# Photolichenoid Dermatitis: A Presenting Sign of Human Immunodeficiency Virus

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PRACTICE **POINTS**

- There are few reports in the literature of human immunodeficiency virus (HIV) presenting as a photolichenoid eruption.
- We report the case of a 62-year-old African man who presented with a new-onset photodistributed eruption and was subsequently diagnosed with HIV.
- This case supports testing for HIV in patients with a similar clinical presentation.

Photolichenoid dermatitis is an uncommon eruptive dermatitis that often occurs in association with a photosensitizing drug. Photodermatitis, in general, is an uncommon clinical manifestation of human immunodeficiency virus (HIV), most often affecting patients of African and Native American descent. Photolichenoid dermatitis has infrequently been reported in patients with HIV who have not been exposed to a photosensitizing drug. We report a case of an African patient with a photodistributed depigmenting eruption without exposure to a photosensitizing drug. Histologic examination revealed a patchy perivascular and bandlike lymphocytic infiltrate with melanophages, interface changes, and dyskeratotic keratinocytes, consistent with photolichenoid dermatitis. Laboratory examination was significant for a positive HIV-2 antibody. Photolichenoid dermatitis may be a presenting sign of HIV infection and may not necessarily be associated with exposure to a photosensitizing drug. Testing for HIV should be done in patients who present with photodistributed depigmenting eruptions, even in the absence of exposure to a photosensitizing drug, and particularly in patients of African and Native American descent.

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Photolichenoid dermatitis is an uncommon eruptive dermatitis of variable clinical presentation. It has a histopathologic pattern of lichenoid inflammation and is best characterized as a photoallergic reaction.[1] Photolichenoid dermatitis was first described in 1954 in association with the use of quinidine in the treatment of malaria.[2] Subsequently, it has been associated with various medications, including trimethoprim-sulfamethoxazole, azithromycin, and nonsteroidal anti-inflammatory drugs.[1,2] Photolichenoid dermatitis has been documented in patients with human immunodeficiency virus (HIV) with variable clinical presentations. Photolichenoid dermatitis in patients with HIV has been described both with and without an associated photosensitizing systemic agent, suggesting that HIV infection is an independent risk factor for the development of this eruption in patients with HIV.[3-6]

## Case Report

A 62-year-old African man presented for evaluation of asymptomatic hypopigmented and depigmented patches in a photodistributed pattern. The eruption began the preceding summer when he noted a pink patch on the right side of the forehead. It progressed over 2 months to involve the face, ears, neck, and arms. His medical history was negative. The only medication he was taking was hydroxychloroquine, which was prescribed by another dermatologist when the patient first developed the eruption. The patient was unsure of the indication for the medication and admitted to poor compliance. A review of systems was negative. There was no personal or

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family history of autoimmune disease. A detailed sexual history and illicit drug history were not obtained. Physical examination revealed hypopigmented and depigmented patches, some with overlying erythema and collarettes of fine scale. The patches were photodistributed on the face, conchal bowls, neck, dorsal aspect of the hands, and extensor forearms (Figures 1 and 2). Macules of repigmentation were noted within some of the patches. There also were large hyperpigmented patches with peripheral hypopigmentation on the legs.

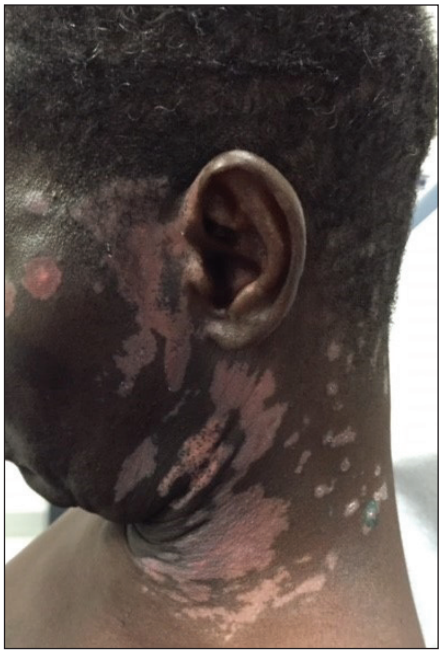

**FIGURE 1.** Photolichenoid dermatitis. Face and neck with photodistributed hypopigmented and depigmented patches with collarettes of fine scale.

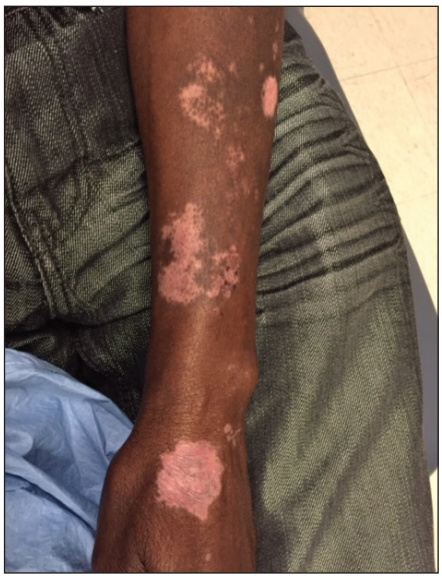

**FIGURE 2.** Photolichenoid dermatitis. Arm with hypopigmented, mildly erythematous patches and overlying macules of repigmentation.

A punch biopsy taken from the left posterior neck revealed a patchy bandlike lymphocytic infiltrate in the superficial dermis with lymphocytes present at the dermoepidermal junction and scattered dyskeratotic keratinocytes extending into the mid spinous layer (Figure 3). Histopathologic findings were consistent with photolichenoid dermatitis.

