

Annular Atrophic Lichen Planus

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Annular atrophic lichen planus(AALP) is the most unusual variant of lichen planus that results from elastolytic activity of inflammatory cells. We report a case of AALP in 22-year-old man who had two annular pruritic plaques on the axilla. He had a two year history of skin lesions. Each lesion had elevated erythematous annular border with hyperpigmented atrophic macular center. Histopathologically, it showed typical features of lichen planus in the border of the lesion while a pattern of resolved lichen planus in its center. Elastic fibers was not found in the papillary dermis either at the border or at the center of the lesion.

(*Ann Dermatol* 15(4) 151~152, 2003).

Key Words : Annular atrophic lichen planus, Elastic fiber

In 1991, AALP was first reported by Friedman and Hashimoto¹. They described one patient with generalized, multiple, chronic AALP lesions. After that two more cases of AALP were reported. We report a patient with two AALP lesions limited to the axilla.

CASE REPORT

A 22-year-old man presented with a 2-year history of two, slowly enlarging, erythematous, annular plaques on the axilla(Fig. 1). One is 1.5-cm sized plaque and the other is 0.5-cm sized papule. These lesions were adjacent to each other. Individual lesion showed a depressed brownish center and an elevated erythematous border. He did not take any medication and had no concurrent illnesses. The nail, hair and mucosal surfaces of patient showed no pathologic findings. Histopathological ex-

amination of the border showed irregular acanthosis, wedge-shaped hypergranulosis, vacuolar degeneration of the basal cell layer and a bandlike lymphohistiocytic infiltrate, while that of the center showed thinning of the epidermis with loss of rete ridges and no inflammatory infiltrate(Fig. 2). Verhoeff-van-Gieson staining demonstrated lack of elastic fibers in the papillary dermis both in the border and in the center of the lesion. The lesion was treated with topical steroid and slightly improved after 4 weeks of therapy.

DISCUSSION

Lichen planus(LP) is a common, pruritic, inflammatory disease of the skin, hair follicles, nails and mucous membranes. LP has numerous clinical variants. Annular LP occurs in about 10% of patients with LP and usually scattered among more typical lesions. Another variant of LP is atrophic LP, which occurs after the resolution of lesions of LP and is a result of thinning of the epidermis and fibrosis of the papillary dermis. Annular atrophic LP(AALP) is the rarest variant of LP and has both features of annular and atrophic LP in the same lesion. The lesion is characterized by small violaceous papules slowly enlarging peripherally. The center becomes atrophic and hyperpigmented, while the borders are raised. Histopathologic examination shows typical

Received March 3, 2003

Accepted for publication June 30, 2003

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Fig. 1. Two annular lesions with a depressed brownish center and an erythematous elevated border on the axilla

features of LP in the elevated border and a flattened epidermis with loss of rete ridges in the atrophic center. In both sites, the elastic fibers are destroyed in the papillary dermis¹. By electron microscopy, fragmented elastic fibers were found as in cutis laxa¹. Friedman and Hashimoto¹, who had first reported AALP, concluded that the annular and atrophic configuration of the lesion resulted from the elastolytic activity of the inflammatory cells rather than thinning of the epidermis.

In the previous reported AALP¹⁻³, there were many large AALP lesions on the extensive body area. In our case, 1.5-cm sized annular plaque with satellite 0.5 cm sized annular papule were observed limited to the axilla.

Annular LP may be formed in two different ways⁴. One is by the grouping of individual papules arranged in rings and the other is by the gradual peripheral enlargement of an individual papule, clearing in the center and leaving an elevated outer rim. In the latter formation pattern is similar to AALP. In many reports of annular LP the lesions have been described with central atrophy and violaceous, elevated borders^{4,5}, but elastic stain was not performed in these lesions. So we wonder if this annular and atrophic configuration resulted from elastolysis.

AALP has been described in association with Sneddon's syndrome². Lipsker *et al.*² postulated that both diseases might result from a similar patho-

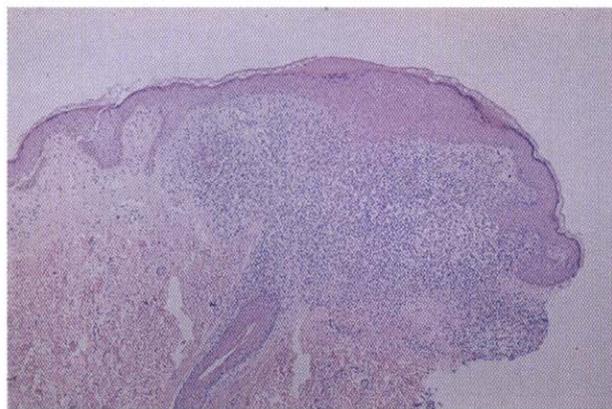


Fig. 2. Histopathology of the border showing irregular acanthosis, vacuolar degeneration of the basal layer, necrotic keratinocytes, and a band-like lymphohistiocytic infiltrate (the right side), and the center showing flattened epidermis with no inflammatory infiltrate (the left side).

mechanism, namely an abnormal production of elastolytic enzymes, a defective protection against them or a constitutional abnormality of the elastic tissue, since Sneddon's syndrome is characterized by arteriolar changes with deterioration of the internal elastic lamina and AALP by destruction of the dermal elastic tissue.

The course of AALP is very chronic^{1,3} and tends to resist treatments such as topical steroids or UV light^{1,3}. Our patient has 2-year history and slightly improved after topical steroids treatment.

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