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Dermoscopic Study of Palmoplantar Dermatoses in a Tertiary Care Centre

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HIGHLIGHTS

- Enhanced dermatoses diagnosis
- Non-invasive evaluation
- Improved lesion differentiation
- Reduced biopsy requirement
- Therapeutic response monitoring

Key Words:
Dermoscopy
Palmoplantar dermatoses
Non-invasive diagnosis
Dermatology
Vascular patterns

ABSTRACT

Introduction: Dermoscopy is a non-invasive diagnostic tool that enhances visualization of subsurface skin structures not visible to the naked eye. It improves diagnostic accuracy in dermatology, particularly in palmoplantar dermatoses, where clinical features are often atypical due to unique anatomical characteristics. Dermoscopy helps identify vascular patterns, scaling, adnexal changes, and disease-specific features, thereby supporting a systematic diagnostic approach and reducing unnecessary biopsies. **Aim & Objective:** To evaluate various palmoplantar dermatoses using dermoscopy in a tertiary care center, to classify these conditions based on their dermoscopic features, and to provide an updated overview of the dermoscopic patterns seen in common palmoplantar dermatoses. **Materials & Methods:** This 18-month descriptive observational study was conducted in the Department of Dermatology, Venereology and Leprosy at F.H. Medical College, Agra. Patients with clinically diagnosed palmoplantar dermatoses were included after informed consent. Detailed history, clinical examination, and dermoscopic evaluation using a handheld dermatoscope were performed. Dermoscopic parameters such as vascular patterns, scaling, follicular changes, and specific diagnostic clues were assessed and correlated with clinical diagnoses. **Results:** The study included patients aged 3 to 73 years. Dermoscopy revealed distinct and reproducible patterns across various palmoplantar dermatoses, aiding differentiation of clinically similar conditions. It improved diagnostic confidence and reduced the need for invasive procedures while assisting in biopsy site selection and treatment monitoring. **Conclusion:** Dermoscopy is a valuable adjunct in the evaluation of palmoplantar dermatoses, improving diagnostic accuracy, guiding biopsy decisions, and monitoring therapeutic response when correlated with clinical findings.

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INTRODUCTION

Dermatological diagnosis primarily relies on visual examination. However, in several clinical situations, overlapping features or atypical presentations may create diagnostic uncertainty, thereby requiring additional supportive investigations. Diagnostic tools in dermatology are broadly classified into invasive methods, such as skin and scalp biopsies, semi-invasive procedures, including slit skin smear and trichogram analysis, & non invasive techniques such as potassium hydroxide (KOH) examination, nail clipping studies, hair density assessment, and dermoscopy.

Dermoscopy, also known as dermatoscopy, epiluminescence microscopy, incident light microscopy, or skin surface microscopy, is a non-invasive imaging modality performed using a handheld dermatoscope. This instrument consists of a light source and magnification (usually around 10×), enabling enhanced visualization of subsurface structures within the epidermis, dermoepidermal junction, and superficial dermis that are not visible to the naked eye [1].

Over the past decade, dermoscopy has become an essential component of routine dermatological practice, extending beyond pigmented lesions to include inflammatory dermatoses, palmoplantar disorders, infections, pigmentary conditions, and hair, scalp, and nail diseases. Its expanding application in non-oncological conditions has led to the concept of "inflammoscopy" [2]. Several studies have demonstrated that dermoscopy significantly improves diagnostic accuracy and clinical confidence. Currently, dermatoscopes are broadly categorized into non-polarized devices, which require direct contact with the skin, and polarized devices, which allow non-contact examination.

Despite its well-established role in tumor diagnosis with standardized criteria, dermoscopic evaluation of inflammatory dermatoses remains inconsistent, with variable and often subjective terminology, limiting reproducibility across studies [3,4].

To address this limitation, the International Dermoscopy Society proposed a consensus-based framework comprising five fundamental dermoscopic parameters with thirty-one subcomponents for standardized assessment in general dermatology [5]. These include vascular features describing type, morphology, and distribution of vessels; scaling characteristics focusing on color and arrangement of scales; follicular findings involving changes in follicular openings and structures; additional dermoscopic structures referring to non-vascular and non-scaling elements based on color and morphology; and diagnostic-specific clues that are strongly suggestive of particular diseases due to established dermoscopic pathological correlations.

Dermoscopy plays an important role in the diagnosis of skin lesions by supporting or refining clinical impressions, narrowing differential diagnoses, and occasionally refuting clinical suspicions. It also helps determine the need for biopsy or excision and allows for dermoscopy-guided biopsy to improve diagnostic yield. Furthermore, dermoscopic images can be shared digitally for consultation, teaching, teledermatology, and academic collaboration, making it a valuable tool in modern dermatological practice. It is also useful in monitoring treatment response and assessing procedural outcomes.

