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DERMATOLOGIC THERAPY WILEY

LETTER

Lichen planus actinicus treated successfully with topical tacrolimus 0.1%: A report of six cases

Dear Editor,

Lichen planus actinicus (LPA) is a photodistributed variant of lichen planus (LP) that frequently occurs individuals with dark complexions on sun-exposed areas.[1,2] All of the cases admitted to our clinics for asymptomatic discoloration and rash on different parts of the faces. Five of six cases were male and one of them was female. Lesions of three male patients were on the forehead; one of these was in the form of an annular brown-violaceous plaque and two of these were in the form of hyperpigmented patch lesion (case-1, 3, 6). Other two of them had hyperpigmented patch lesions on the neck (case-2, 5). Hyperpigmented patch lesions of female patient were on perioral region (case-4). Detailed demographic and clinical features of the cases were presented in Table 1, and clinical images of the cases were shown in Figure 1. Histopathology results of all patients revealed

TABLE 1 Demographic features of the cases

Case number	Case-1	Case-2	Case-3	Case-4	Case-5	Case-6
Sex	M	M	M	F	M	M
Age	44	41	17	67	35	42
Fitzpatrick skin type	3	3	2	3	3	3
History of chronic sun exposure	Positive	Positive	Positive	Positive	Positive	Positive
History of local trauma or infection	Absent	Absent	Absent	Absent	Absent	Absent
Family history	None	None	None	None	None	None
Systemic disease	None	None	None	Diabetes mellitus, hypertension, coronary artery disease	None	None
Topical/systemic medication	None	None	None	Antidiabetic and antihypertensive drugs	None	None
Morphology of the lesion	Brown pigmented patch with atrophic center	Brown pigmented patch	Annular violaceous plaque with atrophic center	Brown pigmented patch	Brown pigmented patch and brown-violaceous papuloplaque	Brown pigmented patch with atrophic center and irregular border
Distribution	Forehead	Neck	Forehead	Perioral	Neck	Forehead, right cheek
Subtype	Melasma-like (pigmented)	Melasma-like (pigmented)	Annular	Melasma-like (pigmented)	Melasma-like (pigmented) + classical (plaque)	Melasma-like (pigmented)
Pruritus	None	None	None	None	None	None
Koebner phenomenon	None	None	None	None	None	None
Mucousa involvement	None	None	None	None	None	None
Nail involvement	None	None	None	None	None	None

(Continues)

TABLE 1 (Continued)

Duration of the disease	A few months	3 months	1 month	2 years	3 months	7 months
Treatment	Topical Tacrolimus ointment 2 × 1	Topical Tacrolimus ointment 2 × 1	Topical Tacrolimus ointment 2 × 1	Topical Tacrolimus ointment 2 × 1	Topical Tacrolimus ointment 2 × 1 + Topical retinoic acid 1 × 1	Topical Tacrolimus ointment 2 × 1
Treatment duration	6 months	6 months	Only 1 month (no longer follow-up)	6 months	1 year	1 month (still undertherapy and follow-up)
Response	Complete response	Complete response	Partial response	Complete response	Partial response	Partial response

