Actinic Lichen Planus
- A Case Report
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Actinic lichen planus is a variant of lichen planus that mostly affects young individuals with dark complexions of Middle Eastern origins. We herein report a 51-year-old woman with multiple itchy erythematous annular plaques and papules over her forehead, chin, neck, and the V area of the chest for 4 months that were unresponsive to topical corticosteroids. Histopathological findings exhibited the typical picture of lichen planus. The lesions improved dramatically after applying 0.1% tacrolimus ointment, and no new lesions were noted during 5 months of follow up. (Dermatol Sinica 24: 205-208, 2006)

Key words: Actinic lichen planus, Annular, Tacrolimus

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- 病例報告
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INTRODUCTION

Actinic lichen planus is predominantly seen in people with dark complexions. In Middle Eastern countries, actinic lichen planus accounts for 30 to 40 percent of lichen planus cases. Three types of actinic lichen planus have been reported to date: annular, pigmented, and dyschromic. It usually affects sun-exposed areas such as the forehead, dorsum of the hands, and the extensor surface of the upper extremities. Nails and oral mucosa are usually spared. The onset of actinic lichen planus is usually in spring and summer. Spontaneous remission or improvement may occur during the winter, but recurrences are not uncommon. Typical characteristics of lichen planus such as Koebner phenomenon and scaling are not seen in actinic lichen planus.

CASE REPORT

A 51-year-old woman had a 4-month history of symmetric and pruritic skin lesions which spread from her chin to her forehead, and then to her V area of chest. The patient had tried to treat this condition with topical steroids but in vain. There was no history of prolonged sun exposure at the affected sites. She also denied other medical problems and was not taking any systemic medications.

Dermatological examination revealed two morphologically different types of the lesions: one comprising erythematous papules; the other manifesting as erythematous annular plaques with a raised edge (Fig. 1). They ranged from 1mm (papules) to 1cm (plaques) in diameter. All lesions were confined to the sun exposure areas, and no scales were noted. There was neither mucosal nor nail involvement. None of her family members had any similar skin manifestations. The laboratory findings were within normal limits except an elevated GPT level (46 IU/L, 0-35).

Two biopsies (one papular lesion and one annular lesion) were taken from the V area of the chest. Both of them exhibited typical characteristics of lichen planus including epidermal hyperplasia with focal sawtooth pattern, hypergranulosis and hyperkeratosis. Bandlike lymphocytic infiltration in the upper dermis and occasional cytoid body formation were also seen (Fig. 2A & 2B).

The patient was treated with 0.1% tacrolimus ointment twice a day with a dramatic improvement in one week. At the one-month follow up, there were no new lesions noted, and the old ones were flattened (Fig. 3). The dosing of tacrolimus ointment was then shifted to once daily for another one month and only slight residual pigmentation remained. Tacrolimus ointment was then discontinued and there was
Actinic lichen planus is a variant of lichen planus which has been reported under a variety of names: lichen planus subtropicus, lichen planus tropicus, lichenoid melanodermatitis, summertime actinic lichenoid eruption and lichen planus atropicus annularis.1-5 In 1919, Fordyce was the first to publish a picture of actinic lichen planus.5 It occurs most often in people of dark complexions with a marked geographical variation.2, 5 In Dostrovsky and Sagher’s study, most of the actinic lichen planus patients were from Palestine and other Middle Eastern/Asiatic countries (35% and 41% respectively), only 14% patients were from Europe.4

Unlike most cases of actinic lichen planus, our patient is a 51-year-old Taiwanese woman with Fitzpetrick skin type III who lived in New Zealand but has been back in Taiwan for 4 years. The onset of the lesions in our patient was in December, and the patient denied any excessive sunlight exposure during this period. No remission had been noted for 4 months before she visited our clinic.

