Acitretin: A Good Treatment Option for Hypertrophic Lichen Planus

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ABSTRACT

Lichen planus (LP) is a chronic inflammatory dermatosis of unknown etiology characterized by pruritic violaceous papules. Here, we share our experience of a long standing case of disseminated hypertrophic LP treated with oral acitretin. A 48-year-old married male, presented with multiple highly itchy dark raised lesions over bilateral legs since 15 years. There was no history of any preceding trauma, any recent drug intake before eruption, dental metal fillings, hepatitis, or any other infection. Patient was treated with oral antihistamines and topical moisturizers and topical steroid and salicylic acid combination ointments in the past with only temporary relief. Clinical examination revealed multiple hyperpigmented keratotic papulonodular lesions over bilateral legs and few on feet. Mucous membranes were normal. He was started on acitretin 25 mg twice daily along with oral hydroxyzine 25 mg and topical moisturizer and clobetasol and 6% salicylic acid ointment. After 2 weeks, patient noted up to 30–40% improvement in lesions and some became flat. Furthermore, itching was reduced. His lipid and liver profile showed no abnormality. Acitretin 25 mg bid and antihistamines were continued along with moisturizer for another 2 weeks. Since patient tolerated acitretin well without any major side effects except for mucosal dryness and slight hair loss, it was continued for another 1 month. At the end of 2 months, there was almost 90% improvement in most of the lesions. Acitretin was stopped after 4 months. There was no recurrence reported up to 6 months posttreatment. Our case of HLP showed a good response to acitretin and it can be considered one of the treatment options for such severe, highly itchy cases of LP affecting quality of life.

Key Words: Acitretin, lichen planus, treatment

INTRODUCTION

Lichen planus (LP) is autoimmune dermatosis, involving either or all of skin, mucosa, nail, and hairs. It has various clinical presentations such as classical LP, hypertrophic LP (HLP), bullous LP, LP pigmentosus, and linear LP. Here, we report a case of disseminated HLP associated with severe pruritus, treated with oral acitretin with a good outcome.

CASE REPORT

A 48-year-old otherwise healthy married male, presented with multiple highly itchy dark raised lesions over bilateral legs since 15 years [Figure 1]. There was no history of any preceding trauma, any recent drug intake before eruption, dental metal fillings, hepatitis, or any other infection. Patient was nonalcoholic. Patient denied the family history of similar lesions. No history of vitiligo or thyroid disease in past. Patient was treated with oral antihistamines and topical moisturizers and topical steroid – salicylic acid ointments and intralesional steroid injections by various dermatologists in past with only temporary relief.

Clinical examination revealed multiple hyperpigmented keratotic papulonodular lesions over bilateral legs and few on feet [Figure 1]. Mucous membranes were normal. Nails examination was normal.

Based on history and clinical examination, differential diagnosis of HLP and prurigo nodularis was thought.

With informed consent, biopsy was taken from a fresh representative lesion. Biopsy showed compact orthohyperkeratosis, focal hypergranulosis, acanthosis, saw-tooth appearance of epidermis, band-like infiltrate in upper dermis, and interface change with Max Joseph space [Figure 2a]. On further magnification, lymphocytic infiltrate, colloid bodies, interface change, and melanin incontinence were seen [Figure 2b] suggestive of LP. On clinicopathological correlation, a final diagnosis of HLP was made.
was made. Complete blood count, liver function tests, and renal function tests were normal. Tests for hepatitis C virus and human immunodeficiency virus were negative. Thyroid function was also normal.

Based on history, clinical findings, and histopathology, a final diagnosis of HLP was made. Considering long-standing nature of disease and various treatments tried in past patient was explained about acitretin as a treatment option, and he was started on acitretin 25 mg twice daily along with oral hydroxyzine 25 mg and topical moisturizer and clobetasol and 6% salicylic acid ointment. He was advised to follow-up after 2 weeks with repeat tests for lipid profile and liver profile.