Clinical examination remains the cornerstone in the diagnosis of palmoplantar dermatoses, integrating multiple morphological

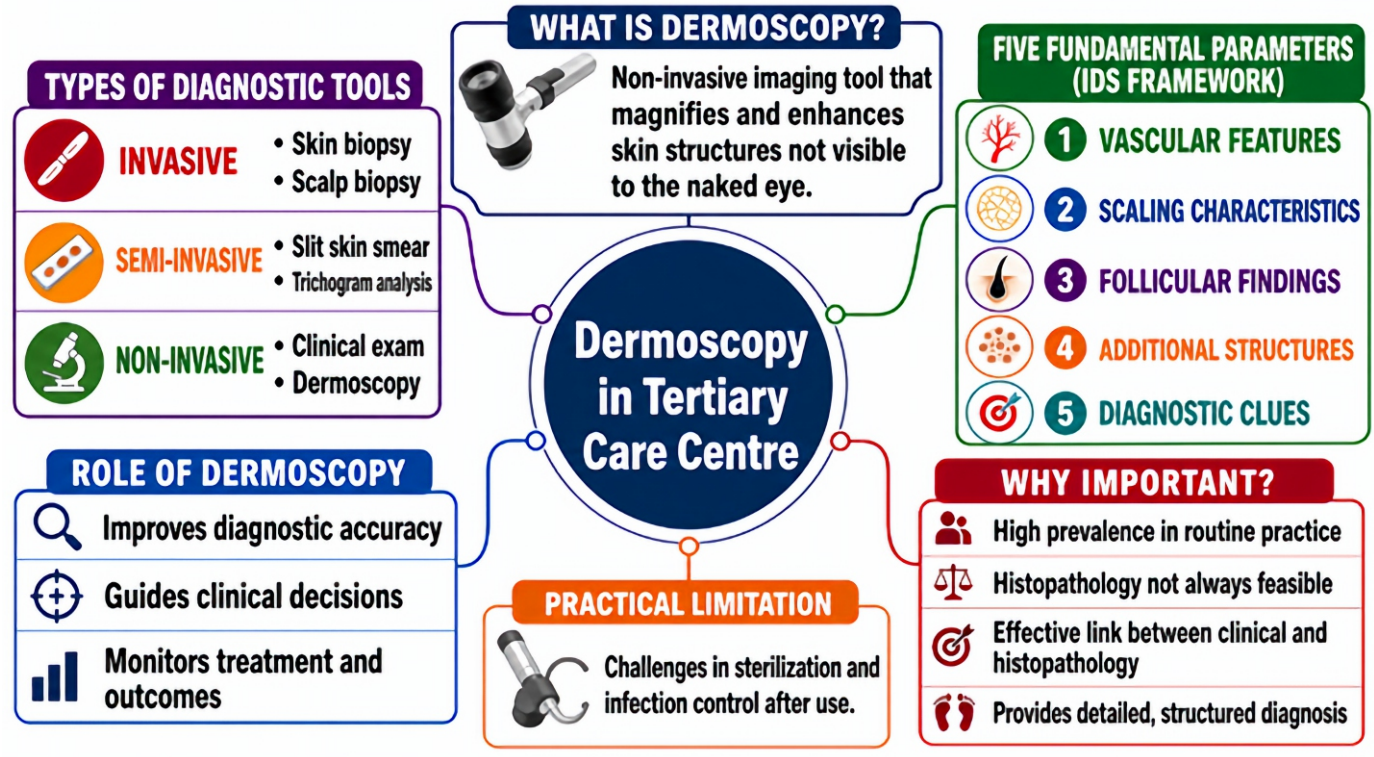

Figure 1: Overview of dermoscopy in tertiary care, highlighting its diagnostic role, IDS framework, and clinical importance.

features into a comprehensive assessment. Dermoscopy enhances this process by providing submacroscopic details, thereby converting diagnosis into a structured two-step approach that complements clinical evaluation [5]. It bridges the gap between clinical assessment and histopathology, improving diagnostic accuracy and confidence.

Given the high prevalence of palmoplantar dermatoses in routine dermatological practice, histopathological examination cannot be used as a first-line investigation in all cases and is reserved for selected difficult or atypical presentations. In such situations, dermoscopy serves as an effective intermediary between clinical evaluation and histopathological confirmation.

A practical limitation encountered in dermoscopic practice is the challenge of ensuring proper sterilization of the dermatoscope after use, which may raise concerns regarding infection control. **Figure 1** shows the overview of dermoscopy in tertiary care, highlighting diagnostic tools, IDS framework parameters, clinical importance, and its role in improving diagnostic accuracy and patient management.

Thus, this study is undertaken to evaluate the efficacy of dermoscopy in the diagnosis of palmoplantar dermatoses, highlighting its role in improving diagnostic accuracy, guiding clinical decisions, and reducing the need for invasive procedures.

MATERIALS & METHODS

This study was conducted as a descriptive observational study in all patients with palmoplantar disorders attending the outpatient Department of Dermatology, Venereology & Leprosy at F.H. Medical College, Agra, over a period of 18 months. The study included all clinically diagnosed cases of palmoplantar dermatoses who provided informed consent (or guardian consent in minors). Patients not willing to participate or who were non-cooperative were excluded. A detailed history, including age, sex, occupation, socioeconomic status, duration of illness, site of onset, associated symptoms, and relevant personal and family history, was recorded using a predesigned proforma. All patients underwent thorough clinical examination, including assessment of morphology and distribution of lesions, along with relevant systemic examination. Clinical photographs were taken under uniform lighting conditions. Dermoscopic evaluation was performed using a handheld DermLite DL5 dermoscope (10× magnification) with polarized light and UV illumination, assessing vascular morphology, scaling pattern, background coloration, follicular changes, and other specific dermoscopic clues. Investigations such as routine blood tests, fasting blood sugar, KOH mount, and skin biopsy were performed wherever necessary to support the diagnosis. Data were recorded systematically and later analyzed using Microsoft Excel; only descriptive statistics such as frequencies and percentages were used, as no inferential statistical analysis was applied due to the descriptive nature of the study.