Actinic lichen planus characteristically affects the sun-exposed areas. The lateral aspect of the forehead is the most commonly involved site (41%). Other commonly affected areas are as follows: the dorsum of hands, the extensor surface of upper extremities, the lower lips, the cheeks, and the neck, in order of their frequency. The non-exposed skin of the legs, trunk, genitals, and oral mucosa is rarely affected. Nails are always spared.2, 4, 5

Several morphological patterns of actinic lichen planus have been described: annular hyperpigmented plaques, melasma-like patches, and the most typical pattern is the annular hyperpigmented plaques after using 0.1% tacrolimus ointment for one month.

Table. I The comparison of classic lichen planus and actinic lichen planus.2

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<thead>
<tr>
<th></th>
<th>Actinic Lichen Planus</th>
<th>Classic Lichen Planus</th>
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<tbody>
<tr>
<td>Age</td>
<td>Younger</td>
<td>Older</td>
</tr>
<tr>
<td>Location</td>
<td>Sun-exposed skin</td>
<td>Flexor areas of extremities</td>
</tr>
<tr>
<td>Race</td>
<td>Middle East countries</td>
<td>No racial predilection</td>
</tr>
<tr>
<td>Seasonal onset</td>
<td>Spring/ Summer</td>
<td>No</td>
</tr>
<tr>
<td>Duration</td>
<td>Longer</td>
<td>Shorter</td>
</tr>
<tr>
<td>Mucosal/Nail involvement</td>
<td>Absent</td>
<td>Present</td>
</tr>
<tr>
<td>Koebner reaction</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Pruritus</td>
<td>Usually absent</td>
<td>Present</td>
</tr>
<tr>
<td>Scales</td>
<td>Absent</td>
<td>Present</td>
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Dyschromic papules and classic lichenoid papules/plaques. There are both annular hyperpigmented plaques and classic lichenoid papules in our patient. The annular hyperpigmented plaque is the most common type of actinic lichen planus, which is characterized by a thready rolled border with a dark erythematous and brownish center. Classic lichenoid papules/plaques, which are violaceous in color, may occur simultaneously with the other patterns of actinic lichen planus. Mouta Dilaimy reported a total number of lesions in 20 patients was 111, which gave an average of 5.55 lesions per patient. The total number of the lesions of our patient was about 20 to 30.

The comparison of classic lichen planus and actinic lichen planus are listed in Table 1. Slight pruritus was noted by our patient, and neither scaling nor Koebner reaction was found. Her mucosa and nails were spared.

The differential diagnoses of actinic lichen planus include discoid lupus erythematosus, granuloma annulare, secondary syphilis, polymorphic light eruption, melasma, porokeratosis of Meibelli, fixed drug eruption, elastosis perforans serpiginosa, and erythema dyschronicum perstans. All of these can be ruled out by skin biopsy and several tests.

The histologic pictures of actinic lichen planus are consistent with the findings in classic lichen planus. The cause of actinic lichen planus is still unknown. Sunlight appears to be the major precipitating factor. Kim and Krivda had reported a case of lichen planus localized to the radiated area 2 months after radiation therapy for penile carcinoma. Skowron et al. reported one 41-year-old North American woman with HBV infection, whose decrease in plasma load of HBV with lamivudine therapy induced the resolution of the actinic lichen planus. Our patient denied HBV infection. Several treatments of actinic lichen planus have been reported: bismuth, grenz rays, arsenic compounds, x-ray, and topical corticosteroids under occlusion. Intraleisional corticosteroids accompanied by topical sunscreen and hydroxychloroquine; acitretin in combination with topical steroids and sun avoidance have been used successfully. Recently, Shanna et al. reported one patient who had improvement of actinic lichen planus by topical tacrolimus 0.1% ointment and oral acitretin 25 mg daily for 2 months, then hydroxychloroquine 400 mg daily for one month. Topical tacrolimus had also been reported to treat chronic erosive oral lichen planus.

In conclusion, actinic lichen planus is a variant of lichen planus. Single use of topical 0.1% tacrolimus ointment is effective in our patient.

REFERENCES