Net Letter

Acrosyringeal lichen planus of palm

Sir,

Lichen planus (LP) is a pruritic, benign, papulosquamous, inflammatory dermatosis of unknown etiology that affects either or all of the skin, mucus membrane, hair and nail. In its classic form, it presents with violaceous, scaly, flat-topped, polygonal papules.

Commonly it affects extremities and mucus membranes.[1,2]

A 23-year-old unmarried male presented with asymptomatic hyperpigmented keratotic plaques with punctate keratoses and pits over bilateral palms since two months. These lesions were gradual in onset and progressive in nature. They started with keratotic papules and later coalesced to form plaques. There was no history of vesiculation or oozing or of similar lesions elsewhere on the body. Examination revealed four hyperpigmented, hyperkeratotic plaques with punctate keratoses and pits over them at places [Figures 1 and 2]. No other skin lesions were seen on the body. Nails and oral mucosa were normal.

A diagnosis of palmar lichen nitidus and LP was thought and a skin biopsy from a plaque was obtained.

Histopathological examination of biopsy showed compact orthokeratosis, hypergranulosis, irregular slightly saw-tooth acanthosis with focal vacuolar alteration of basal layer with degeneration of basement membrane and scattered necrotic keratinocytes. In papillary dermis, band-like dense lymphocytic infiltrate with congested capillaries and occasional melanophages was seen [Figure 3]. A dermal lymphocytic infiltrate mainly in juxtaposition to the acrosyringium and liquefaction degeneration of the acrosyringeal basal cell layer were seen as prominent findings [Figure 4a]. Also dilated acrosyringium with orthokeratotic plug was seen corresponding to punctate keratoses seen clinically [Figure 4b]. However, epidermal perforation could not be found even on multiple step sections and thus cause of pits seen clinically remained unknown. On clinicopathological correlation, a diagnosis of acrosyringeal LP of palm was made. Patient is advised to apply topical clobetasol and 3% salicylic acid cream twice daily along with moisturizers and is under follow-up.

Involvement of palms and soles is rare in LP. In a clinico-etiological study of 375 LP patients, involvement of the palms was seen in only 3.5% and of soles in 4.3% of the cases.[2,3] Palmoplantar LP usually presents with yellowish hyperkeratotic plaques with or without itching.[1] However, there is wide variation in lesions of palmoplantar LP.

Various morphological patterns of palmoplantar LP have been described, including erythematous scaly plaques, yellowish hyperkeratotic papules, diffuse keratoderma, ulcerated lesions, vesicle-like papules, diffuse palmar hyperpigmentation, umbilicated papules[3-7] hyperkeratotic pitted plaques with perforation of epidermis (perforating LP)[7] and punctate keratotic plaques (as in present case).

Due to this varied clinical presentation, histopathology is usually needed to confirm diagnosis in such cases.

Keratotic plaques with punctate keratoses or pitting over palms are always a diagnostic dilemma. The conditions to be considered for such presentation as in our case are punctate porokeratosis, lichen nitidus, punctate palmoplantar keratoderma, arsenical keratoses and porokeratotic eccrine ostial and dermal duct nevus. Isolated pitting of palms is also seen in pitted keratolysis, Darrier White disease, Gorlin syndrome, dyskeratosis congenita, Cowden's syndrome, basaloid follicular hamartomas and aquagenic keratoderma.[3,7] Khandpur *et al*. reported four cases of hyperkeratotic pitted plaques on palms and soles and suggested that hyperkeratotic plaques with pits on the palm and soles are highly suggestive of lichenoid pathology and should prompt search for LP or lichen nitidus at other sites. Presence of plugs within the pits is suggestive of LN and violaceous rim

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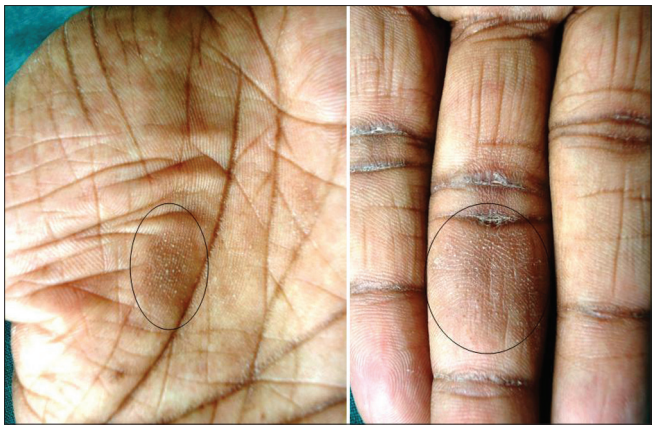

