CASE REPORT

Blaschkoid lichen planus in dark phototype: Dermoscopic diagnosis and follow-up

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ABSTRACT

Blaschkoid lichen planus (BLP) is a rare variant of lichen planus, accounting for less than 1% of cases, characterized by lesions distributed along the lines of Blaschko. This variant poses diagnostic challenges, particularly in patients with darker phototypes (IV–VI), in whom hyperpigmentation may obscure classic inflammatory findings. Early recognition is clinically relevant, as it helps prevent misdiagnosis and allows appropriate therapeutic management.

Dermoscopy is a valuable diagnostic tool that enables visualization of Wickham striae, a characteristic feature of this condition. We present the case of an adolescent patient with a dark phototype who showed a favorable response to treatment with topical corticosteroids. Dermoscopy was used for both diagnosis and follow-up. Dermoscopic examination played a fundamental role in early diagnosis and monitoring, demonstrating progressive resolution of inflammation and development of residual hyperpigmentation after treatment with high-potency topical corticosteroids.

This case highlights the diagnostic and follow-up utility of dermoscopy in BLP among patients with darker phototypes, emphasizing its clinical value in cases with less characteristic presentations.

INTRODUCTION

Lichen planus (LP) is a chronic inflammatory disease affecting the skin and mucous membranes, with an incompletely understood etiology and multiple clinical variants. Blaschkoid lichen planus (BLP) is a rare presentation affecting approximately 0.24%–0.62% of patients with LP and is characterized by lesions distributed along the lines of Blaschko.[1,2]

The diagnosis of BLP may be challenging, particularly in patients with darker phototypes, in whom hyperpigmentation may predominate and mask other inflammatory signs.[3] In this context, dermoscopy emerges as a key diagnostic tool, allowing visualization of characteristic findings such as Wickham striae, which may guide the clinical diagnosis.[2]

Despite diagnostic advances, the literature regarding BLP in patients with darker phototypes remains limited, restricting understanding of its clinical and dermoscopic particularities. This case provides an additional perspective by describing the clinical, dermoscopic, and histopathological findings in an adolescent patient with a dark phototype, highlighting the relevance of early diagnosis and dermoscopic follow-up.

CASE REPORT

A 17-year-old male patient, Fitzpatrick phototype V, with no relevant past medical history, presented with a one-month history of pruritic dermatosis affecting the left thigh. The patient denied recent medication use or exposure to potential triggering factors. Physical examination revealed gray-brown hyperkeratotic papules coalescing into linear plaques distributed along the lines of Blaschko (Figure 1). Dermoscopy demonstrated Wickham striae over a hyperpigmented background, associated with scattered fine whitish scales (Figure 2).

Based on the clinical and dermoscopic findings, Blaschkoid lichen planus and blaschkitis were considered in the differential diagnosis. A 4 × 4 mm punch biopsy was performed. Histopathological examination revealed hyperkeratosis, hypergranulosis, and irregular acanthosis with saw-tooth rete ridges; vacuolar degeneration of the basal layer with necrotic keratinocytes (Civatte bodies); and a band-like inflammatory infiltrate in the superficial dermis partially obscuring the dermoepidermal junction, composed of lymphocytes, histiocytes, and melanophages, confirming the diagnosis of lichen planus (Figure 3).

Treatment was initiated with clobetasol propionate 0.05% ointment applied once daily for three weeks, followed by a tapering regimen consisting of application on alternate days for two weeks and subsequently twice weekly for an additional three weeks, aiming to minimize adverse effects. Clinical and symptomatic improvement was observed at the two-month follow-up (Figure 4). Dermoscopy demonstrated a reduction in Wickham striae, which were replaced by areas of residual hyperpigmentation (Figure 5).



Figure 1. Clinical image showing gray-brown hyperkeratotic papules coalescing into linear plaques distributed along the lines of Blaschko.