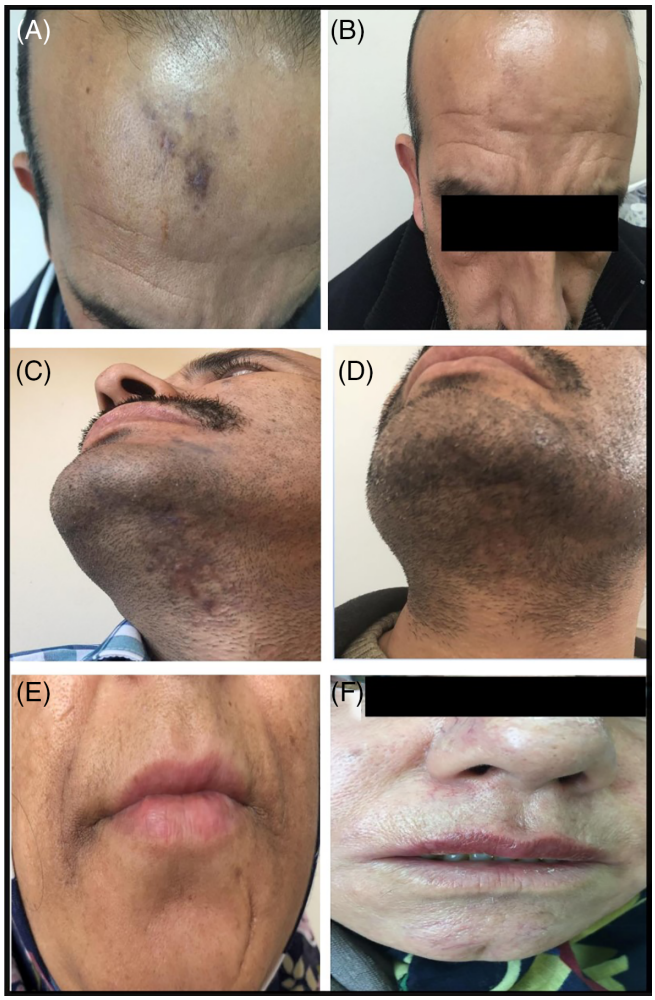

FIGURE 1 Clinical presentations of the cases. A, Slightly atrophic, hyperpigmented patch lesion on his forehead with irregular border (case-1). B, After 6 months treatment in case-1. C, Hyperpigmented patch lesion on the neck (case-2). D, After 6 months treatment in case-2. E, Hyperpigmented patch lesion with irregular border at two corners of the perioral region (case-4). F, After 6 months treatment in case-4

basal vacuolar degeneration, band-like lymphocytic infiltration, pigmentary incontinence (Figure 2). For all patients, we recommended to use sunscreen and avoid sunlight and topical tacrolimus 0.1% ointment was initiated twice a day. Case-1, 2, 4 continued topical tacrolimus therapy for 6 months, complete improvement were observed with no recurrence (Figure 1). In case-3, little improvement was observed after 1 month but the patient was lost to follow-up. In case-5, topical tacrolimus was initiated with topical retinoic acid, 1 year later, partial recovery was observed. In case-6 little improvement was observed after 1 month, the patient has still been under treatment and follow-up (Table 1).

Several treatment modalities have been tried for LPA, but there is no clear consensus.[3]

In one case, successful treatment response with hydroxychloroquine was observed in a patient in whom topical tacrolimus and acitretin administration was not effective after 2 months.[4] In another case, the acitretin therapy was given for 4 months with betamethasone dipropionate cream for 2 weeks and complete resolution occurred after 2 months of therapy.[5] In the other case, a combination of hydroxychloroquine and 0.1% methylprednisolone aceponate was given, good response was observed.[6]

The use of calcineurin inhibitors has been extensively studied in different variants of LP including oral, erosive, vulvar, pigmented form.[7-9] LP is a chronic T-cell immune-mediated inflammatory skin disease and calcineurin inhibitors' mechanism of action is the blockage of T-cell activation. In contrast with topical steroids, these drugs are not thought to induce skin atrophy with prolonged use.[3,7,9] In one case, the patient was successfully treated with topical pimecrolimus and adequate sun protection, and no recurrence was observed.[3] In the other case, complete improvement of all lesions were observed after 1 month of topical tacrolimus treatment.[2] In another case with rapidly progressing photo-exacerbated LPA, combination of oral prednisone and topical tacrolimus was initiated, oral prednisone was used over the course of 3 weeks, after completing the oral steroid course, the patient was transitioned to topical clobetasol and continued on tacrolimus.[10]

In our cases, half of our patients were treated by topical tacrolimus for 6 months successfully (case-1, 2, 4). One patient used topical tacrolimus with topical retinoic acid for a year with partial remission (case-5). This patient had classic type LPA differing from the others who had melasma like LPA. The result of partial response in this patient may be explained by lower skin penetration of tacrolimus in classic type LPA comparing to melasma like LPA, leading to lower treatment efficacy. Two of other patients have not completed the treatment period. We believe topical tacrolimus therapy may be a first line treatment option without inducing skin atrophy unlike topical steroid use; since LPA needs longer treatment courses than other LP

