Unilateral Linear Lichen Planus Hypertrophicus Along Blaschko's Lines

Sir,

Lichen planus (LP) is an idiopathic inflammatory skin condition affecting the skin and mucosa. Certain unusual variants of LP may present a difficulty in diagnosis. We report two cases of localized, unilateral, linear LP hypertrophicus along the lines of Blaschko. To the best of our knowledge, a similar clinical presentation has been previously described only once.[1]

Case 1 was a 60-year-old female who presented with the complaint of raised lesions on the left ankle and left lower leg for 15 years. The lesions had gradually increased in number and size. These were pruritic but there was no pain or discharge. On examination, there were well-defined discrete to confluent hyperkeratotic nodules and plaques on the dorsal surface of left foot and anterior surface of left lower leg arranged in a Blaschko's linear pattern, extending about 5 cm above the ankle. The lesions were firm and nontender with crusting present on few lesions. The first and second toe nails of the left foot showed longitudinal melanonychia [Figure 1].

Case 2 was a 60-year-old female who presented with raised itchy lesions on the right lower leg for 26 years. On examination, the medial aspect of the right lower leg showed hyperpigmented nodules and plaques arranged along the Blaschko's line [Figure 2].

There was no history of trauma, drug intake, preceding infection or comorbidity in any of the cases. Mucosal, scalp, and nail examinations were insignificant in these patients except for the involvement of toe nails in the first patient. There was no lymphadenopathy and systemic examination was essentially normal. Routine investigations including viral markers were normal. The differential diagnoses were sporotrichosis, hypertrophic LP, chromoblastomycosis, nodular prurigo, sporotrichoid leishmaniasis, and verruca vulgaris. Skin biopsy in both these patients showed marked orthokeratotic hyperkeratosis overlying irregular pseudoepitheliomatous epidermal hyperplasia. Hypergranulosis was present. Patchy band-like lymphocytic infiltrate was present in papillary dermis focally abutting the basal layer particularly along the rete ridges, showing squamatization and apoptotic keratinocytes. Granulomatous pathology and fungal elements were not seen. These features were consistent with LP hypertrophicus [Figure 3a and b].

Hypertrophic LP, also known as LP verrucosus, is characterized by intensely pruritic, thick hyperkeratotic plaques seen primarily on the shins or dorsal surface of the foot. The lesions are commonly symmetric and tend to be chronic due to repetitive scratching. Chronic venous insufficiency contributes to its development. Histopathology shows marked hyperkeratosis, acanthosis, papillomatosis, and hypergranulosis. The interface vacuolar changes are often limited to the base of rete ridges. It is recalcitrant to treatment and some cases may undergo malignant transformation.