Figure 2. Dermoscopic image showing Wickham striae (red arrow) over a hyperpigmented background (yellow arrow), scattered fine whitish scales, black dots, and focal pinkish areas.

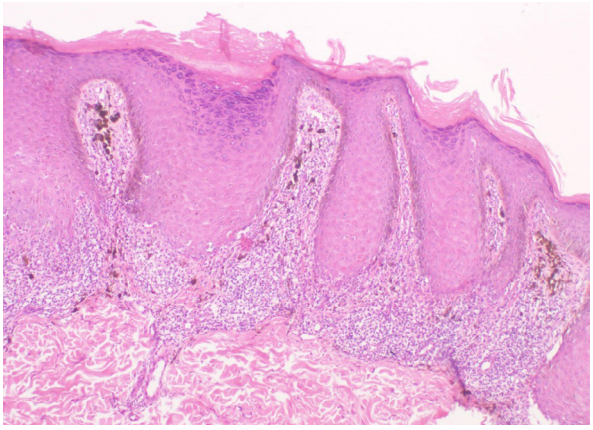


Figure 3. Histopathological examination showing hyperkeratosis, hypergranulosis, irregular saw-tooth rete ridges, Civatte bodies, and a band-like inflammatory infiltrate composed of lymphocytes, histiocytes, and melanophages (hematoxylin and eosin, 20×).



Figure 4. Clinical image after two months of treatment with clobetasol propionate 0.05% ointment showing residual hyperpigmentation following a linear distribution.

DISCUSSION

Lichen planus (LP) is a chronic inflammatory mucocutaneous disease of incompletely understood etiology. Immunologically mediated mechanisms are believed to play a fundamental role, particularly through a cytotoxic response directed against altered basal keratinocytes.[1]

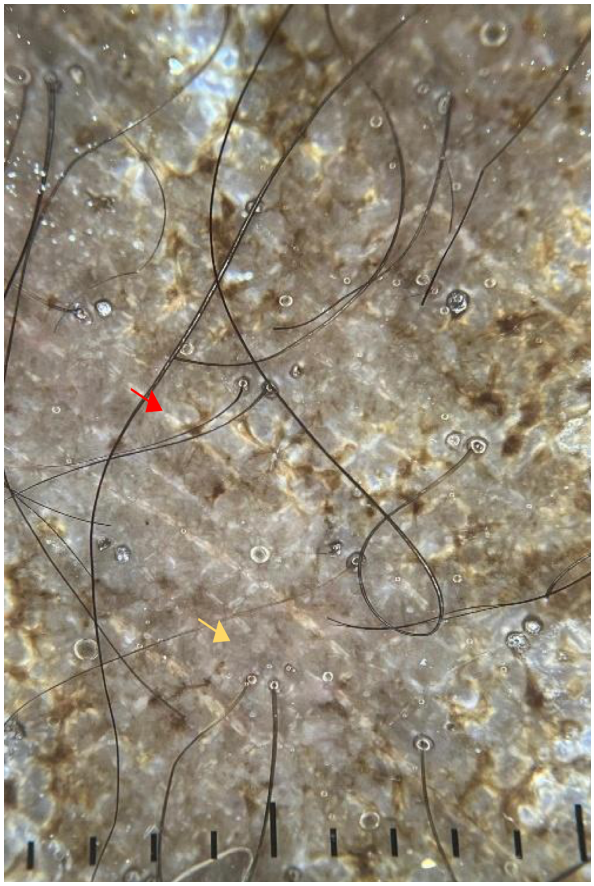


Figure 5. Dermoscopic image after two months of treatment showing decreased Wickham striae (red arrow) over a hyperpigmented background (yellow arrow).

