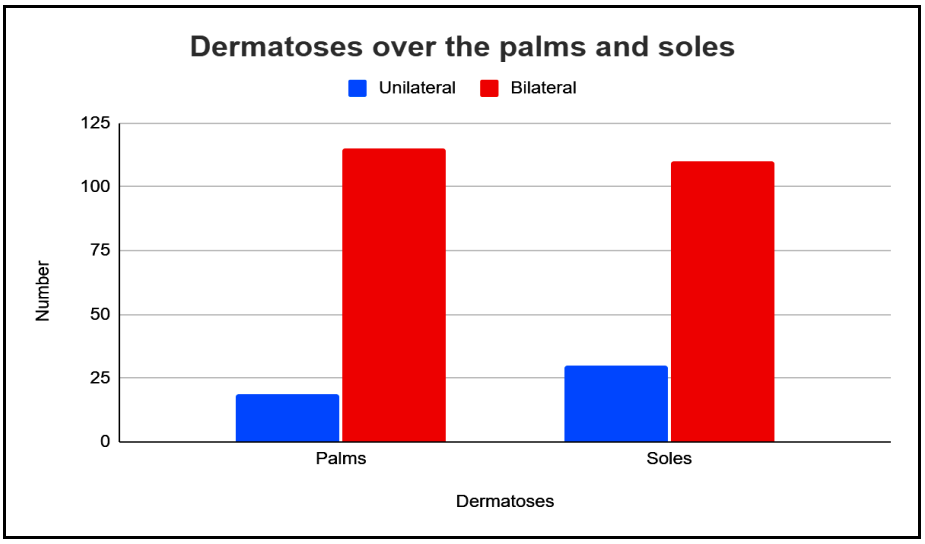

Fig. 1: Dermatoses over the palms and soles

Fig. 2 shows the distribution of dermatoses across various areas of the palms, with the highest frequency observed in the digits with webspace (160 cases), followed by the thenar region (150 cases) and the hypothenar region (143 cases). The web spaces commonly affected by digits indicate that spaces between the fingers are susceptible to dermatoses due to some factors, such as moisture retention and friction. This provides a substantial number of cases in the area at the base of the thumb and suggests its vulnerability due to repeated use and stress.

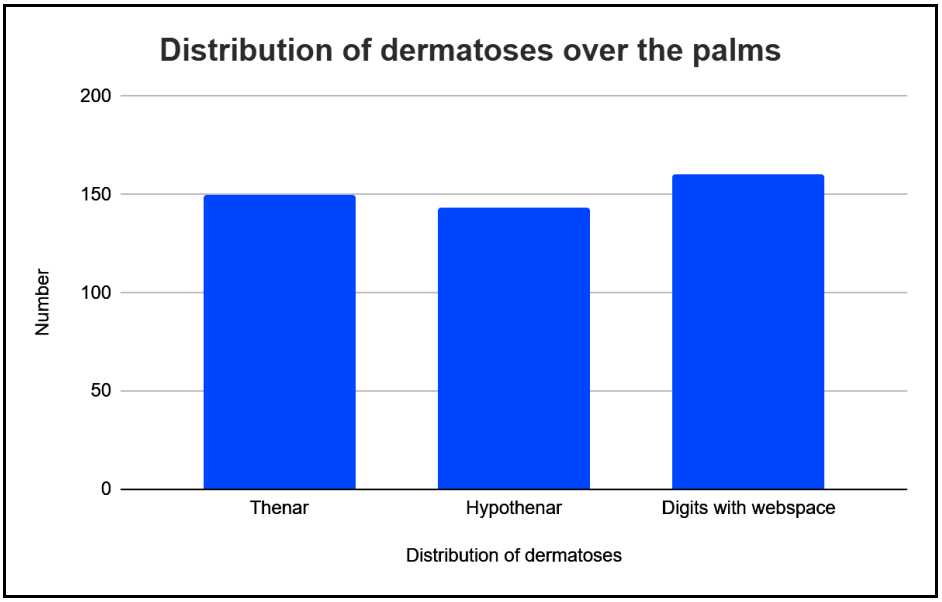

Fig. 2: Distribution of dermatoses over the palms

doi: 10.21276/SSR-IIJLS.2025.11.6.17

Fig. 3 shows the distribution of dermatoses in the soles, where the heel has the highest number of dermatoses (165 cases), followed by the toe (142 cases), the digits with webspace (151 cases), and the arch (165 cases). This suggests that the heel and toe regions are the most commonly affected areas, likely due to their increased exposure and potential for friction or pressure. The digits with webspace also show a notable presence of dermatoses, indicating that the areas between the toes may be inclined to conditions such as fungal infections or irritation.