RESULTS

Data was collected using Google Forms & analyzed in Microsoft Excel using descriptive statistics. Categorical variables were expressed as frequencies, percentages & no inferential tests were applied due to the descriptive study design. During the two-year study period (September 2023 to September 2025), 236 patients with clinically diagnosed palmoplantar dermatoses attending the Dermatology, Venereology & Leprosy OPD at F.H. Medical College, Agra, were included. The following results were obtained. **Table 1** analyses the age of patients, ranging from 3 years to 73 years. The maximum number of cases belonged to the 1–20 years age group (24.32%), followed by 31–40 years (23.42%), 21–30 years (21.62%), 41–50 years (17.56%), 51–60 years (9%), 61–70 years (3.15%), & 71–80 years (0.9%) in descending order of frequency. **Table 2** shows the sex-wise distribution of various palmoplantar dermatoses among the study population. A higher prevalence was observed in males (66.52%) compared to females (33.47%). Conditions such as atopic dermatitis and tinea infections were more common in males, while a few conditions showed relatively equal or female predominance. **Table 3** shows that out of 42 patients with psoriasis, 39 patients (92.9%) showed regularly distributed uniform dotted blood vessels, 38 patients (90.5%) showed dull red background, and 28 patients (66.7%) showed white scales. **Table 4** shows that out of 20 patients with eczema, focal dotted vessels were seen in 16 patients (80.0%), yellow clod sign was seen in 16 patients (80%), vessels with a white halo were seen in 14 patients (70%) and scales were seen in 14 patients (70%). **Table 5** out of 23 patients with lichen planus, 20 patients (87%) showed wickham's striae, 14 patients (60.9%) showed violet background, 7 patients (30.4%) showed blood vessels out of which; 4 patients showed dotted vessels (50%), 1 patient showed linear vessels (412.5%) & 2 patients (37.5%) showed globular vessels & 6 patients (26.1%) showed pigmented dots/globules. **Table 6** shows that out of 45 patients with atopic dermatitis, white scales were seen at 13.3%, yellow scales in 82.2%, Vascular irregularities 35.5%, & yellowish-orange crusts 75.6%. **Table 7** shows that in our study, out of 51 patients with tinea manuum & tinea pedis, white scales in Skin Crease were seen in 88.2%, white and yellow scales in 7.8%, Brown Dots or Pigment Net-work were seen in 19.6%, erythematous background 29.4%, & edge scaling in 37.3%. **Table 8** shows that in our study, out of 10 patients with Palmoplantar warts, red dots were seen in 50%, white & yellowish colour tone in 50%, disruption of dermatoglyphics in 100%, and papilliform surface in 80%. **Table 9** shows that in our study, out of 3 patients with secondary syphilis having palmoplantar lesions, biett's collarette were seen in 100%, orange yellow background in 33.3%, central darker or fading erythema in 66.7 %, absence of dotted/globular vessels seen in 100%. **Table 10** shows that in our study on palmoplantar corn, out of 16 patients, 100% demonstrated translucent central core & preservation of dermatoglyphics, & 62.5% showed a whitish annular ring.

Table 11 shows that in our study, out of 3 patients, 100% demonstrated Homogeneous yellow-white hyperkeratosis, 100% showed fissures, preserved dermatoglyphics, & 66.7% showed preserved skin pattern. **Table 12** shows that in our study, out of 5 patients 100% demonstrated Multiple small, well demarcated, round, & shallow pits,40% showed brownish hue due to dirt accumulation & 80% showed absence of vascular structures. **Table 13** shows that in our study, out of 5 patients 100% peeling edge sign, 80%demonstrated Collarette of Whitish, 80% Absence of Vascular Structures,80% Multiple Discrete or Confluent Peeling Foci,40% Central Erythematous Base, 60%. **Table 14** shows that in our study, out of 16 patients, 100% demonstrated Targetoid Pattern with Three Zones,100% Splash of Ink" Appearance,50% showed Lack of Scale or Keratotic Surface,50% Red to pink structureless areas, and 50% demonstrated Brown to black clods. **Table 15** shows that in our study, out of 16 patients 100% demonstrated Central Structureless Dusky or Gray-Brown Area,100% Peripheral Erythematous Halo or Rim,100% Sharp, Well-Circumscribed Borders. **Figure 2** shows erythematous scaly plaques of palmoplantar psoriasis distributed symmetrically over the palms. Dermoscopy demonstrates regular dotted vessels (red arrow), irregularly spaced rows of glomerular vessels (red arrow), and diffuse white scales (purple arrow) over a dull red background with diffuse blood vessels (red arrow). **Figure 3** shows hyperkeratotic scaly eczematous plaques with fissures symmetrically distributed over the plantar aspect of the feet. Dermoscopy of palmoplantar dermatitis reveals patchy yellow and white scales with dotted vessels on a light-red background. **Figure 4** shows violaceous scaly plaques of lichen planus over the instep and plantar areas of both feet. Dermoscopy reveals characteristics of Wickham's striae. **Figure 5** shows palmar syphilis presenting as coppery papules with Biett's collar on the palmar surfaces of both hands. Dermoscopy reveals a thin circular rim (Biett's ruff) surrounding erythematous lesions with a yellow-orange center. **Figure 6** shows keratolysis exfoliativa involving both hands, including the right hand. Dermoscopy reveals a collarette of whitish scales with the absence of vascular structures. **Figure 7** shows palmar corns on clinical examinations. Dermoscopy demonstrates a translucent central core with preserved dermatoglyphics and a whitish annular ring. **Figure 8** shows dermoscopic features of atopic dermatitis with white and yellow scales along with fissures and cracks. In pitted keratolysis, multiple small, well-demarcated, shallow pits are seen. **Figure 9** shows polarized dermoscopy with white scales accentuated in skin furrows and adjoining dermatoglyphics. With immersion fluid, dotted vessels are seen as being localized to the furrows.

