LETTER TO THE EDITOR

Mixed vitiligo that progressed from segmental inflammatory vitiligo, clinically mimicking lichen striatus

Dear Editor,

A 10-year-old Korean boy presented with pruritic skin lesions on his left leg that spread gradually over 1 month. Annular-shaped, erythematosus scaly patches along with mild hypopigmentation in the center were arranged in a blaschkoid distribution (Fig. 1a,b). In addition, a 5-cm sized halo nevus on the left anterior chest was found two years ago. A skin biopsy from the erythematosus border showed confluent parakeratosis over hyperkeratosis, focal basal vacuolization, and subtle perivascular and perifollicular lymphohistiocytic infiltration (Fig. 1c).

Though histopathologic findings were not typical, we clinically considered this case as that of lichen striatus (LS) based on the distribution of skin lesions and the patient’s age. We prescribed a mid-potency topical steroid, and erythematous patches resolved after 3 weeks of application.

However, 8 months later, he revisited our clinic because of depigmenting patches on his left leg where there had been erythematous patches earlier (Fig. 1d). In addition, depigmentation occurred around the periorbital region (Fig. 1e). All the depigmenting patches were accentuated under Wood lamp examination. Repeat skin biopsy revealed that the depigmenting lesions did not show any inflammatory infiltration, indistinguishable from the uninvolved lesion in hematoxylin-eosin-stained section. However, the lesional skin did not show any melanin pigmentation or live melanocytes compared to the non-lesional skin (Fig. 1f, g).

The periorbital lesion improved remarkably within 2 months with narrow band-ultraviolet light B phototherapy combined with topical corticosteroids. Nevertheless, lesions on the left leg showed modest response despite treatments with 308-nm excimer laser with topical tacrolimus for 2 years.

Figure 1. Mixed vitiligo that progressed from segmental inflammatory vitiligo, clinically mimicking lichen striatus. (a) The initial visit of the patient with erythematous linear lesions over the left leg following Blaschko’s lines. (b) Each lesion was characterized by annular scaly patches with mild central hypopigmentation. (c) Hyperkeratosis, parakeratosis, and focal basal vacuolization were noted in the epidermis and perivascular lymphohistiocytic infiltration (hematoxylin-eosin stain, ×200). Eight months after the initial visit, depigmenting patches developed over the left leg (d) and periorbital area (e). Melan-A stain (×200) of the depigmenting lesion revealed near complete loss of melanocytes over the stratum basale (f) compared to non-lesional skin (g).
Looking back at the clinical findings from his initial visit, we regarded this case as that of segmental inflammatory vitiligo (IV) based on Blaschko’s line, clinically mimicking LS. IV is known to present with a rim of erythema at the periphery of the depigmenting patches, and the histological correlate of the inflammatory border often showed nonspecific superficial perivascular lymphohistiocytic infiltrate, as shown in our case.\(^1\) The differential diagnosis between IV and inflammatory blaschkolinear dermatoses such as LS and blaschkitis might be challenging.\(^2\) As LS sometimes leaves residual hypochromia and even co-exists with segmental vitiligo,\(^3\) careful Wood lamp examination of the hypopigmented area can aid an accurate diagnosis. Misdiagnosing segmental IV could result in vitiligo lesions being ignored without early treatment, later results in low response to medical treatment and may require surgical procedures.\(^3\)

Moreover, our case can be classified as mixed vitiligo (MV) because segmental vitiligo on the leg progressed into facial involvement along with halo nevus, which is a strong predictor of MV. This case strengthens the proposed hypothesis of MV that an initial cutaneous gene defect or mosaicism causes segmental vitiligo, which later triggers a generalized immune response toward melanocytes, leading to non-segmental vitiligo.\(^5\)

In conclusion, we report a case of MV in which segmental IV mimicking LS progressed to non-segmental vitiligo. Clinicians need to be cautious when there is an inflammatory lesion with subtle hypopigmentation following Blaschko’s lines; the possibility of segmental IV should be considered as a differential diagnosis.

**CONFLICT OF INTEREST:** None declared.

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**REFERENCES**