Among the cutaneous variants, Blaschkoid lichen planus (BLP) is an uncommon presentation, representing only 0.24–0.62% of all cases of lichen planus.[1,2,4] It occurs more frequently in children and adolescents.[5] BLP is characterized by lesions distributed along the lines of Blaschko—patterns that are invisible under normal conditions but represent the migration and proliferation of cellular clones during embryonic development.[2] It has been proposed that BLP arises from postzygotic mosaicism, in which certain keratinocyte clones exhibit increased susceptibility to developing lichenoid changes after exposure to a triggering stimulus.[6–8]

The diagnosis of BLP can be challenging, particularly in patients with darker phototypes (IV–VI). In these cases, lesions may predominantly exhibit post-inflammatory hyperpigmentation rather than classic inflammatory signs such as erythema or the violaceous

hue typically observed in LP in lighter phototypes. This atypical clinical presentation may complicate the differential diagnosis with other linear dermatoses, such as lichen striatus, incontinentia pigmenti, or linear forms of lichen planus pigmentosus.[3,9]

In this case, blaschkitis was considered among the differential diagnoses. Blaschkitis is an acquired dermatosis that also follows the lines of Blaschko but differs histopathologically from BLP. Blaschkitis is characterized by spongiotic dermatitis without a band-like lichenoid infiltrate, whereas BLP demonstrates classic lichenoid changes, including basal vacuolar degeneration, Civatte bodies, and a band-like lymphocytic infiltrate. In the present case, these findings allowed exclusion of blaschkitis and confirmation of Blaschkoid lichen planus.[10] Consistent with previous reports, similar cases describing linear hyperpigmented lesions in young patients with Blaschkoid distribution have been documented.[6,9] However, most published cases involve lighter or intermediate phototypes. Therefore, this report provides clinically relevant information regarding the clinical and dermoscopic manifestations of BLP in a darker phototype, in which hyperpigmentation may obscure classic inflammatory findings.

Although histopathological examination remains the gold standard for diagnosis, dermoscopy has become a key diagnostic tool in inflammatory diseases and is particularly useful in narrowing differential diagnoses. In LP, the most characteristic dermoscopic finding is Wickham striae—fine whitish lines forming a reticular pattern over the lesions. In darker phototypes, these may be less evident, but their identification is crucial for guiding the diagnosis. Additionally, dermoscopy allows recognition of other complementary signs, such as brown dots, dotted vessels, and whitish scales, which may further support the diagnosis.[11–13]

In this case, the dermoscopically observed Wickham striae correlated with the hypergranulosis seen on histopathology, while the background hyperpigmentation corresponded to the presence of dermal melanophages. This clinicopathological correlation reinforces the value of dermoscopy in distinguishing active phases (with well-defined striae) from resolving phases (with predominance of residual pigmentation). These findings are consistent with the literature, which has demonstrated that dermoscopic patterns vary according to the inflammatory activity of LP.[13]

High-potency topical corticosteroids constitute first-line treatment in the management of BLP, as successfully implemented in this case.[1,9,14] Their anti-inflammatory action helps control disease activity and prevent sequelae. Additional therapies for refractory cases include oral glucocorticoids, phototherapy, Janus kinase (JAK) inhibitors, among other alternatives.[2,15,16] Treatment selection should be individualized, taking into account the extent, severity, location, and previous response of the patient.

This case highlights the importance of considering BLP in the differential diagnosis of linear dermatoses, particularly in darker phototypes where clinical manifestations may be misleading. It also underscores the essential role of dermoscopy not only in diagnosis but also in therapeutic follow-up.

CONCLUSION

Blaschkoid lichen planus (BLP) is a rare variant of lichen planus that poses a diagnostic challenge, particularly in patients with darker phototypes due to the predominance of post-inflammatory hyperpigmentation, which may mask typical inflammatory signs. This case provides additional evidence regarding the usefulness of dermoscopy as a complementary tool for the diagnosis and follow-up of BLP in darker phototypes, allowing correlation between dermoscopic patterns and histological disease activity. It also reinforces the importance of including BLP in the differential diagnosis of linear dermatoses in darker phototypes and highlights the practical value of dermoscopy for dermatologists, not only in early detection but also in assessing therapeutic response.

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