

Lichenoid keratosis successfully treated with topical imiquimod



Hessah BinJadeed, MD,^a Nouf Aljomah, MD,^a Norah Alsubait, MD,^a Fahad Alsaif, PhD,^a and Ahmed AlHumidi, PhD^b
Riyadh, Saudi Arabia

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INTRODUCTION

Lichenoid keratosis (LK), also known as lichen planus-like keratosis, solitary lichen planus, or involuting lichenoid plaque, is a benign skin lesion that commonly occurs as a single small gray-brown plaque or papule and is most commonly located on the chest and upper extremities.¹⁻³ A variety of treatments can be used to remove such lesions, including cryosurgery, electrosurgery, and curettage, but the lesions can recur after removal.⁴ We report a case of LK that was treated effectively with topical imiquimod, with no recurrence upon 7 months of follow-up. A similar case published in 2015 was reported to be effectively treated with topical imiquimod, with no recurrence of the condition.⁴

CASE REPORT

A 76-year-old man presented to our dermatology clinic with an asymptomatic single skin lesion on the right side of the temple. The patient reported that the lesion had been present for 2 weeks (Fig 1). No previous skin lesions had been noted by the patient at the same site. The lesion was stable in size, color, and shape. Physical examination revealed a solitary violaceous thin plaque measuring 1.5 × 2 cm². Scalp, mucosal, and nail examinations were normal. The patient was treated with 5 mg amlodipine/160 mg valsartan for hypertension and used salbutamol and budesonide/formoterol inhalers for bronchial asthma.

A 3-mm punch biopsy was taken from the center of the lesion, which showed interface lymphohistiocytic infiltrate with focal sawtooth rete ridges and scattered necrotic keratinocytes. Solar elastosis was

Abbreviation used:

LK: lichenoid keratosis

also noted in the papillary dermis. There was no evidence of squamous atypia in situ or invasive malignancy (Fig 2).

The lesion's dermoscopic features at the first visit showed a light-brown pseudonetwork with a fading regularly scalloped border, subtle gray circles, structureless pink-white area, and shiny-white blotches; white circles, scales, and short thin serpentine vessels; and no mouth-eaten borders, rosettes, strawberry pattern, or irregular dots. The overall organized dermoscopic features and scales supported the diagnosis of LK (Fig 3).

The patient was initially treated with mometasone cream and tacrolimus ointment once daily. After 12 days of treatment, there was no change observed in the lesion; so we prescribed 5% imiquimod cream to be applied 5 days a week. The patient did not develop a reaction to the medication. After 6 weeks of treatment, he showed significant clinical improvement. No recurrence was observed after 7 months of follow-up (Fig 4).

The lesion's dermoscopic features after 7 months of follow-up showed the following characteristics: white and pink shiny structureless areas, fading white circles owing to fading light-brown pseudonetwork, and short thin serpentine vessels and no more gray circles, white blotches, or scales. These features suggested regression of LK with a great improvement.

From the Dermatology Department^a and the Pathology Department,^b College of Medicine, King Saud University and King Saud University Medical City, Riyadh.

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Correspondence to: Hessah BinJadeed, MD, King Khalid Road, King Khalid University Hospital, Riyadh 12372, Saudi Arabia. E-mail: HF.new@hotmail.com.

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Fig 1. Solitary violaceous thin plaque on the right side of the temple at the time of presentation.

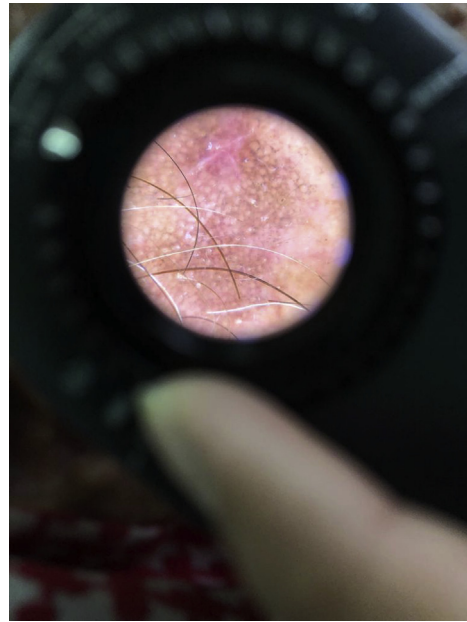


Fig 3. Dermoscopic picture at the time of presentation.