Table 1: Age Distribution of Palmoplantar Dermatoses

Disease	1–20 yrs	21–30 yrs	31–40 yrs	41–50 yrs	51–60 yrs	61–70 yrs	71–80 yrs
Psoriasis	0 (0%)	2 (4.8%)	8 (10%)	13 (31%)	12 (28.6%)	5 (11.9%)	2 (4.8%)
Palmoplantar eczema	2 (10%)	8 (40%)	6 (30%)	3 (15%)	1 (5%)	0	0
Lichen planus	2 (8.7%)	10 (13.5%)	4 (17.4%)	4 (17.4%)	2 (8.7%)	1 (4.3%)	0
Atopic dermatitis	41 (91.1%)	4 (8.9%)	0	0	0	0	0
Tinea manuum/pedis	0	9 (28%)	11 (34.4%)	8 (25%)	3 (9.4%)	1 (3.1%)	0
Palmoplantar warts	0	2 (20%)	5 (50%)	2 (20%)	1 (10.1%)	0	0
Secondary syphilis	0	2	1	0	0	0	0
Palmoplantar corn	0	6 (66%)	7 (33.3%)	0	0	0	0
Keratoderma	3 (100%)	0	0	0	0	0	0
Pitted keratolysis	0	2 (40%)	2 (40%)	1 (20%)	0	0	0
Keratolysis exfoliativa	0	1 (20%)	3 (60%)	1 (20%)	0	0	0
Erythema multiforme	0	1 (20%)	4 (66.7%)	1 (20%)	0	0	0
Fixed drug eruption	0	2 (14.3%)	5 (28.6%)	2 (42.9%)	1 (14.3%)	0	0

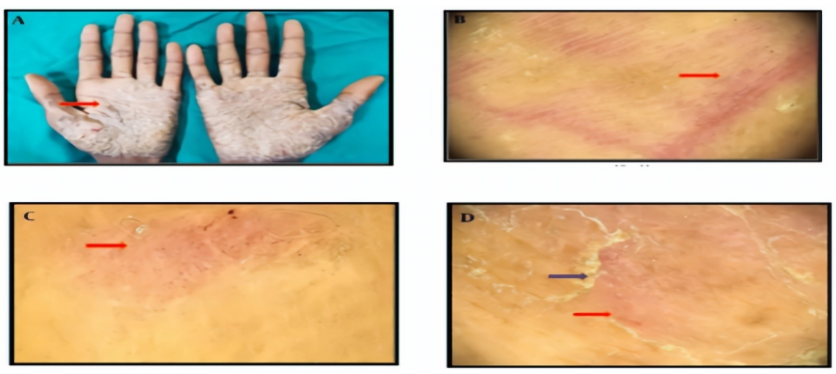

Figure 2: (A) erythematous scaly plaques of psoriasis distributed symmetrically over the palms. B, dermoscopy features of palmoplantar psoriasis, showing regular dotted vessels (the red arrow). **(C)** Dermoscopy findings showing irregularly spaced rows of glomerular vessels (the red arrow) **(D)** dermoscopy features of palmoplantar psoriasis, showing characteristic diffused white scales (the purple arrow) with a dull-red background, and diffuse blood vessels (red arrow).

Table 2: Sex-wise distribution of palmoplantar dermatoses

Disease	Male (n)	Male (%)	Female (n)	Female (%)
Psoriasis	28	68.7%	14	33.3%
Palmoplantar eczema	10	50%	10	50%
Lichen Planus	13	56.5%	10	43.5%
Atopic dermatitis	33	73.3%	12	26.7%
Tinea manuum / Tinea pedis	35	68.6%	16	31.4%
Palmoplantar warts	7	70%	3	30%
Secondary Syphilis	1	33.3%	2	66.7%
Palmoplantar corn	12	75%	4	25%
Keratoderma	2	66.7%	1	33.3%
Pitted keratolysis	3	60%	2	40%
Keratolysis exfoliativa	4	80%	1	20%
Erythema multiforme	4	66.7%	2	33.3%
Fixed drug eruption	5	71.4%	2	28.6%
TOTAL	**157**	**66.52%**	**79**	**33.47%**

Table 3: PSORIASIS

Psoriasis (n=42)	Frequency	Percent
Regular dotted vessels	39	92.9%
Dull red background	38	90.5%
White scales	28	66.7%

Table 4: ECZEMA

Eczema (n=20)	Frequency	Percent
Focal dotted vessels	16	80
Yellow clod sign	16	80
Vessels with white halo	14	70
Scales	14	70

Table 5: LICHEN PLANUS

Lichen plants (n=23)	Frequency	Percent
Wickham's striae	20	87
Violet background	14	60.9
Blood vessels	7	30.4
Dotted	4	50
Linear	1	12.5
Globular	3	37.5
Pigmented dots/globules	6	26.1

Table 6: ATOPIC DERMATITIS

Atopic dermatitis(n=45)	Frequency	Percent
White scales	6	13.3
Yellow scales	37	82.2
Fissures and Cracks	11	24.4
Yellow Crusts[serous exudate]	34	75.6
Vascular irregularities	16	35.6
Erythematous background	31	91.2
Yellowish -orange background	3	8.8