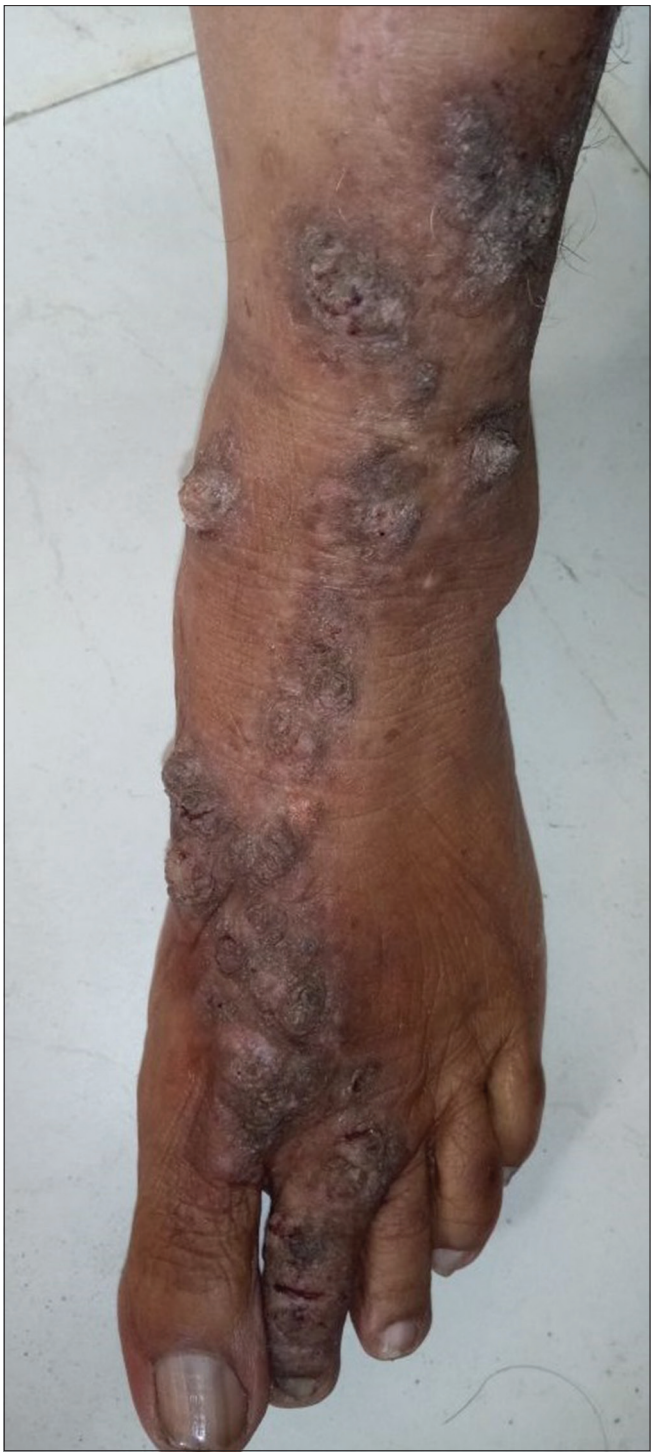

Figure 1: Hyperkeratotic nodules and plaques on the left foot and left lower leg arranged in a Blaschko's linear pattern

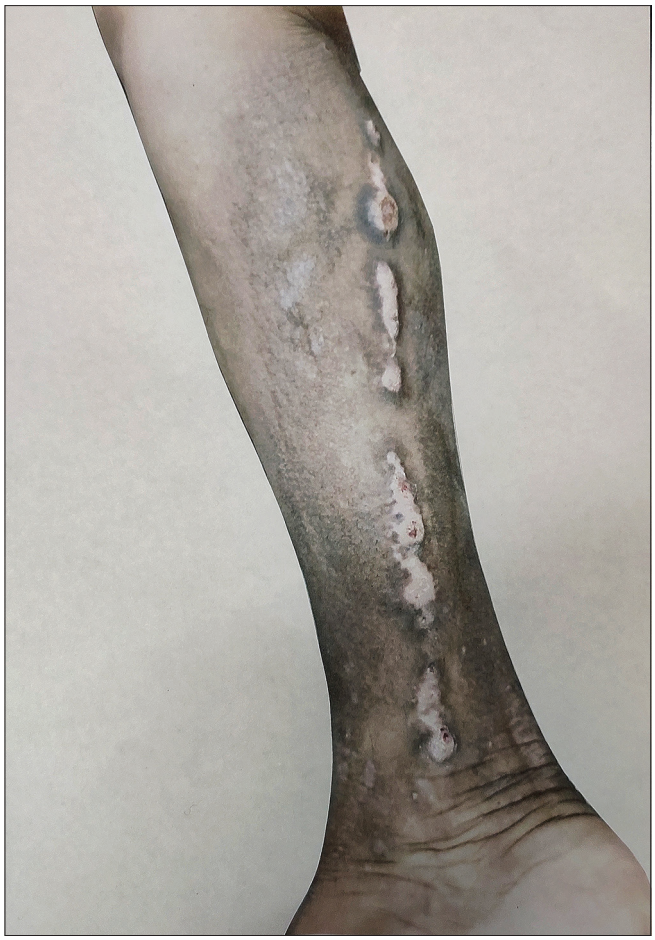

Figure 2: Hyperpigmented nodules and plaques arranged along Blaschko's line on the medial aspect of the right lower leg

Apart from linear lichen planus (LLP), linear lesions along Blaschko's lines have also been reported in other variants of LP like lichen planus follicularis,[2] atrophic LP,[3] and lichen planus pigmentosus.[4] The explanation for the peculiar arrangement of lesions noted in our patients perhaps lies in the nature of Blaschko's lines and unmasking of the abnormal keratinocyte clones after an initiating event for LP.[5] To date, there is single case report describing unilateral, linear LP hypertrophicus.[1] The scarcity of data on unilateral, linear, and blaschkoid LP hypertrophicus prompted this report. Thus, hypertrophic LP should also be considered in the differentials of linear and Blaschkoid lesions in dermatology. Also, correct diagnosis and treatment of this variant of LP is important as there have been reports of malignant transformation in hypertrophic LP.

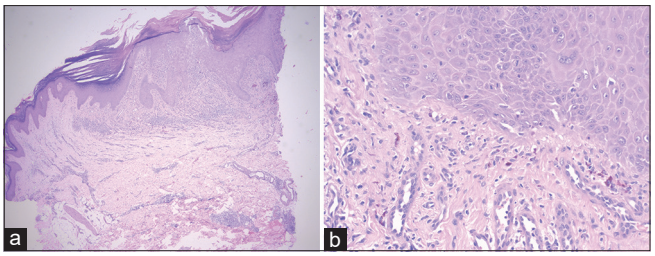

Figure 3: (a) Orthokeratotic hyperkertosis covering epidermis showing pseudoepitheliomatous hyperplasia with hypergranulosis and patchy band-like lymphocytic infiltrate in papillary dermis (H and E, ×40); (b) Basal layer showing squamatization and scattered apoptotic keratinocytes (H and E, ×200)

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patients have given their consent for their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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