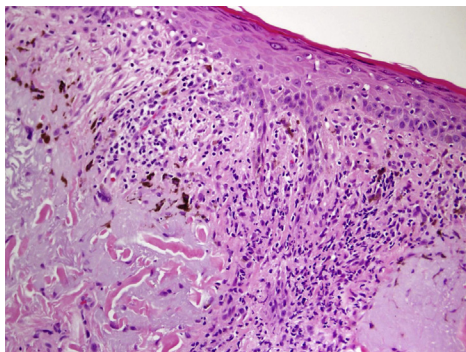


Fig 2. Photomicrography of skin punch biopsy showing interface lymphocytic infiltrate, sawtooth rete ridges, and few necrotic keratinocytes. (Hematoxylin-eosin stain; original magnification: $\times 200$.)

DISCUSSION

LK, also known as lichen planus-like keratosis, solitary lichen planus, or involuting lichenoid plaque, is a common benign cutaneous lesion.¹⁻³ LK is found to represent 1.6% of overall skin biopsies reviewed by dermatopathologists.⁵ It usually affects adults older than 55 years of age and is more prevalent among women.^{2,6} The etiology of LK is not fully understood; however, it usually develops over a preexisting skin lesion, such as a solar lentigo lesion or seborrheic keratosis, which might be evident upon examination.¹ LK can appear anywhere on the body; however, it is most commonly seen on the trunk or the upper extremities. It is frequently present as a single lesion.^{2,5,6} In our case,



Fig 4. After 7 months of follow-up there was no recurrence of the lesion.

the patient had LK on his face, which is a rarely affected site.⁵

LK can be categorized clinically into 6 different types: flat pigmented, flat erythematous, plaque-like, papulokeratotic, nodular, and morpheaform. Patients with the flat pigmented type, which is the most common type of LK, present with a brown lesion < 1 cm in diameter. The second most common type is the flat erythematous type, which is characterized by a pink-brown patch measuring 1-1.8 cm in diameter.

The plaque-like type is characterized by a <1 cm pink-brown plaque with slight scaling, which can be ulcerated. The morpheaform type is characterized by a whitish-pink sclerotic plaque <1 cm, whereas the papulokeratotic type is characterized by a <1 cm pink or black-brown plaque with scales. Finally, the nodular type typically presents as a pink-brown nodule <0.5 cm. LK is usually asymptomatic, but some patients may complain of pruritus.⁷

Pathologically, LK can be classified into 5 different subtypes: classic, bullous, atypical, early or interface, and late regressed or atrophic. With the classic type, which represents 81% of the cases, epidermal acanthosis and parakeratosis with a band-like lichenoid lymphocytic infiltrate are apparent, and plasma cells, eosinophils, and neutrophils can be seen. The bullous type shows intraepidermal or subepidermal blisters with dense lymphocytic infiltrate and necrotic keratinocytes in the basal layer. The atypical type shares features with the classic type and has enlarged lymphocytes with hyperchromatic, irregular nuclei that are CD3+ and CD30+. The early interface type exhibits single lymphocytes arranged along the dermoepidermal junction without epidermal acanthosis. The regressed or atrophic type is characterized by epidermal atrophy, papillary dermal fibroplasia, patchy lymphocytic infiltrates, and melanin incontinence.⁶

Removal of the lesions can be achieved by cryosurgery, electrosurgery, or curettage. Other treatments, such as topical steroids, can also be

used⁸; topical 5-fluorouracil applied once daily has been reported to give good results.⁹ Imiquimod applied topically has also been reported to cure LK with no recurrence of the lesion 1 month later.³ Here, we reported a case of LK treated successfully with topical imiquimod with no recurrence observed after 7 months of follow-up.

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