Figure 1: Hyperkeratotic, hyperpigmented plaque with punctate keratoses over inner arch and middle finger of right palm

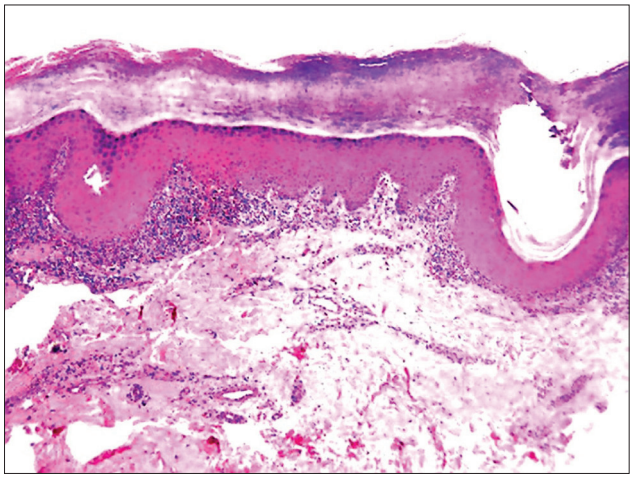

Figure 3: Hyperkeratosis, hypergranulosis, irregular acanthosis and band-like lymphocytic infiltrate in dermis with interface change. (H and E, 40×)

indicates LP.[3] Histologically lichen nitidus will show granulomatous pathology with classic "claw clutching a ball" appearance.

One of the characteristic finding seen in our case was acrosyringeal accentuation of dermal infiltrate. Enhamre *et al*. have described cases of LP with dermal lymphocytic infiltrate in juxtaposition to acrosyringium with liquefactive degeneration of acrosyringeal basal cell layer as a prominent histological finding and coined the term acrosyringeal LP.[8] Mugoni *et al*. described five cases of LP on palms with acrosyringeal LP in one of them.[6] Drugs such as β-blockers that are excreted through sweat ducts may influence its physiology by involving β-adrenergic receptors to produce predominant acrosyringeal changes. However, our patient did not have any history of drug intake. Mugoni *et al*. stated that acrosyringium constitutively expresses

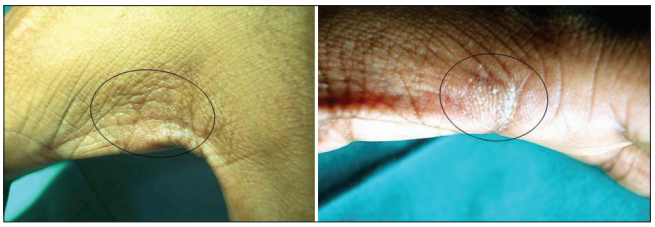

Figure 2: Symmetric, hyperkeratotic, slightly hyperpigmented plaque with multiple pits over them on first web space

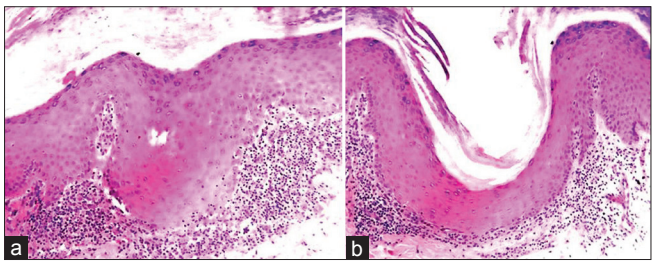

Figure 4: (a) Vacuolar alteration of basal layer with squamatization involving mainly acrosyringium. (H and E, ×100) (b) Dilated acrosyringium with orthokeratotic plug with liquefactive degeneration of the acrosyringeal basal cell layer (H and E, ×100)

class 2 major histocompatibility antigens (HLA-DR, HLA-DP, HLA-DQ) on surface, and this expression of antigens in association with cell-mediated immune mechanisms in certain circumstances, could allow antigen presentation to T cells giving rise to immune response involving predominantly acrosyringium.[6]

Various treatment modalities for palmoplantar LP include topical steroid with emollients, keratolytic agents like salicylic acid, topical tazarotene and systemic steroid, acitretin, subcutaneous enoxaparin and oral immunosuppressants like cyclosporine have been used successfully. Psoralen plus ultraviolet A (PUVA) and PUVA bathing, showed good response in resistant cases. Surgical treatment with excision and grafting can be used in painful erosive cases resistant to other modalities.[2-4]

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