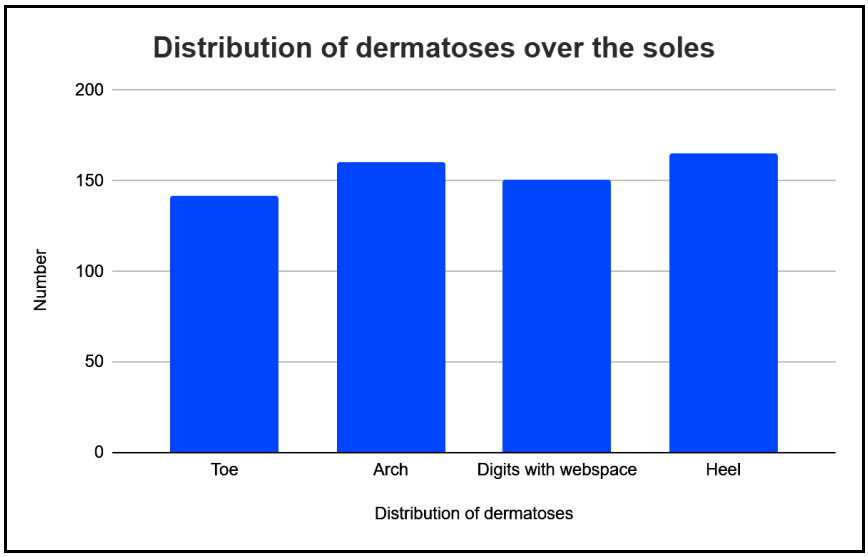

Fig. 3: Distribution of dermatoses over the soles

DISCUSSION

With the advancements in scientific techniques and concepts, the understanding of Palmoplantar dermatoses has evolved significantly from the rudimentary description by Stulli to modern-day genetic and clinical definitions. Considering the severity and the burden that Palmoplantar dermatoses pose on the working-class population, various studies have explored their prevalence and disease patterns. Understanding and quantifying the prevalence of Palmoplantar dermatoses and their types is essential to identify risk factors that will further improve diagnosis, classification, and treatment strategies, not only to guide relevant public health policies but also to improve the overall quality of life of patients. A recent study by Wali et al. explored the clinico-epidemiology that reported eczema as the most common, followed by psoriasis and fungal infections. Further, the majority had involvement of both palms and soles, with pruritus commonly reported [8]. In 2021, Sekhar et al. conducted a descriptive study of the clinical and etiological parameters of Palmoplantar dermatoses in a South Indian tertiary care hospital and reported that 40% of cases suffered from Psoriasis, followed by eczemas (37.5%) and fungal infections (12.5%). The patients reported itching and painful fissures as symptoms [11]. Similarly, a study from Western India reported 23% of cases with eczema, 7.5% with psoriasis, and 7% with dermatophytosis. Interestingly, most of the cases had palm lesions alone, with itching as a common symptom [18]. Another cross-sectional study from India by Vasanthkumar *et al.* was conducted in a sample size of 200 patients. The study enrolled participants aged 5 to 70 years and reported that Palmoplantar psoriasis was the most common dermatosis, affecting 23.5% of patients [19]. Earlier in 2018, a study from Central India confirmed similar findings, with Palmoplantar psoriasis affecting 24% of 200 patients, with a majority of males in the 31-40-year-old age group [3]. A clinical study of 300 patients with palmoplantar dermatoses found 20.7% with palmoplantar psoriasis, 19% with moniliasis, and 7% with hyperhidrosis [12]. In 2002, Kumar et al. conducted a large-scale study that included 3065 patients with palmoplantar lesions, of which 91.9% had palmar lesions. This study further found four distinct patterns on palms and five on soles, with occupational trauma further influencing lesion localisation [20]. More recently, the prevalence and clinical-histological parameters were correlated with cases of acquired palmoplantar keratoderma; around 58.2% of cases had clinical

psoriasis, 10.4% were confirmed histologically, and 23.9% were clinically diagnosed with Lichen planus. This study further provided evidence for overlapping clinical features where skin biopsy aids in diagnosis [21].

