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Case Report

Lichen Planus-Like Keratosis – A Unique Entity

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ABSTRACT

Lichen planus-like keratosis (LPLK) is a benign skin lesion that can be challenging to distinguish from various benign and malignant skin tumours. We are presenting two cases with a single, asymptomatic dark flat lesion on the face and scalp. Dermoscopy of both lesions showed pigment pseudo-network, pigment dots and globules, as well as few white structureless areas. The diagnosis of LPLK was confirmed on histopathology. It is frequently confused with malignant conditions, and therefore, it is essential to be aware of this benign entity to prevent unnecessary psychological impact on the patient of a diagnosis of malignancy as well as to avoid unwarranted biopsies.

Keywords: Lichen planus-like keratosis, Lichenoid keratosis, Dermoscopy, Seborrheic keratosis, Solar lentigo

INTRODUCTION

Lichen planus-like keratosis (LPLK) or lichenoid keratosis (LK) is a benign lesion that is thought to be derived from immunological involution of precursor lesions such as solar lentigo and seborrheic keratosis.[1] Spontaneous regression has been seen to occur in most cases.

It can be diagnosed by histopathological examination, but dermoscopy is also a useful tool. Dermoscopic features have been seen to change with progression and regression of lesions.[2] LPLK is most commonly seen on the trunk and upper extremities.[3] We report two cases one of whom presented with a lesion on the scalp, which is a rare site for LPLK. LPLK is a benign skin lesion that can be challenging to distinguish from various benign and malignant skin tumours and often leads to many unnecessary biopsies. This report is aimed at providing an understanding of the clinical and dermoscopic features of LPLK, especially in the Indian setting where it has been previously unexplored.

CASE REPORTS

Case 1

A 50-year-old male presented with a single blackish asymptomatic lesion on his scalp since two and a half months. No previous lesions had been noticed by the patient at that site. Clinical examination revealed a single hyperpigmented well-defined papule with atrophic centre on the vertex [Figure 1a]. He worked as a vegetable vendor, which exposed him to prolonged sun exposure.

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Dermoscopy of the lesion showed background erythema with pigment pseudo-network, pigment dots and globules and few structureless areas [Figure 1b].

A punch biopsy was performed and histopathology showed mild hyperkeratosis with subepidermal lichenoid infiltrate and prominent pigment incontinence [Figure 1c].

A diagnosis of LPLK was made and topical tacrolimus 0.1% ointment once daily was prescribed. The patient noticed an improvement but was unfortunately unable to follow-up.

Case 2

A 45-year-old male presented with a single dark, raised, and asymptomatic lesion on the left cheek for 2 years on top of a pigmented flat preceding lesion, which was present for 4 years. Examination showed a single well-defined irregular hyperpigmented patch on his left cheek measuring approximately 0.5 × 1 cm^2 and an overlying hyperpigmented papule [Figure 2a].

Dermoscopy revealed erythema, pigment pseudo-networks and white structureless areas [Figure 2b].

On histopathology, there was follicular hyperkeratosis, hyperplastic epidermis with a subepidermal lichenoid infiltrate consisting of lymphocytes with a few melanophages [Figure 2c].

The diagnosis of LPLK was confirmed and the patient was prescribed topical tacrolimus 0.1% ointment once a day. Unfortunately, the patient discontinued treatment and was lost to follow-up.

DISCUSSION

LPLK is a benign skin lesion that is seen most commonly between the fifth and eighth decades of life. It is considered to be an inflammatory process to clear out pre-existing seborrheic keratosis or solar lentigo.[4] A higher predilection in men has been seen in a few reports.[5]

LK can be categorised clinically into six different types: Flat pigmented, flat erythematous, plaque-like, papulokeratotic, nodular, and morpheaform. LK is usually asymptomatic, but some patients may complain of pruritus. It is frequently confused with malignant conditions ranging from squamous cell carcinoma to melanoma and other pre-malignant ones like Bowen's disease.