Table 7: Tinea Mannuum and Tinea Pedis

(n=51)	Frequency	Percent
White Scales in Skin Crease	45	88.2
Erythematous Background	15	29.4
Brown Dots or Pigment Network	10	19.6
Edge Scaling	19	37.3
[Scaling more prominent at the advancing margin of the lesion]		
White and yellow scales	4	7.8

Table 8: Palmoplantar Warts

(n=10)	Frequency	Percent
Red dots	5	50
Disruption of dermatoglyphics	10	100
Papilliform surface	8	80
Yellowish colour tone	5	50

Table 9: Secondary Syphilis

(n=3)	Frequency	Percent
Biett's collarette	3	100
Orange yellow background	1	33.3
Central darker or fading erythema	2	66.7
Absence of dotted/globular vessels	3	100

Table 10: Palmoplantar Corn

(n=16)	Frequency	Percent
Well-defined central translucent core	16	100
Whitish annular ring	10	62.5
Preservation of dermatoglyphics	16	100

Table 11: Palmoplantar Keratoderma

(n=3)	Frequency	Percent
Homogeneous yellow -white hyperkeratosis	3	100
Fissures	3	100
Preserved dermatoglyphics	3	100
Preserve vascular pattern	2	2

Table 12: Pitted Keratolysis

(n=5)	Frequency	Percent
Multiple small, well -demarcated, round, and shallow pits	5	100
Brownish hue due to dirt accumulation	2	40
Absence of vascular structures.	4	80

Table 13: Keratolysis Exfoliativa

(n=5)	Frequency	Percent
Collarette of Whitish scale	4	80
Peeling Edge Sign	5	100
Absence of Vascular Structures	4	80
Multiple Discrete or Confluent Peeling Foci	4	80
Central Erythematous Base	2	40
Central normal Base	3	60

Table 14: Erythema Multiforme

(n=6)	Frequency	Percent
Targetoid Pattern with Three Zones	6	100
Splash of Ink" Appearance	6	100
Lack of Scale or Keratotic Surface	3	50
Red to pink structureless areas	3	50
Brown to black clods	3	50

Table 15: Fixed Drug Eruption

(n=7)	Frequency	Percent
Central Structureless Dusky or Gray -Brown Area	7	100
Peripheral Erythematous Halo or Rim	7	100
Sharp, Well -Circumscribed Borders	7	100
Red to violaceous structureless zones	4	57.1
Brown to slate -gray clods and dots	3	42.9

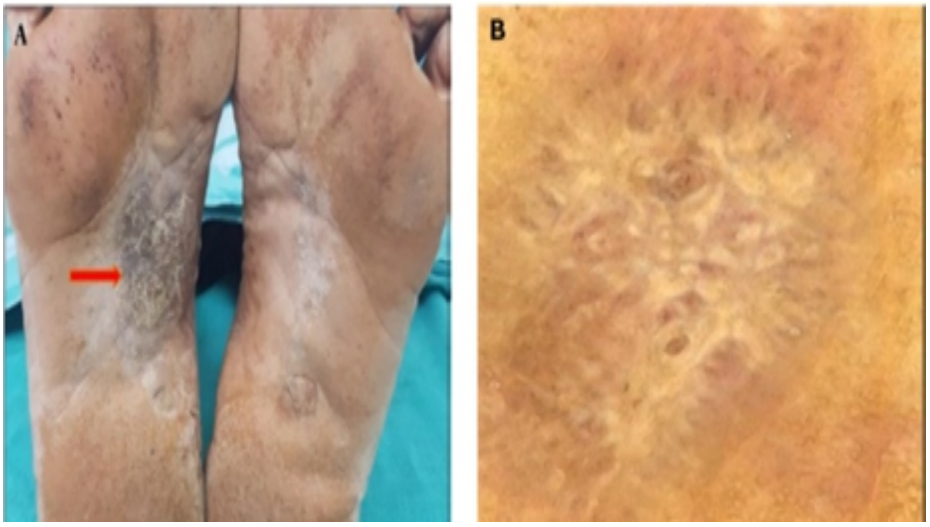

Figure 3: A. Clinical image showing violaceous scaly plaques of lichen planus distributed over the instep (the red arrow) and plantar area of both feet. **B.** Dermoscopy findings in lichen planus, showing Wickham's striae (black arrow).

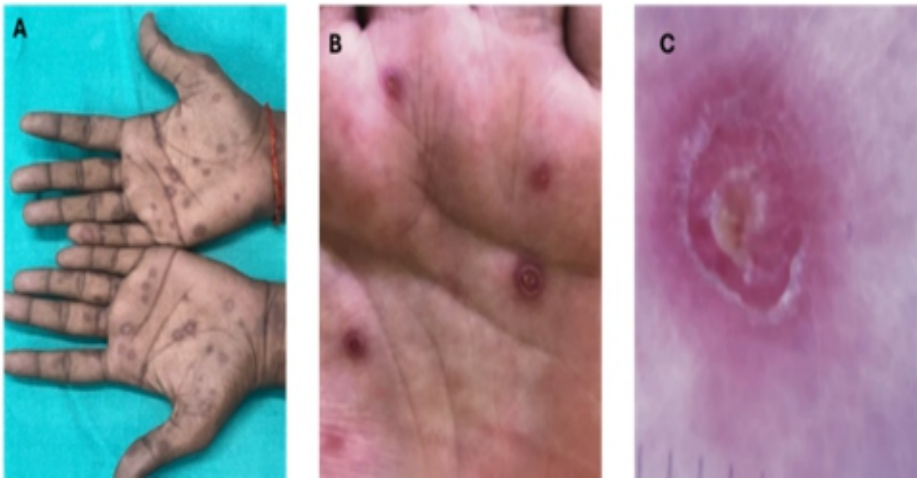

Figure 4: (A) Clinical image showing Syphilis of the palmar surfaces of both hands made of coppery papules surrounded by a Biett's collar. **(B)** Rounded coppery red papules surrounded by a Biett's collar on the palmar surface of the left hand in a syphilitic subject (**C)** Dermoscopic image of palmar syphilis showing a thin circular rim progressing outwards (called Biett's ruff) and surrounding an erythematous lesion with a yellow-orange center.

