Successful treatment of lichen amyloidosis with cryosurgery

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Summary
Lichen amyloidosis is a rare, chronic pruritic disorder characterized by amyloid deposition in the skin without evidence of visceral involvement. Clinically, lichen amyloidosis demonstrates discrete, intensely pruritic, hyperkeratotic papules that may coalesce into plaques, mainly located on the lower extremities (1,2). Although many treatment modalities including topical and intralesional corticosteroids, topical dimethyl sulfoxide (DMSO), ultraviolet B (UVB), oral psoralen plus ultraviolet A (PUVA), retinoids and dermabrasion have been described, the results are generally unsatisfactory (3-5). There is paucity of reports of liquid nitrogen cryosurgery as a treatment option in the management of lichen amyloidosis in the literature. In this article, we report a case of lichen amyloidosis, with pruritic hyperkeratotic papules on the left shin of 7 years' duration, successfully treated with cryosurgery.

Key words: Cryosurgery, lichen amyloidosis, treatment

Introduction
Lichen amyloidosis (LA) is an unusual, persistent pruritic papular eruption, characterized by cutaneous amyloid deposition without systemic involvement. The clinical features consist of discrete, intensely pruritic, hyperkeratotic skin colored or yellowish brown papules that may coalesce into plaques, mainly located on the lower extremities (1,2).

Although many treatment modalities including topical and intralesional corticosteroids, topical dimethyl sulfoxide (DMSO), ultraviolet B (UVB), oral psoralen plus ultraviolet A (PUVA), retinoids and dermabrasion have been described, the results are generally unsatisfactory (3-5). There is paucity of reports of liquid nitrogen cryosurgery as a treatment option in the management of LA in the literature. We hereby report a 24-year-old man diagnosed as LA, with pruritic hyperkeratotic papules on the left shin of 7 years' duration, successfully treated with cryosurgery.

Case Report
A 24-year-old man presented with a 7 year history of persistent, pruritic eruption on his left shin, unresponsive to topical corticosteroid treatment. The patient denied a history of trauma. He was otherwise healthy and had took no medication.

On physical examination we observed excoriated, firm, scaly hyperkeratotic papular lesions on his left shin (Figure 1). There were no other cutaneous or mucosal abnormalities. Routine laboratory investigations including complete blood count, renal, hepatic and thyroid function tests and urinary analysis were within normal limits.
Ultrasonography of the thyroid and surrenal glands revealed no pathological findings.

A 4 mm punch biopsy specimen revealed orthokeratosis, hypergranulosis, irregular acanthosis, and a perivascular lymphohistiocytic inflammatory infiltrate and melanophages in the superficial dermis. In the papillary dermis, focal collections of amorphous eosinophilic-staining material that stained positive with crystal violet were present (Figure 2). A diagnosis of LA was established and the patient was treated with liquid nitrogen cryosurgery using a 15 second, single freeze thaw cycle. One month later there was prominent regression of the papular lesions, and a second session of cryosurgery was carried out. At the end of the second month, the patient was symptom free, and a near complete resolution of the lesions was achieved (Figure 3). A side effect of hypopigmentation was also observed in the treatment site. A control biopsy specimen of the previously involved skin showed clearance of amyloid deposits in the superficial dermis. No recurrence was noted during 6 months of follow-up.

The lesions of LA usually occur in a symmetrical distribution as multiple, scaly, closely set papules, some with a lichenified surface, mainly located on the lower legs, especially around the ankles, and, to a lesser extent, the trunk and the upper extremities. Atypical localization with involvement of the vulva, ears and buttocks and generalized cases have also been described (13-15). Histological features include cosinophilic globular masses of amorphous material in the papillary dermis that stain positively for amyloid with Congo red and crystal violet stains. Hyperkeratosis, hypergranulosis, slight degree of epidermal hyperplasia, colloid bodies, basal cell vacuolar degeneration, melanophages, and a mild superficial and perivascular lymphohistiocytic infiltrate in the dermis may also be observed (6,9). The findings of excoriated, hard and hyperkeratotic papules on the anterior aspect of the shin as well as the deposition of amorphous amyloid material in the papillary dermis was consistent with a diagnosis of LA in our case.

LA is reported in association with several disorders including multiple endocrine neoplasia type 2A (Sipple syndrome), atopic dermatitis, lichen planus, mycosis fungoides, angiolymphoid hyperplasia with eosinophilia, Kimura’s disease and Alagille syndrome (2,16-18). No associated dis-
In conclusion, we consider that an open spray technique of cryosurgery may be considered in the therapy of localized LA resistant to other treatment options.

References

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