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## Atrophic Lichen Planus Annularis: Presentation of 3 Cases

## Liquen plano anular y atrófico: presentación de 3 casos

## To the Editor:

Atrophic lichen planus annularis is a variant of lichen planus that is rarely reported in the literature. It is characterized clinically by annular papules with elevated margins and a central atrophic area; these lesions may be associated with the typical lesions of lichen planus. Histologically, the borders of the lesions present the typical findings of lichen planus, together with progressive thinning of the epidermis, and the center reveals reduction and fragmentation of the elastic fibres of the dermis.

Due to the rare nature of the disease, it has not been possible to establish a typical location for the lesions.

We report 3 cases of patients with atrophic lichen planus annularis with no other accompanying lesions; the lesions were located in the lumbar region and showed similar responses to the prescribed treatment.

The first case was a 47-year-old man with no relevant personal history. During a checkup for melanocytic nevus using epiluminescence, several skin lesions were detected that had been absent in previous annual checkups.

The second case was a 50-year-old woman with a history of diabetes mellitus on treatment with insulin, hypertension, and hysterectomy due to endometrial cancer; the patient was seen at our department for assessment of lesions that had appeared 3 months earlier (Figure 1A).

The third case was a 15-year-old boy with no relevant medical or surgical history, who visited our department for assessment of skin lesions that had been present for an unknown length of time.

In all 3 cases, the lesions were asymptomatic and located in the lumbar region in the midline. There was no characteristic grouping pattern of the lesions, except in the third case, in which they had a linear distribution. The lesions consisted of circular papules with a raised violaceous margin, which was slightly scaly in the second case, and an atrophic central area.

No lesions were found elsewhere on the skin or on the mucosa or nails.

Additional examinations included routine laboratory tests in the first case; these tests showed no abnormalities in the

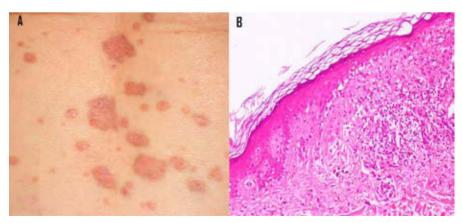


Figure 1 A) Clinical image of the second case. B) Histologic image of the second case: band-like lichenoid infiltrate with vacuolar degeneration of the basal layer and progressive thinning of the epidermis from the edge of the lesion (hematoxylin-eosin, ×20).

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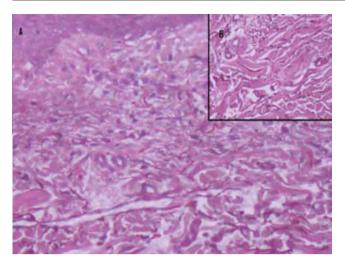


Figure 2 A) Elastic fibers in the periphery of the lesion in the second case (orcein stain). B) Fragmented, and thinned elastic fibers in the center of the lesion in the second case (orcein stain).

complete blood count, biochemistry, or thyroid profile, and serology for hepatitis B and C viruses was negative.

In all 3 cases, a punch biopsy of the lesions was performed that included the central atrophic area and the raised edge. Staining with hematoxylin-eosin revealed a dense lichenoid, monomorphic lymphocytic infiltrate in the papillary dermis and vacuolar degeneration of the basal layer. The epidermis showed progressive thinning from the edges of the lesion toward the center (Figure 1B).

Orcein staining, carried out in the second case, revealed increased fragmentation and thinning of the dermal elastic fibers at the center of the lesion (Figure 2A) compared to the margins of the lesion (Figure 2B).

Treatment with high-potency topical corticosteroids was prescribed in all 3 cases but no improvement was observed in any of the lesions.

Lichen planus annularis is a rare variant of lichen planus that presents annular papules as the main lesion, instead of the typical polygonal lesions.

The presentation and reported site of the lesions vary. In a series of 20 cases at the University of Pennsylvania, the most commonly affected area was the axilla, followed by the penis and the groin, particularly when patients presented with few lesions. However, when patients presented with many lesions accompanied by the findings of typical lichen planus, the most common sites were the torso and limbs

Unlike classic lichen planus with involvement of the oral cavity, no association has been shown with hepatitis C virus infection or with other diseases or situations; nor have cases been reported in which the lesions have undergone malignant change.

Friedman and Hashimoto,<sup>2</sup> followed by other authors,<sup>3-5</sup> described a variant of lichen planus annularis, which was called atrophic lichen planus annularis and was characterized by annular lesions with a raised margin and an atrophic central area. Distribution was also highly variable<sup>5</sup> and, in some cases, the most frequent sites reported were the usual sites for lichen planus.<sup>6</sup> Some authors did not feel that the disease should be considered as a separate entity from the already rare variant of lichen planus annularis, from which it differs only slightly.<sup>1</sup>

Histologically, the findings of atrophic lichen planus annularis are the same as for lichen planus, together with progressive thinning of the epidermis and reduction and fragmentation of the elastic fibres from the edge of the lesions toward the central area.<sup>7,8</sup>

In all 3 of our cases, the lesions were located in the lumbar region and were clinically identical.

The clinical differential diagnosis included granuloma annulare, atrophic lichen planus, iatrogenic atrophy due to corticosteroid use, and the possibility of skin metastases in patients with a history of cancer, but histologic findings confirmed the diagnosis of atrophic lichen planus annularis.

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