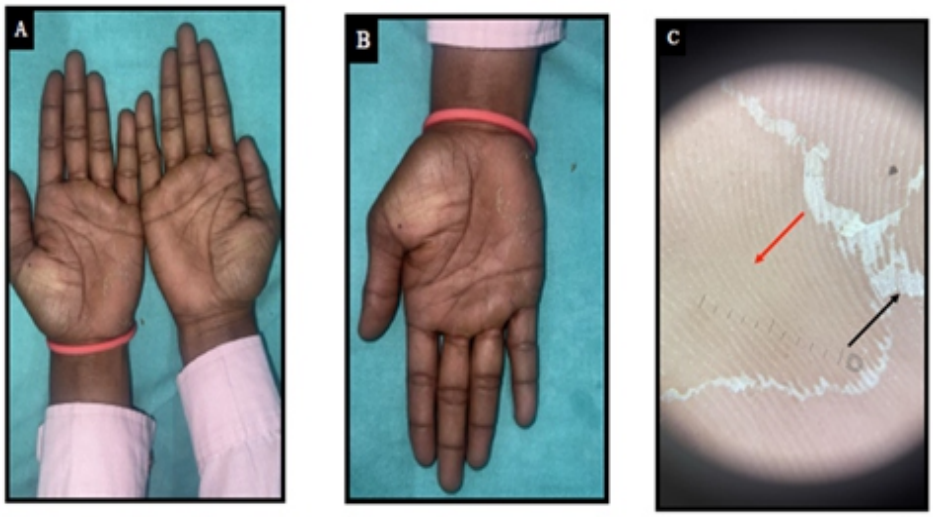

Figure 5: (A) keratolysis exfoliativa of both the hands. **(B)** keratolysis exfoliativa of right hand. **(C)** Dermoscopic image of keratolysis exfoliative showing Collarette of Whitish scales (black arrow), Absence of Vascular Structures (red arrow)

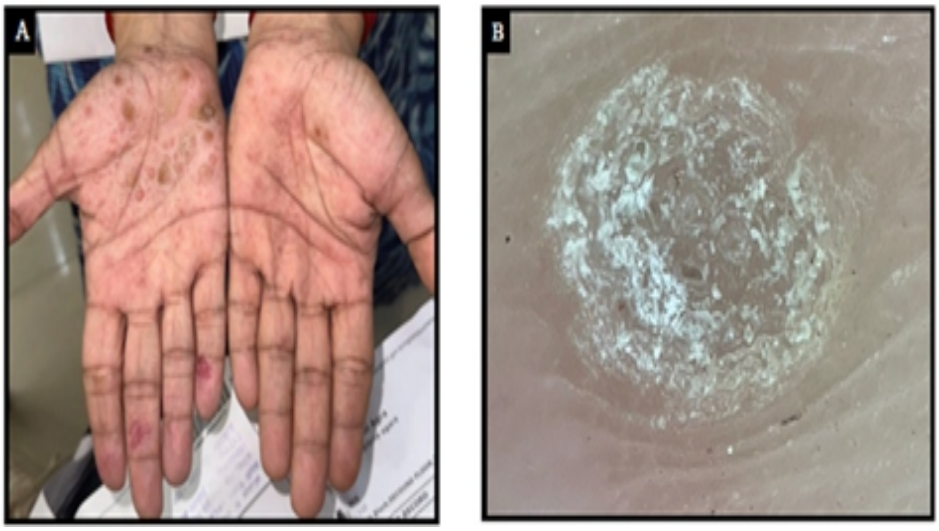

Figure 6: (A) Clinical image showing palmar corns. **(B)** Dermoscopic Image corn showing translucent central core and also preservation of dermatoglyphics and whitish annular ring

