



Case Report

Psoriasis Under the Lens: Dermoscopy Findings from a Case Series.

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ABSTRACT

Background: Psoriasis is a chronic immune-mediated dermatosis characterized by erythematous plaques with silvery scales. Dermoscopy provides enhanced visualization of vascular and epidermal structures, improving diagnostic accuracy. **Objective:** To describe dermoscopy patterns across different clinical variants of psoriasis and evaluate their diagnostic significance.

Methods: A case series of five patients with clinically diagnosed psoriasis was analysed. Dermoscopic evaluation was performed using the Illuco IDS-1100 dermoscope and findings were assessed for vascular and scaling patterns.

Results: Key dermoscopy features included:

- Uniform red dotted vessels in all cases
- White scaling with variable distribution and intensity
- Yellow-brown globules in palmoplantar psoriasis
- Homogeneous erythema in inverse psoriasis

Conclusion: Dermoscopy is a valuable adjunct for diagnosing psoriasis, particularly in atypical presentations, by revealing distinct vascular and scaling patterns that support clinical assessment and aid differential diagnosis.

Keywords: Psoriasis, Dermoscopy, Vascular Patterns, Scaling.

INTRODUCTION

Psoriasis is a chronic immune-mediated inflammatory skin disorder affecting approximately 2–3% of the global population, with significant impact on quality of life.¹ It is clinically characterized by erythematous plaques with overlying silvery-white scales and may be associated with pruritus, nail dystrophy, and joint involvement in psoriatic arthritis.² Although clinical diagnosis is often straightforward, atypical presentations can mimic other papulosquamous disorders, warranting the use of adjunctive diagnostic tools.³

Dermoscopy, a non-invasive imaging technique, has gained widespread application in the evaluation of inflammatory dermatoses, including psoriasis.⁴ It provides magnified visualization of microvascular and epidermal structures, allowing identification of characteristic morphological patterns not appreciable by the naked eye.⁵ The hallmark dermoscopic feature of psoriasis is the presence of regularly distributed red dotted vessels on a light erythematous background, corresponding histologically to dilated capillaries within elongated dermal papillae.⁶ Additional features, such as diffuse white scaling and yellow-brown globules—particularly in palmoplantar variants—contribute to diagnostic precision and aid in differentiating psoriasis from conditions such as eczema or pityriasis rosea.^{7,8}

This case series describes dermoscopy findings across five patients with different variants of psoriasis, two patients of chronic plaque psoriasis, one patient of erythrodermic psoriasis, one of scalp psoriasis, one of palmoplantar psoriasis, underscoring its diagnostic utility and potential role in enhancing clinical assessment and monitoring disease progression.

CASES DESCRIPTION

This case series was conducted in the Department of Dermatology, of a tertiary care hospital. Five patients with clinically diagnosed psoriasis were enrolled after obtaining informed consent and approval from the Institutional Ethics Committee (IEC).

Dermoscopy Technique:

All patients underwent dermoscopic evaluation using a polarized handheld dermatoscope (ILLUCO IDS-1100). High-resolution images were captured and analysed for vascular patterns, scaling characteristics, and other morphological features. Observations were compared with established dermoscopic criteria for psoriasis and its differential diagnoses, such as eczema, pityriasis rosea, and lichen planus.



CASE 1

A 35-year-old male presented with well-demarcated erythematous plaques localized over the elbows and knees, suggestive of chronic plaque psoriasis (Figure A & B). The lesions had been present for the past three years with a gradual increase in size and number. The patient reported mild pruritus, which worsened during the winter season. He had intermittently used over-the-counter topical corticosteroids but denied any family history of psoriasis. On systemic screening, no evidence of nail, scalp, or joint involvement was noted.

Dermoscopic examination revealed uniformly distributed red dotted vessels over a light erythematous background, accompanied by diffuse white scaling across the lesion surface. The absence of yellow crusts or serocrusts helped differentiate the condition from eczema. Based on these findings, a diagnosis of chronic plaque psoriasis was established. The patient was initiated on oral methotrexate 7.5 mg per week, clobetasol propionate 0.05% ointment along with emollients, and partial resolution was observed at the 4-week follow-up.