SUMMARY

In summary, these studies collectively highlight that palmoplantar dermatoses are common dermatological concerns that vary significantly in prevalence and patterns across populations. Generally, eczema and psoriasis are the most reported symptoms, along with itching and pruritus. The involvement of both palms and soles is typical; however, studies have reported that occupation may influence lesion patterns. To improve quality of life, early diagnosis and symptom management remain the crucial takeaways from all the studies.

CONCLUSIONS

This study concluded that findings highlight a slight male predominance, with a significant proportion of cases affecting middle-aged individuals. Housewives, laborers, and students constitute the largest occupational groups, with varied educational backgrounds ranging from illiteracy to postgraduate qualifications. Clinically, itching and peeling of the skin were the most common symptoms, often persisting for prolonged periods without treatment, underscoring the underutilisation of medical interventions. Palmoplantar psoriasis emerged as the most prevalent diagnosis, predominantly affecting males and the palms, followed by keratinising disorders and eczema. The palms and soles exhibited high rates of bilateral involvement, suggesting systemic or generalised factors at play. Anatomically, the web spaces of the palm's digits, thenar, and hypothenar regions, along with the soles' heels, toes, and arches, were most frequently affected. These findings underscore the need for increased awareness, early diagnosis, and appropriate management strategies to address the burden of palmoplantar dermatoses and improve patient outcomes.

CONTRIBUTION OF AUTHORS

Research concept- Chirag Jayantibhai Vamja, Raj Vitthalbhai Patolia
Research design- Chirag Jayantibhai Vamja, Raj Vitthalbhai Patolia
Supervision- Chirag Jayantibhai Vamja
Materials- Chirag Jayantibhai Vamja, Raj Vitthalbhai Patolia
Data collection- Chirag Jayantibhai Vamja, Raj Vitthalbhai Patolia
Data analysis and interpretation- Chirag Jayantibhai Vamja, Raj Vitthalbhai Patolia
Literature search- Chirag Jayantibhai Vamja, Raj Vitthalbhai Patolia
Writing article- Chirag Jayantibhai Vamja, Raj Vitthalbhai Patolia
Critical review- Chirag Jayantibhai Vamja
Article editing- Chirag Jayantibhai Vamja, Raj Vitthalbhai Patolia
Final approval- Chirag Jayantibhai Vamja

REFERENCES

[1] Fatović-Ferencić S, Holubar K. The portrait and paper of a forgotten hero--Luca Stulli (1772–1828) and the Mal de Meleda of yesteryear: a 175-year anniversary. J Invest Dermatol., 2001; 116: 198–99. doi: 10.1046/j.1523-1747.2001.00225.x.

[2] Singhal R, Diwan NG, Nair PA. Impact of palmoplantar dermatoses on quality of life. Indian Dermatol Online J., 2018; 9: 309–13. doi: 10.4103/idoj.IDOJ_347_17.

[3] Rathoriya SG. Clinical profile of palmoplantar dermatoses in patients attending tertiary health center in central India. Int J Res Dermatol., 2018; 4: 514–14. doi: 10.18203/issn.2455-4529.IntJResDermatol20184221.

[4] Elinkichari D, Rabhi F, Jaber K, Dhaoui R. Palmoplantar psoriasis: epidemiological and clinical features and impact on quality of life. Dermatol Pract Concept., 2024; 14: 1–07. doi: 10.5826/dpc.1403a191.