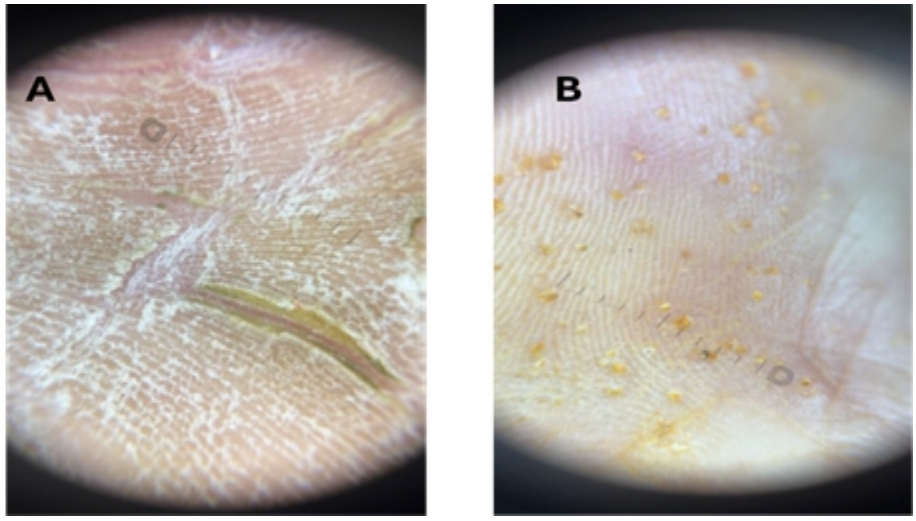

Figure 7: (A) Dermoscopic image of atopic dermatitis showing white scales (black arrow), yellow scales (green arrow), Fissures and Cracks (red arrow). **(B)** Dermoscopic image of pitted keratolysis showing multiple small, well-demarcated, round, and shallow pits (black arrow). .

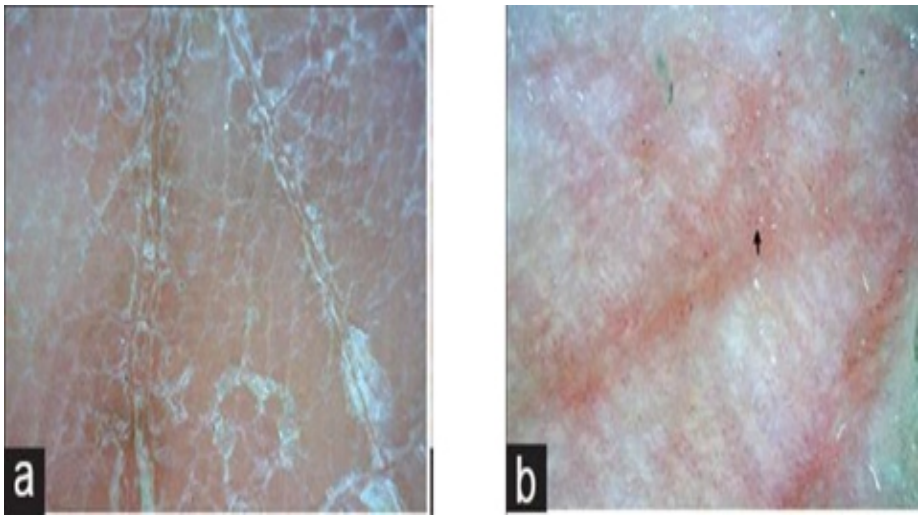

Figure 8: (**a)** Polarized dermoscopy showing white scales accentuated in the skin furrow and adjoining dermatoglyphics. (**b)** Polarized dermoscopy with immersion fluid showing the dotted vessels (black arrow) localized to the skin furrows.

DISCUSSION

In the present study, dermoscopic evaluation of palmoplantar dermatoses demonstrated a wide spectrum of characteristic patterns that significantly improved diagnostic accuracy and aided in clinical differentiation. The age distribution showed that patients ranged from 3 to 73 years, with the highest proportion belonging to the 1–20 years age group (22.41%), followed by 21–30 years (20.33%). This indicates that palmoplantar dermatoses commonly affect younger age groups in our setting, likely due to increased susceptibility to infections, atopic predisposition, and environmental exposure. A gradual decline in frequency with increasing age was observed, suggesting reduced incidence of inflammatory and infectious dermatoses in older populations.

Male predominance was observed in the present study (66.52%), with a male-to-female ratio of approximately 2:1. This may be attributed to higher occupational exposure, increased outdoor activities, and greater likelihood of seeking medical care for symptomatic lesions. Similar male predominance has been reported in studies evaluating inflammatory dermatoses and dermoscopic patterns in clinical practice [6].

Dermoscopy in psoriasis revealed regularly distributed uniform dotted vessels in 92.9% of cases, dull red background in 90.5%, and white scales in 66.7%. These findings correspond to the classical psoriatic vascular pattern resulting from dilated and elongated capillaries in dermal papillae. Comparable observations have been reported by Azim et al. and Lallas et al., who described dotted vessels and erythematous background as consistent dermoscopic hallmarks of psoriasis [7,8].

In eczema, focal dotted vessels were observed in 80% of cases, yellow clod sign in 80%, vessels with white halo in 70% & scales in 70%. These features reflect spongiotic epidermal changes and serocrust formation. The yellow clod sign corresponds to serum crusting, while vascular halos indicate surrounding inflammatory edema. Similar dermoscopic patterns have been documented in inflammatory eczema by Lallas et al., though with slightly lower frequencies compared to the present study [8].

Lichen planus cases demonstrated Wickham's striae in 87% of patients, violet background in 60.9%, and vascular structures in a minority of cases, including dotted vessels (50%), linear vessels (12.5%), and globular vessels (37.5%). Pigmented dots and globules were seen in 26.1%. Wickham's striae represent hypergranulosis and are considered a hallmark dermoscopic feature. These findings agree with studies by Gungor et al. and Lallas et al. [9,10]. In atopic dermatitis, yellow scales were the most frequent finding (82.2%), followed by yellowish-orange crusts in 75.6% and erythematous background in 91.2%. Vascular irregularities were noted in 35.5% of cases. These features correlate with chronic scratching, barrier dysfunction, & secondary infection. Errichetti et al. and Bhatt et al. have similarly described erythema, yellow crusting, and scaling as common dermoscopic features of atopic dermatitis [11,12].