Fig A: - Clinical image showing hyperpigmented well demarcated plaques with silvery white scales over elbows.
Fig B: -Dermoscopic image showing red dotted vessels and diffuse bright white scales

CASE 2-An 8-year-old female, previously diagnosed with psoriasis, presented with new scaly lesions on the scalp (Figure C & D). The lesions had been present for one month and were initially misdiagnosed as seborrheic dermatitis. The mother reported noticing thick scaling over the crown, without associated pruritus or burning. The child had been treated with

ketoconazole shampoo, but no improvement was observed. On examination, dermoscopy revealed regularly distributed red dotted vessels over a diffuse pinkish background, along with thick, adherent white scales covering the psoriatic plaques. There was no evidence of perifollicular scaling or broken hairs, and potassium hydroxide (KOH) preparation was negative, thereby ruling out tinea capitis. Based on these clinical and dermoscopic findings, a diagnosis of scalp psoriasis was confirmed. The patient was prescribed betamethasone lotion and tar shampoo, with significant improvement noted within three weeks.

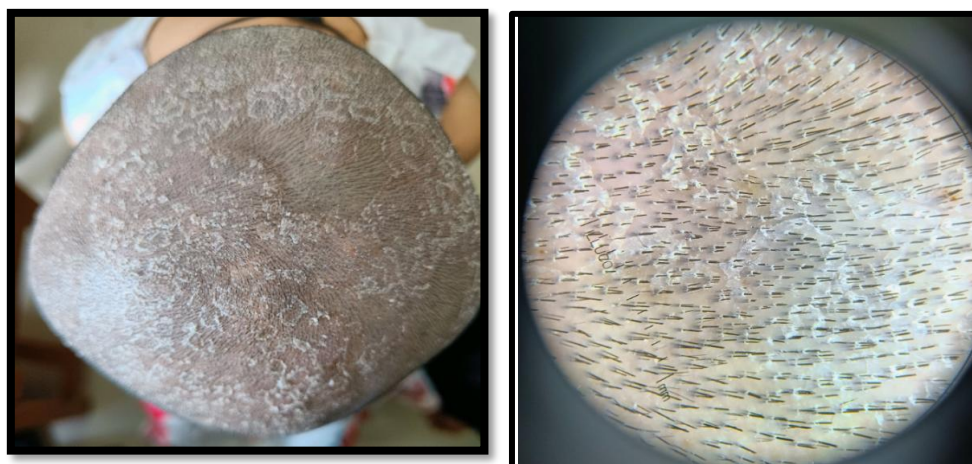


Fig C:- Clinical image of scalp psoriasis
Fig D:- Dermoscopic image of scalp psoriasis

CASE 3

A 42-year-old male presented with well-defined psoriatic plaques involving the lower back and lower limbs (Figure E, F & G). The lesions had been gradually increasing in size over the past six months. The patient reported a positive family history of psoriasis. On dermoscopic evaluation, diffuse white scaling was observed across the lesion surfaces, along with bright red dots and globules arranged in a characteristic “red globular pattern.” There was no evidence of a pigment network or atypical vascular structures, helping to distinguish the condition from lichenoid or pigmented dermatoses. Nail and joint examinations were unremarkable, with no pitting, dactylitis, or joint swelling noted.



Fig E:- Clinical image showing large erythematous plaques with white scales over back
Fig F:- Clinical image showing well defined erythematous plaques with silvery white scales over legs
Fig G:- Dermoscopic image of chronic plaque psoriasis.

CASE 4

A 50-year-old female presented with hyperkeratotic, scaly lesions localized to the palms and soles (Figure H, J & G). The lesions had been present for approximately 1.5 years, with episodic flare-ups. During exacerbations, the patient experienced painful fissuring, which significantly interfered with daily activities. She had previously been treated with urea-based creams and clobetasol ointment, with only partial benefit. Dermoscopic examination revealed regularly distributed red dots on a light erythematous background, along with prominent, compact white scales. A distinctive “strawberry pattern,” characterized by red dots surrounded by yellowish structureless areas, was noted—findings typical of palmoplantar psoriasis. Systemic evaluation showed no joint pain, and fungal infection was excluded with a negative KOH test. The patient was prescribed high-potency topical corticosteroids under occlusion along with keratolytics, and significant clinical improvement was observed after four weeks of therapy.



