Dermatology Reports
https://www.pagepress.org/journals/index.php/dr/index

eISSN 2036-7406

Please cite this article as:

Korecka K, Bowszyc-Dmochowska M, Łabędź N, et al. Keratosis lichenoides chronica: a case report with dermatoscopic and ultrasonographic analysis. *Dermatol Rep 2025 [Epub Ahead of Print] doi: 10.4081/dr.2025.10093*

Submitted 16/07/24 - Accepted 17/05/25

Keratosis lichenoides chronica: a case report with dermatoscopic and ultrasonographic analysis

Katarzyna Korecka,[1] Monika Bowszyc-Dmochowska,[2] Nina Łabędź,[3] Ryszard Żaba,[1] Aleksandra Dańczak-Pazdrowska,[3] Adriana Polańska[1]

[1]Department of Dermatology and Venereology; [2]Cutaneous Histopathology and Immunopathology Section, Department of Dermatology; [3]Department of Dermatology, Poznań University of Medical Sciences, Poznań, Poland

Correspondence: Katarzyna Korecka, Department of Dermatology and Venereology, Poznań University of Medical Sciences, Przybyszewskiego 49, 60-356 Poznan, Poland.
E-mail: kasia.korecka@gmail.com

Key words: dermoscopy; keratosis lichenoides chronica; high-frequency ultrasonography.

Contributions: KK, conceptualization, visualization, data collection, writing–original draft; MBD, visualization, writing–original draft; NŁ, writing–original draft; RŻ, conceptualization, writing–original draft; ADP, supervision, conceptualization, writing–original draft; AP, visualization, supervision, conceptualization, writing–original draft.

Conflict of interest: the authors have no conflict of interest to declare.

Ethics approval and consent to participate: no ethical committee approval was required for this case report by the Department, because this article does not contain any studies with human participants or animals. Informed consent was obtained from the patient included in this study.

Consent for publication: the patient gave her written consent to use her personal data for the publication of this case report and any accompanying images.

Availability of data and materials: all data underlying the findings are fully available.

Abstract

We present the case of a 46-year-old woman with a long-standing history of linear erythematosquamous papules on the arms and thighs, which were unresponsive to treatment with topical corticosteroids. She also reported lesions typical of seborrheic dermatitis located on her face. After performing a clinical examination, dermatoscopy, high-frequency ultrasonography (HFUS), and a biopsy for histopathological examination, a diagnosis of keratosis lichenoides chronica (KLC) was obtained.

Also known as Nekam disease, keratosis lichenoides chronica is a rare, chronic inflammatory skin disease characterized by diffuse, linearly arranged erythro- or erythematosquamous papules with a thin, keratotic plug.

Introduction

Keratosis lichenoides chronica (KLC), also known as Nekam disease, is a rare chronic inflammatory skin disease in which diffuse, linearly arranged erythro- or erythematosquamous papules with a thin, keratotic plug can be detected.[1,2] Additionally, seborrheic-like lesions can occur on the face.[1] It has been widely discussed whether it is a separate entity or a subtype of lichen planus, lupus erythematosus, or lichen simplex chronicus.[2] Historically, it was named “porokeratosis striata lichenoides”, although no cornoid lamella was found in the histopathological examination.[3,4] Herein, we present a case of KLC examined with dermatoscopy and high-frequency ultrasonography (HFUS). To date, we have not found any descriptions of the KLC ultrasound image in the literature.

Case Report

A 46-year-old woman presented with diffuse, linear erythematosquamous lesions located on the arms and thighs (Figure 1 a,b), which have been present for many years. She also reported recurrent episodes of seborrheic dermatitis on the face with a poor treatment outcome. Nail changes were not observed. Dermatoscopy (DermLite DL5, 10x magnification) revealed white scales covering purple structureless areas alongside dotted and linear vessels (Figure 1 c,d). HFUS examination (DermaScan C, Cortex, 20 MHz) presented hyperechogenic and irregular entrance echo with perpendicular shadowing corresponding to the scales covering the lesions. Subjacent to the entrance echo, we observed alternately arranged conical hypoechogenic structures, with hyperechogenic lines ingrowing into the dermis (Figure 2).