It is essential to be aware of this benign entity to prevent unnecessary psychological impact on the patient of a diagnosis of malignancy as well as to avoid unwarranted biopsies.

Dermoscopy of this lesion has evolving features according to clinical stage of regression of the lesion and helps point toward the diagnosis of this benign entity.

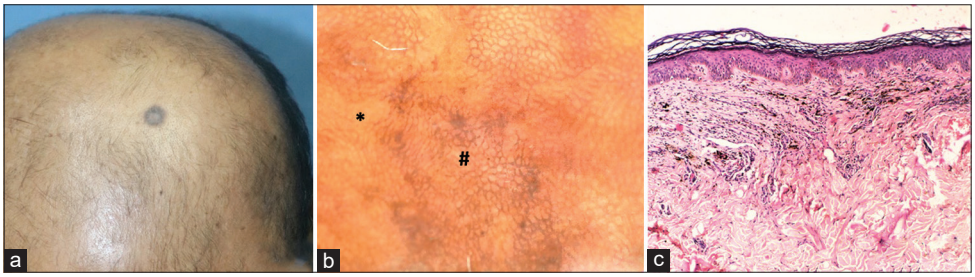

Figure 1: (a) Single hyperpigmented well-defined papule with atrophic center on the vertex. (b) Background erythema with pigment pseudo-network (*), pigment dots and globules and few structureless areas (#). (c) Follicular hyperkeratosis, hyperplastic epidermis with a subepidermal lichenoid infiltrate consisting of lymphocytes with a few melanophages (Haematoxylin and Eosin: ×100).

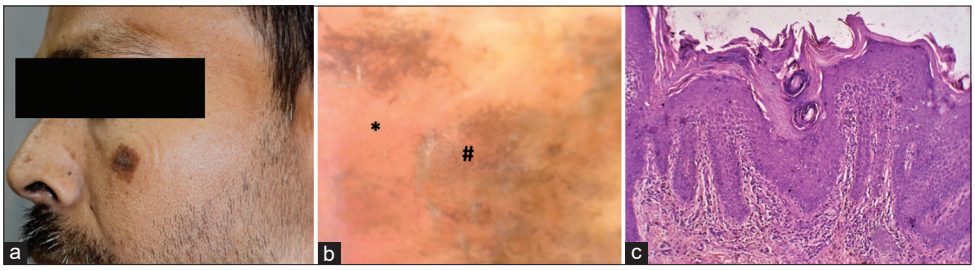

Figure 2: (a) Well-defined irregular hyperpigmented patch on the left cheek with an overlying hyperpigmented papule. (b) Pigment pseudo-networks (*) and white structureless areas (#). (c) Follicular hyperkeratosis, hyperplastic epidermis with a subepidermal lichenoid infiltrate consisting of lymphocytes with a few melanophages. (Haematoxylin and Eosin 100×).

Early stage is characterised by polymorphous vessels: dotted vessels and short thin vessels that are either linear, slightly curved or serpentine in appearance. The lesions may appear structureless, pink-white with an orange or yellow hue. Intermediate stage lesions reveal regression structures such as focal grey dots or granules. Late stage LPLK shows scattered clumps of pigment with grey/brown dots/granules. Both our patients show dermoscopic features of late stage which corresponds histopathologically with the presence of pigment incontinence in upper dermis.

Since LPLK is a benign condition, treatment is mainly undertaken for cosmetic purposes. Moreover, most lesions resolve spontaneously. Treatment options include topical 5% 5-FU, imiquimod and tacrolimus ointment.

CONCLUSION

LPLK is a benign skin condition that can be challenging to distinguish from various benign and malignant skin tumors. Dermoscopy acts as a useful tool to guide us towards its diagnosis and thus, reducing the need for histopathological examination.

Ethical approval

Institutional Review Board approval is not required.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Nil.

Conflicts of interest

There are no conflicts of interest.

Use of artificial intelligence (AI)-assisted technology for manuscript preparation

The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

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