Laboratory workup revealed a normal complete blood cell count and complete metabolic panel. Other negative results included antinuclear antibody, anti-Ro antibody, anti-La antibody, QuantiFERON-TB Gold, syphilis IgG antibody, and hepatitis B surface antigen and antibody. Positive results included hepatitis B antibody, hepatitis C antibody, and HIV-2 antibody. The patient denied overt symptoms suggestive of an immunocompromised status, including fever, chills, weight loss, or diarrhea. Initial treatment included mid-potency topical steroids with continued progression of the eruption. Following histopathologic and laboratory results indicating photolichenoid eruption, treatment with hydroxychloroquine 200 mg twice daily was resumed. The patient was counseled on the importance of sun protection and was referred to an infectious disease clinic for treatment of HIV. He was ultimately lost to follow-up before further laboratory workup was obtained. Therefore, his $CD4^+$ T-cell count and viral load were not obtained.

## Comment

*Prevalence of Photosensitive Eruptions*—Photodermatitis is an uncommon clinical manifestation of HIV occurring in approximately 5% of patients who are HIV positive.[3] Photosensitive eruptions previously described in association with HIV include porphyria cutanea tarda,

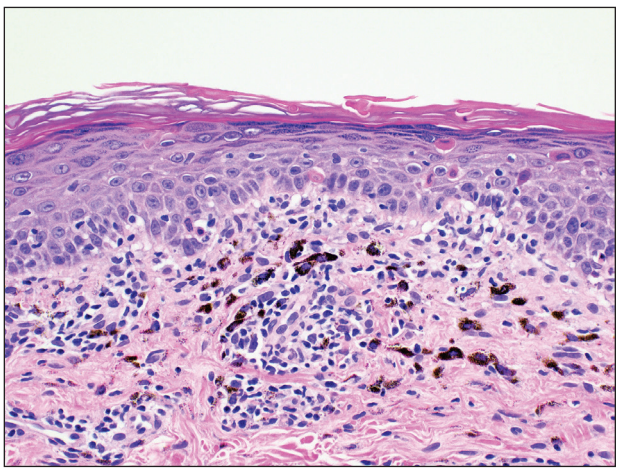

**FIGURE 3.** A patchy perivascular and bandlike lymphocytic infiltrate with numerous melanophages and interface changes. Numerous dyskeratotic keratinocytes were present throughout the epidermis (H&E, original magnification ×40).

pseudoporphyria, chronic actinic dermatitis, granuloma annulare, photodistributed dyspigmentation, and lichenoid photodermatitis.[7] These HIV-associated photosensitive eruptions have been found to disproportionally affect patients of African and Native American descent.[5,7,8] Therefore, a new photodistributed eruption in a patient of African or Native American descent should prompt evaluation of possible underlying HIV infection.

*Presenting Sign of HIV Infection*—We report a case of photolichenoid dermatitis presenting with loss of pigmentation as a presenting sign of HIV. The patient had no known history of HIV or prior opportunistic infections and was not taking any medications at the time of onset or presentation to clinic. Similar cases of photodistributed depigmentation with lichenoid inflammation on histopathology occurring in patients with HIV have been previously described.[4-6,9] In these cases, most patients were of African descent with previously diagnosed advanced HIV and CD4 counts of less than 50 cells/mL$^3$. The additional clinical findings of lichenoid papules and plaques were noted in several of these cases.[5,6]

*Exposure to Photosensitizing Drugs*—Photodermatitis in patients with HIV often is attributed to exposure to a photosensitizing drug. Many reported cases are retrospective and identify a temporal association between the onset of photodermatitis following the initiation of a photosensitizing drug. The most commonly implicated drugs have included nonsteroidal anti-inflammatory drugs, trimethoprim-sulfamethoxazole, and azithromycin. Other potential offenders may include saquinavir, dapsone, ketoconazole, and efavirenz.[3,5] In cases in which temporal association with a new medication could not be identified, the photodermatitis often has been presumed to be due to polypharmacy and the potential synergistic effect of multiple photosensitizing drugs.[3,5-8]

*Advanced HIV*—There are several reported cases of photodermatitis occurring in patients who were not exposed to systemic photosensitizers. These patients had advanced HIV, meeting criteria for AIDS with a CD4 count of less than 200 cells/mL$^3$. The majority of patients had an even lower CD4 count of less than 50 cells/mL$^3$. Clinical presentations have included photodistributed lichenoid papules and plaques as well as depigmented patches.[4,5,8,10]

*Evaluating HIV as a Risk Factor for Photodermatitis*—Discerning the validity of the correlation between photodermatitis and HIV is difficult, as all previously reported cases are case reports and small retrospective case series. One study of 34 patients with HIV and photodermatitis showed that there was no significant increase in incidence of photodermatitis in patients who were exposed to a photosensitizing drug vs those who were not,[3] which further validates that HIV infection may be an independent risk factor in the development of photodermatitis.

## Conclusion

This case represents an uncommon presentation of photolichenoid dermatitis as the presenting sign of HIV infection.[10] Although most reported cases of photodermatitis in HIV are attributed to photosensitizing drugs, we propose that HIV may be an independent risk factor for the development of photodermatitis. We recommend consideration of HIV testing in patients who present with photodistributed depigmenting eruptions, even in the absence of a photosensitizing drug, particularly in patients of African and Native American descent.

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