[5] O'Doherty CJ. High prevalence of cigarette smoking in patients with palmoplantar pustulosis. Br J Dermatol., 1994; 111: 41–41. doi: 10.1111/j.1365-2133.1984.tb05269.x.

[6] Lovgren ML, McAleer MA, Irvine AD, Wilson NJ, Tavadia S, et al. Mutations in desmoglein 1 cause diverse inherited palmoplantar keratoderma phenotypes. Br J Dermatol., 2017; 176: 1345–50. doi: 10.1111/bjd.14973.

[7] Nair PA, Diwan NG, Singhal R, Vora RV. A prospective study of clinical profile in patients of palmoplantar

doi: 10.21276/SSR-IIJLS.2025.11.6.17

dermatoses. Indian Dermatol Online J., 2017; 8: 331–35. doi: 10.4103/idoj.IDOJ_308_16.

[8] Wali V, Mrudula E. A clinico-epidemiological study on palmoplantar dermatoses. Int J Adv Res., 2023; 11: 860–67. doi: 10.21474/IJAR01/16090.

[9] Chauhan P, Meena D, Jindal R, Roy S, Shirazi N. Dermoscopy in the diagnosis of palmoplantar eczema and palmoplantar psoriasis. Indian J Dermatol., 2023; 68: 120–25. doi: 10.4103/ijd.ijd_908_21.

[10] Yu X, Wei G, Shao C, Zhu M, Sun S, et al. Analysis of dermoscopic characteristics for differential diagnosis of palmoplantar psoriasis and palmoplantar eczema. Med., 2021; 100: e23828. doi: 10.1097/MD.0000000000023828.

[11] Prasad KN, Reddy DS, Boppani PK. Descriptive study of clinical and etiological profiles of palmoplantar dermatoses. Cureus, 2021; 13: e20268. doi: 10.7759/cureus.20268.

[12] Hongal AA, Rajashekhar N, Gejje S. Palmoplantar dermatoses: a clinical study of 300 cases. J Clin Diagn Res., 2016; 10: WC04–07. doi: 10.7860/JCDR/2016/20818.8364.

[13] Raut P, Saha PK, Bhunia D, Singh P. Impact of hyperkeratotic palmoplantar dermatoses on Dermatology Life Quality Index, in a tertiary care centre in Eastern India: A cross-sectional study. Student's J Health Res Africa, 2024; 5(6): 1–8. doi: 10.51168/sjhrafrica.v5i6.1167.

[14] Murakami M, Terui T. Palmoplantar pustulosis: current understanding of disease mechanism. J Dermatol Sci., 2020; 98: 13–19. doi: 10.1016/j.jdermsci.2020.03.003.

[15] Covington M, Roman C, Abdulla FR. Methotrexate as a treatment of palmoplantar lichen planus. Cutis, 2020; 106: 01–03. doi: 10.12788/cutis.0068.

[16] Spieth K, Grundmann-Kollmann M, Runne U, Staib G, Fellbaum C, et al. Mycosis-fungoides-type cutaneous T-cell lymphoma of the hands and soles. Dermatol., 2002; 204: 01–06.

[17] Raposo I, Torres T. Palmoplantar psoriasis and palmoplantar pustulosis: current treatment and future prospects. Am J Clin Dermatol., 2016; 17: 349–58. doi: 10.1007/s40257-016-0191-7.

[18] Devi S, B S, M S. Clinico-epidemiological profile of palmoplantar dermatoses in northeast India. Int J Res Dermatol., 2021; 7: 800–04.

[19] Vasanthkumar YH, Chandrasekhar MH, Murugesh SB. Clinical aspects of palmoplantar dermatoses. Int J Res Dermatol., 2020; 6: 383–87.

[20] Kumar B, Saraswat A, Kaur I. Palmoplantar lesions in psoriasis: a study of 3065 patients. Acta Derm Venereol., 2002; 82: 192–95. doi: 10.1080/00015550260132488.

[21] Sen I, Tarafdar D, Sarkar S, Roy S, Das NK, et al. An etiological study of acquired palmoplantar keratoderma. Indian J Dermatol., 2023; 68: 603–10. doi: 10.4103/ijd.ijd_572_23.