In tinea manuum and tinea pedis, white scales in skin creases were seen in 88.2% of patients, edge scaling in 37.3%, erythematous background in 29.4%, and brown dots in 19.6%. Peripheral scaling represents active fungal growth at lesion margins. Similar findings have been reported in dermatophytosis by Errichetti et al. and Manoharan et al. [13,14].

Palmoplantar warts showed disruption of dermatoglyphics in 100% of cases, papilliform surface in 80%, and red dots in 50%. These red dots correspond to thrombosed capillaries, while interruption of dermatoglyphics is a key diagnostic feature. Comparable findings have been described in previous studies of verrucae by Gurel et al. [15].

Palmoplantar corns demonstrated a translucent central core in 100% of cases, preservation of dermatoglyphics, and whitish annular ring in 62.5%. These features help distinguish corn from warts, where dermatoglyphics are disrupted. Similar observations have been documented by Patil et al. [16].

In palmoplantar keratoderma, homogeneous yellow-white hyperkeratosis and fissures were seen in 100% of cases, with preserved dermatoglyphics in 66.7%. These features reflect diffuse epidermal thickening with minimal vascular involvement. Comparable descriptions are available in earlier dermoscopic evaluations of keratoderma [17].

Pitted keratolysis showed multiple well-demarcated shallow pits in 100% of cases, a brownish hue in 40%, and the absence of vascular structures in 80%. These pits result from bacterial keratin degradation. Similar dermoscopic findings have been reported in prior studies of bacterial keratolysis [18].

Keratolysis exfoliativa demonstrated peeling edge sign in 100% cases, white collarette in 80%, absence of vascular structures in 80%, and multiple peeling foci in 80%. These features are characteristic of superficial intraepidermal splitting and help distinguish it from eczema and fungal infections [19].

Erythema multiforme showed targetoid pattern in 100% of cases, “splash of ink” appearance in 100%, and red to pink structureless areas in 50%. These concentric zones correspond to the classic target lesions. Similar dermoscopic features have been described in earlier reports of erythema multiforme [20].

Fixed drug eruption demonstrated central dusky or gray-brown areas in 100% of cases, peripheral erythematous halo in 100%, and sharply demarcated borders in 100%. These features reflect dermatitis with pigmentary incontinence. Similar dermoscopic patterns have been reported in drug-induced lesions [21].

Overall, the dermoscopic findings in the present study showed good concordance with published literature, although minor variations in frequency were observed, possibly due to differences in disease stage, chronicity, treatment status, and skin type. Dermoscopy proved to be a highly effective non-invasive tool in distinguishing palmoplantar dermatoses with overlapping clinical features and in reducing diagnostic uncertainty.

CONCLUSION

This study highlights that inflammoscopy, the application of dermoscopy in inflammatory dermatoses, has a wide clinical utility as it assists in confirming or excluding clinical diagnoses, monitoring disease progression and treatment response, guiding decisions regarding biopsy or excision, selecting appropriate sites for dermoscopy-guided biopsy, and enabling digital sharing of images for consultation and academic purposes. With the development of standardized, objective, and reproducible dermoscopic criteria, the need for diagnostic biopsies can often be reduced. However, dermoscopic findings should always be interpreted in conjunction with clinical evaluation and, when necessary, histopathological correlation to ensure diagnostic accuracy. Overall, dermoscopy serves as a valuable adjunct to routine dermatological examination, enhancing traditional diagnostic approaches and improving clinical decision-making.

LIMITATIONS & FUTURE PERSPECTIVES

The study was limited by its single-centre design, relatively small sample size, and short duration, which may restrict generalizability. Future research could focus on multicenter studies with larger cohorts to validate findings, evaluate long-term outcomes, and explore innovative diagnostic and management strategies for appendicular perforation, improving patient prognosis and reducing complications.

CLINICAL SIGNIFICANCE

The clinical significance of this study lies in its potential to bridge the gap between research findings and practical healthcare applications. It emphasizes the importance of translating scientific observations into meaningful improvements in patient care, diagnosis, and treatment outcomes. By highlighting realworld relevance, the study contributes to evidence-based medical practice and supports informed clinical decision-making. Ultimately, the findings aim to enhance patient quality of life, optimize therapeutic strategies, and promote better disease management in clinical settings.

ABBREVIATIONS

AD: Atopic Dermatitis
LP: Lichen Planus
PPK: Palmoplantar Keratoderma
EM: Erythema Multiforme
FDE: Fixed Drug Eruption

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AUTHOR CONTRIBUTIONS

All authors significantly contributed to the study conception and design, data acquisition, or data analysis and interpretation. They participated in drafting the manuscript or critically revising it for important intellectual content, consented to its submission to the current journal, provided final approval for the version to be published, and accepted responsibility for all aspects of the work. Additionally, all authors meet the authorship criteriaoutlined by the International Committee of Medical Journal Editors (ICMJE) guidelines.

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CONFLICT OF INTEREST

Authors declared that there is no conflict of interest.

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All necessary consent & approval was obtained by authors.

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DATA AVAILABILITY

All data generated and analyzed are included within this research article. The datasets utilized and/or analyzed in this study can be obtained from the corresponding author upon a reasonable request.

USE OF ARTIFICIAL INTELLIGENCE (AI) & LARGE LANGUAGE MODEL (LLM)

The authors confirm that no AI & LLM tools were used in the writing or editing of the manuscript, and no images were altered or manipulated using AI & LLM.

AUTHOR'S NOTE

This article serves as an important educational tool for the scientific community, offering insights that may inspire future research directions. However, they should not be relied upon independently when making treatment decisions or developing public health policies.

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