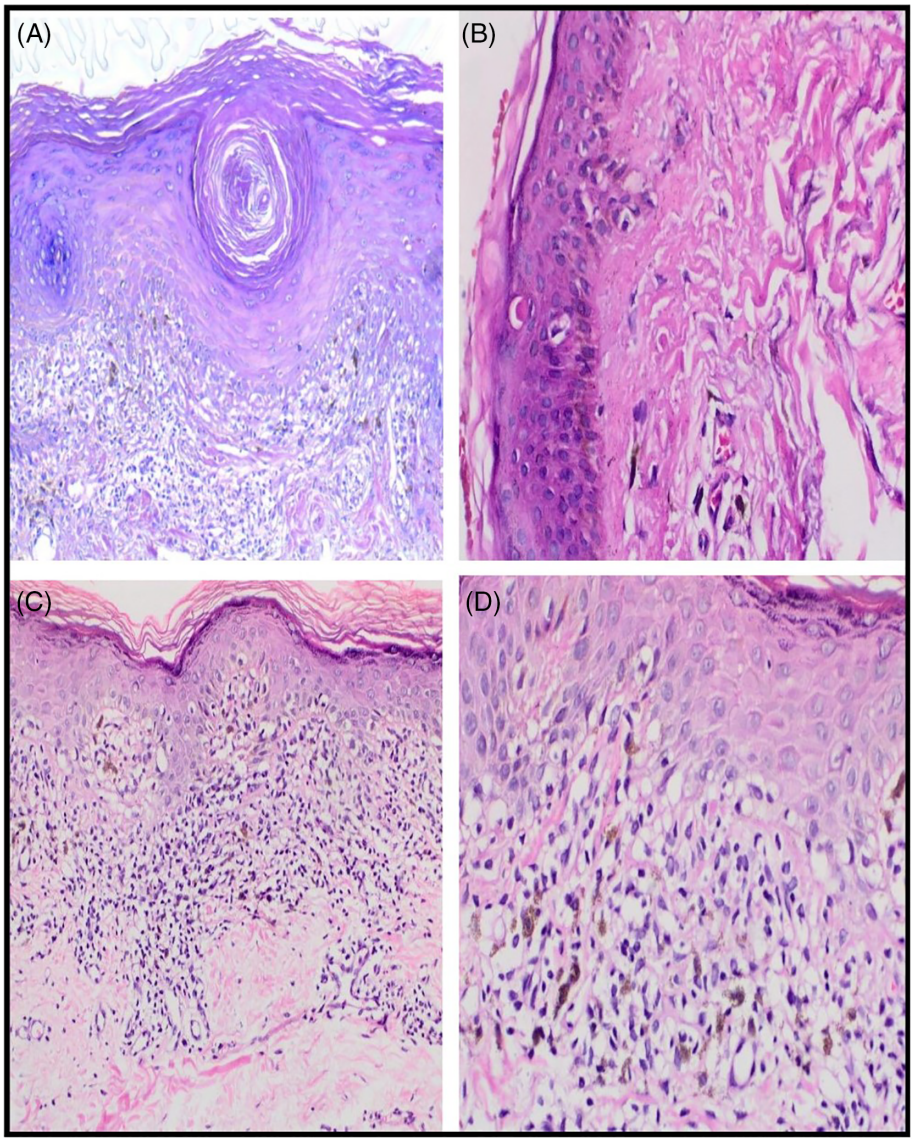

FIGURE 2 Histopathological images from the cases; A, focal hypergranulosis, band-like lymphocytic infiltration in the superficial papillary dermis with scattered melanophages; C,D, basal vacuolar degeneration, pigmentary incontinence and band-like lymphocytic infiltration were seen. B, Pigmentary incontinence, basal vacuolar degeneration, Civatte body were seen. A, HE × 100 (from case-1). B, HE × 100 (from case-6). C, HE × 20 (from case-2). D, HE × 40 (from case-2)

forms.[4,8] These drugs' prolonged use may offer advantage to the dermatologists without causing systemic toxic effects.

INFORMED CONSENT

Written informed consent was obtained from all the patients.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

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