

Case Series

Lichenoid Keratosis: A Clinical Trap without Secrets for Reflectance Confocal Microscopy

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Keywords

Confocal microscopy · Lichenoid keratosis · Pink lesion · Polymorphic vascular pattern

Abstract

Lichenoid keratosis, also defined as benign lichenoid keratosis, was reclassified as lichen planus-like keratosis by Shapiro and Ackerman. Clinical and dermoscopic features of lichen planus-like keratosis can vary, often not providing useful and necessary information to perform an accurate diagnosis without performing a biopsy or histological examination. We describe 2 difficult to detect lichen planus-like keratosis cases in which we performed reflectance confocal microscopy. We underline the usefulness of this noninvasive diagnostic tool in the unclear cases of lichen planus-like keratosis.

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Introduction

Lichenoid keratosis (LK), also known as benign LK, lichen planus-like keratosis (LPLK), or involuting lichenoid plaque, was first described in 1966 as a solitary form of lichen planus. It was later reclassified as LPLK by Shapiro and Ackerman [1]. Clinical and dermoscopic features of LK can vary, often not providing useful and necessary indications to perform an accurate diagnosis without performing a biopsy or histological examination. Here, we describe 2

cases of LPLKs evaluated by means of dermoscopy and reflectance confocal microscopy (RCM).

Case Reports

A 65-year-old woman, without family history of skin cancer, presented with a pink-violet solitary lesion on the leg of 2 years' duration (Fig. 1a). The lesion encrusted sporadically. On dermoscopy, it displayed a nonspecific pattern of benign or malignant skin tumors. It showed the presence of multiple polymorphous vascular patterns (linear, looped, and coiled vessels) distributed in the entire lesion as well as white and orange dots and clods (Fig. 1b). Examination by RCM revealed a typical honeycombing pattern at both the spinous and granular layers of the epidermis, with several round-oval dark structures consistent with comedo-like openings, and the presence of elongated cords corresponding to acanthotic (hyperplastic) epidermis bulging against the packed papillae (Fig. 1c). RCM also showed an inflammatory infiltrate at the dermo-epidermal junction closer to bulging packed papillae (Fig. 1d). Two RCM blocks illustrated the presence of inflammatory cells and melanophages. These features strongly suggested a diagnosis of inflamed or regressive benign keratotic lesion. Histopathologic examination confirmed the diagnosis of LPLK (Fig. 1e).

The second lesion was reported in a 45-year-old man. Dermoscopy revealed a polymorphic vascular pattern on a soft pink background and some light brown areas in the borders that could not be traced back to a real pigment network (Fig. 2a). These features were nonspecific and did not lead to a clinical diagnosis of benign or malignant lesion with certainty. We performed RCM showing the presence of a typical honeycombing pattern related to several round oval dark and hyper reflective oval structure, attributable to comedo-like openings (Fig. 2b). Moreover, an RCM mosaic performed at a deeper level revealed the presence of elongated cords, bulbous projections and, within the interpapillary spaces, several bright round cells, brisk inflammatory cells (Fig. 2c).

Discussion

Dermoscopic analysis does not support a reliable diagnosis in these cases because of the absence of specific criteria consistent with a melanocytic lesion. A previous stepwise RCM approach for solitary pink lesions by Gill and Gonzalez [2] has facilitated appropriate diagnosis. Following RCM examination, surgical excision of the lesions for histopathologic analysis confirms the RCM diagnosis of LK. To our knowledge, there is only one case described by Nagrani et al. [3] reporting the usefulness of RCM to detect an unclear case of LPLK. Due to this difficulty, wrong diagnosis of LK is very frequent [4]. Zaballos et al. [5] reported 24 cases of the dermoscopic pattern of intermediate stage in seborrheic keratosis regressing to LK, suggesting the presence in 63% of BCC, in 24% squamous cell carcinoma, in 6% seborrheic keratosis, and in 1% miscellaneous. In our cases, dermoscopy did not reveal peripheral gray pigment or other element strictly related to LPLK diagnosis, but only the presence of a polymorphic vascular pattern and some white-brown dots and clods. Nagrani et al. [3] reported the usefulness of RCM and dermoscopy in the diagnosis of difficult to detect LPLK, discussing the different stages of regression, which result in different appearances. Only few data are published on RCM pitfalls of difficult to detect LPLKs, confirming similar RCM aspects to our experience. In particular, typical honeycombing pattern related to several round oval dark and hyperre-

flective oval structures, attributable to comedo-like openings. Moreover, there were some bright round cells consistent with inflammation, located in the interpapillary spaces, and numerous bright-stellate spots or plump bright cells in the superficial dermis. Ramirez-Fort et al. [4] also reported the absence of discernible papillae consistent with an epidermal neoplasm (i.e., seborrheic keratosis), blunting the regular contour of the dermo-epidermal junction and allowing correct diagnosis [3, 4].

Conclusion

In conclusion, RCM is a useful tool to diagnose difficult cases of LK, revealing features invisible to dermoscopic approaches.

Statement of Ethics

Subjects have given their informed consent to publish their case (including publication of images), and the study protocol has been approved by the institute's committee on human research.

Disclosure Statement

The authors do not report any conflicts of interest related to this work.