Fig H:- Clinical image showing thick hyperkeratotic plaques over palms

Fig I :- Clinical image showing thick hyperkeratotic plaques over soles

Fig J:- Dermoscopic image of palmoplantar psoriasis

Fig K:- Dermoscopic image of palmoplantar psoriasis

CASE 5

An 18-year-old male with a prior history of chronic plaque psoriasis presented with widespread erythema and scaling of two weeks' duration, consistent with erythrodermic psoriasis (Figure L, M & N). The condition developed following abrupt cessation of long-term corticosteroid therapy. The patient reported systemic symptoms, including generalized malaise, warmth, chills, and exfoliation. On dermoscopic examination, extensive red dots and globules were observed diffusely across erythematous areas, with a more intense background erythema compared to localized plaque psoriasis. Scaling was less prominent, likely due to exfoliative changes associated with erythroderma. Laboratory investigations revealed leukocytosis with elevated ESR, along with mildly decreased serum albumin. The patient was hospitalized and initiated on methotrexate 15 mg/week in addition to supportive care, resulting in gradual clinical improvement.



Fig L:- Clinical image of erythrodermic psoriasis showing multiple erythematous plaques with white scales over arms and trunk

Fig M:- Dermoscopic image of erythrodermic psoriasis

Fig N:- Clinical image showing diffuse erythema in a patient of erythrodermic psoriasis

DISCUSSION

Dermoscopy has emerged as a valuable adjunctive tool in the diagnosis of psoriasis, offering non-invasive visualization of characteristic vascular and epidermal changes. In this case series, key dermoscopic features included uniformly distributed red dots or globules and diffuse white scaling, consistent with established literature.⁹⁻¹¹ These patterns reflect the underlying histopathological changes of dilated capillary loops within elongated dermal papillae and parakeratotic scaling of the stratum corneum.¹²

Vascular Structures

The hallmark dermoscopic finding in psoriasis is the presence of red dotted vessels arranged in a regular pattern across the lesion surface.⁹ These correspond histologically to dilated, tortuous capillaries in the dermal papillae.¹³ In palmoplantar psoriasis, glomerular vessels may also be observed due to hyperkeratosis and localized inflammatory changes.¹⁴

Scaling Patterns

White scaling was consistently observed, with variations in thickness across clinical types. Fine scaling is more typical of guttate psoriasis, while thick, adherent scales are characteristic of scalp psoriasis.¹⁵ Conversely, inverse psoriasis often lacks visible scaling due to the moist nature of intertriginous areas.¹⁶

Specific Dermoscopic Patterns

Unique dermoscopic subpatterns, such as the “red globular pattern” and “strawberry pattern,” provide additional diagnostic clues, particularly in palmoplantar variants.¹⁴ Yellow-brown globules may suggest pustular transformation, while absence of perifollicular involvement aids in distinguishing scalp psoriasis from tinea capitis.¹⁷

Comparison with Other Scaly Dermatoses

Differentiating psoriasis from other papulosquamous disorders remains crucial in clinical practice. Dermoscopic comparisons are summarized in Table 1.

Condition	Vascular Pattern	Scaling Characteristics	Other Key Features
Psoriasis	Red dots, uniform	White, diffuse or patchy	Yellow-brown globules (palmoplantar)
Eczema	Polymorphic vessels	Yellowish crusts	Serous exudation
Pityriasis rosea	Sparse red dots	Peripheral collarette scaling	Herald patch
Tinea capitis	Perifollicular vessels	White scaling, broken hairs	Fungal elements on KOH

These comparative findings emphasize the high diagnostic value of dermoscopy in distinguishing psoriasis from other scaly dermatoses, particularly in clinically ambiguous cases.

CONCLUSION

This case series underscores the consistent dermoscopic features of psoriasis, including uniformly distributed red dotted vessels, diffuse white scaling, and specific patterns such as the red globular and strawberry patterns. These findings reinforce the role of dermoscopy as a valuable adjunct to clinical evaluation, particularly in differentiating psoriasis from other papulosquamous dermatoses. Future studies with larger cohorts are warranted to validate these observations and further explore the utility of dermoscopy in disease monitoring and assessment of therapeutic response.

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