After 2 weeks, patient noted up to 30–40% improvement in lesions and some became flat. Furthermore, itching was reduced. His lipid and liver profile showed no abnormality. Acitretin 25 mg bid and antihistamines were continued along with moisturizer for another 2 weeks. Since patient tolerated acitretin well without any major side effects, except for mucosal dryness and slight hair loss, it was continued for another 1 month. At the end of 2 months, there was almost 90% improvement in most of the lesions going flat [Figure 3]. We tapered acitretin to 25 mg/day, which was continued for another 2 months without any alterations in lipid and liver profile on repeat tests. After a total of 4 months, acitretin was stopped and moisturizer was continued. Patient lost to follow-up as he shifted to another city due to change in job but as per telephonic conversation, no recurrence was reported up to 6 months posttreatment.

**DISCUSSION**

HLP presents clinically as highly itchy, lichenified, hyperkeratotic papulonodules or plaques, usually symmetrical, with a predilection by the pretibial region.\(^1\)

Chronic HLP is treatment challenge and treatment is still unsatisfactory. In most of the severe and chronic cases like our case, systemic treatment of HLP is imperative. Though oral steroids are effective, chronic nature of disease, tendency for relapse, and side effects of steroids limit their use. In such cases, various other nonsteroidal agents such as acitretin, cyclosporine, azathioprine, mycophenolate mofetil, cyclophosphamide, and methotrexate are tried with variable results.\(^3,4\)

Acitretin is a synthetic retinoid with a half-life between 55 and 60 h. Teratogenicity is among its most important side effects. Reversible side effects such as hypertriglyceridemia as well as hypercholesterolemia and elevation of transaminases are also important changes are seen in 5–8% of the patients. Mucocutaneous side effects are among the most prevalent like skin xerosis, lip dryness, and hair loss, but they are also dose-dependent and reversible.\(^5\)

Acitretin is used for different dermatological diseases. Its main effects include the regulation of keratinization disorders such as psoriasis, ichthyosis, Darier’s disease, and palmoplantar keratodermas. It is also found to be effective in severe and hypertrophic cases of LP.\(^5,6\)

The exact etiopathogenesis of LP is not clear. Among the many etiologic mechanisms proposed dermal T-lymphocyte mediated autoimmunity is considered most likely. These cells after activation produce cytokines such as interferon-\(\alpha\). These cytokines lead to monocyte expression of lymphocyte
function-associated antigen that helps these cells to attach to keratinocytes. After attaching to keratinocytes activated immune cells cause their destruction.[7]

Usefulness of retinoids in LP may be explained by their ability to change surface antigens of keratinocytes which may reduce the attachment of activated T cells to them. Furthermore, retinoids are known to possess anti-inflammatory properties, perhaps through their interaction with the arachidonic acid cascade. There have been few isolated clinical trials which have shown acitretin as an effective therapy for severe cases of LP.[4-7]

Our case of HLP showed a good response to acitretin and it can be considered one of the treatment options for such severe, highly itchy cases of LP affecting quality of life of patient, unless contraindicated. However, further prospective studies with a large number of patients are needed.

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Conflicts of interest
There are no conflicts of interest.

REFERENCES
1. Inamdar AC, Palit A. On lichen planus and lichenoid disorders. In: Valia RG, Valia AR, editors. IADVL Textbook of Dermatology. 3rd ed. Mumbai, India: Bhalani Publishers; 2008. p. 1070-86.
2. Gutte RM. Unilateral acrosyringeal lichen planus of palm. Indian Dermatol Online J 2013;4:350-2.
3. Cribier B, Frances C, Chosidow O. Treatment of lichen planus. An evidence-based medicine analysis of efficacy. Arch Dermatol 1998;134:1521-30.
4. Orfano CE, Zouboulis CC, Almond-Roesler B, Geilen CC. Current use and future potential role of retinoids in dermatology. Drugs 1997;53:358-88.
5. Berbis P. Acitretine. Ann Dermatol Venereol 2001;128:737-45.
6. Laurberg G, Geiger JM, Hjorth N, Holm P, Hou-Jensen K, Jacobsen KU, et al. Treatment of lichen planus with acitretin. A double-blind, placebo-controlled study in 65 patients. J Am Acad Dermatol 1991;24:434-7.
7. Palit A, Inamdar AC. On pathogenesis of lichen planus. In: Valia AR, Khopkar U, editors. Lichen Planus. 1st ed. New Delhi, India: Jaypee Publishers; 2013. p. 1-10.