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Author Contributions

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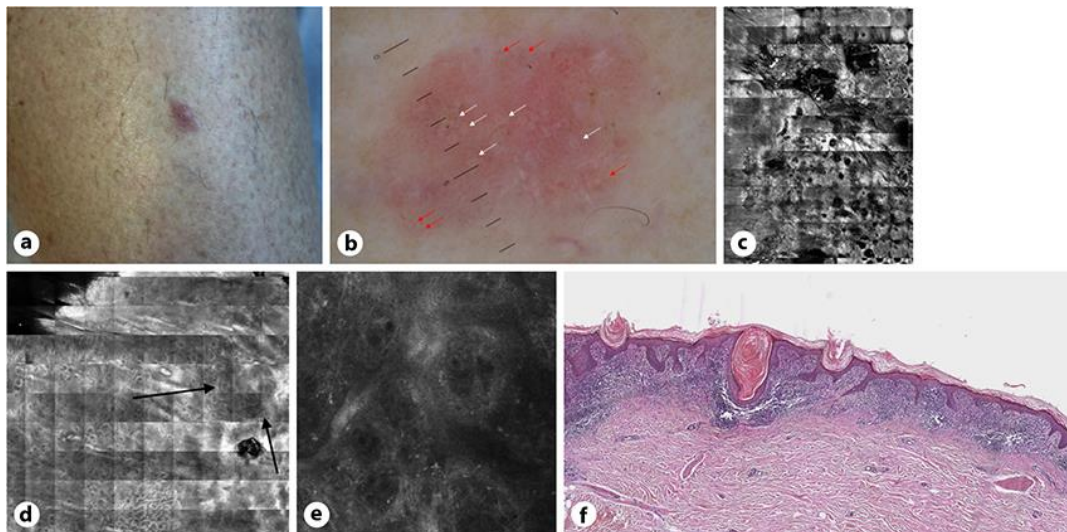


Fig. 1. **a** Clinical examination of a pink-violet oval lesion of the leg in a 65-year-old woman. **b** Dermoscopy showed the presence of a polymorphous vascular pattern (linear, looped, and coiled vessels) (red arrows). White and orange dots and clods can be detected (white arrows). **c** RCM mosaic (3 × 3 mm) revealed a typical honeycombing pattern at the spinous and granular layers of the epidermis, with several round dark oval structures consistent with comedo-like openings and the presence of elongated cords corresponding to hyperplastic epidermis, bulging against the packed papillae. **d** Inflammatory infiltrate in the epidermal layer can also be observed (arrows). **e** RCM block showing inflammatory infiltrate closer to epidermal thickening. **f** Histopathological examination illustrated hyperkeratosis, hypergranulosis, and variable acanthosis with focal parakeratosis of the epidermis. A dense lymphohistiocytic inflammatory infiltrate in a band-like horizontal disposition is also present.

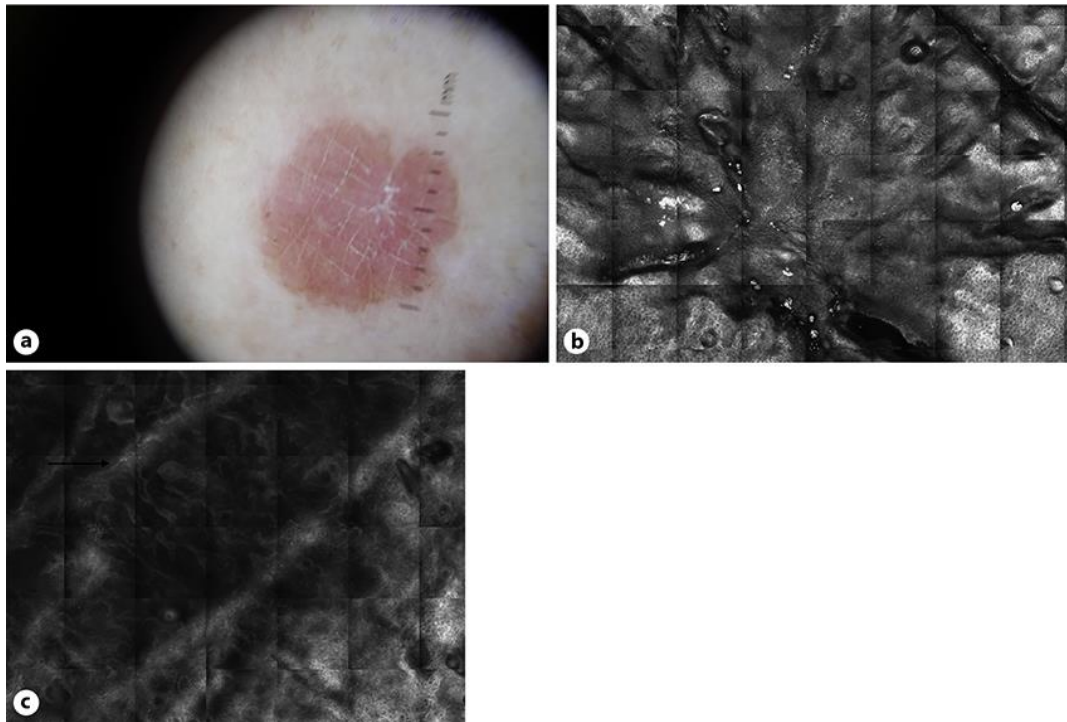


Fig. 2. **a** Dermoscopic image showing pink structureless areas. **b** RCM mosaic showed the presence of oval hyperreflective structures corresponding to comedo-like openings. **c** RCM mosaic performed at a deeper level illustrated elongated cords, bulbous projections and, within the interpapillary spaces, several bright round cells, consisting in a brisk inflammatory infiltrate.