A punch biopsy was performed, and an acanthotic epidermis with verrucous hyperortokeratotic surface, irregular granular layer, and irregular rete ridges with hydropic

degeneration of basal cells and occasional necrotic keratinocytes with dense band-like lymphohistiocytic infiltrate in the papillary dermis was seen in histopathology. Moreover, discrete parakeratosis within the hyperkeratotic plug in the dilated hair follicle, surrounded by inflammatory infiltrate, and inflammatory infiltrates surrounding dilated thin-walled blood vessels were also observed (Figure 3). The differential diagnoses were hypertrophic lichen planus and porokeratosis. The patient was initiated on systemic isotretinoin; however, treatment was discontinued after three months due to minimal clinical improvement and adverse effects, primarily severe skin dryness and irritation, which were poorly tolerated. She was subsequently started on UVA1 phototherapy but was only able to complete 10 sessions owing to personal circumstances. At follow-up, the patient expressed acceptance of her condition and declined further therapeutic interventions.

Discussion and Conclusions

KLC is an ambiguous dermatologic condition, with approximately 80 cases described in the literature.[1] The treatment modalities used for this disease include retinoids or phototherapy. However, evidence regarding their efficacy remains limited, primarily derived from individual case reports, with no randomized controlled trials available.[3] Furthermore, there are only a few reports on noninvasive skin imaging in KLC; in two of them, dermoscopic images were reported, and in one of them, the findings in reflectance confocal microscopy were described. On dermoscopy, a desquamative plaque with irregular edges, arranged in a hyperpigmented reticular pattern with superficial white scales on an erythematous pink base, was seen in one of the reports.[5] The second case revealed thick whitish lines, dotted and linear vessels, and brown-gray irregular and perifollicular granules and dots.[6] In our case, in HFUS, we observed hyperechogenic entrance echo related to the verrucous hyperortokeratotic surface of the lesions and hypoechogenic, conical structures related, among others, to the changes in the deeper part of the epidermis, as well as dense band-like lymphohistiocytic infiltrate in the papillary dermis. The linear, ingrowing hyperechoic lines may represent a distinctive ultrasonographic feature of KLC, potentially corresponding to dilated hair follicles filled with hyperkeratotic and parakeratotic material. This finding could aid in differentiating KLC from hypertrophic lichen planus; however, validation in a larger patient cohort is necessary.

The presence of scales covering the lesional skin is responsible for perpendicular shadowing and impairs the ability to assess the boundaries of the lesion. While histopathology remains the gold standard in the diagnosis of KLC, it is not always evident. In most cases, this lichenoid eruption resembles verrucous lichen planus with some exceptions like occasional

parakeratosis, perifollicular/acrosyringotropic, or perivascular inflammatory infiltrates.[7] The currently available therapies for KLC include systemic retinoids (isotretinoin and acitretin) and phototherapy, which have been described to have a satisfying efficacy in some patients.[1] Furthermore, resistance to dapsone, systemic steroids, methotrexate, and cyclosporine has also been reported.[1,8] Recently, Tang *et al.* reported a case in which a JAK-inhibitor, upadacitinib 15 mg/daily, in a KLC patient was used. A near-complete clearance of the lesions on his limbs was observed after 5 months of therapy.[8]

Additional non-invasive techniques, such as HFUS and dermatoscopy, can assist physicians in making a preliminary diagnosis. Although the diagnosis of this entity is challenging, Determining the specific features in dermatoscopy and HFUS would require a larger group of patients, which might be challenging to obtain due to the rarity of this dermatosis.

References

1. Aromolo IF, Giacalone S, Genovese G, et al. Keratosis lichenoides chronica: A case report and focused overview of the literature. Australas J Dermatol 2022;63.
2. Konstantinov KN, Søndergaard J, Izuno G, Obreshkova E. Keratosis lichenoides chronica. J Am Acad Dermatol 1998;38:306-9.
3. Böer A. Keratosis Lichenoides Chronica: Proposal of a Concept. Am J Dermatopathol 2006;28:260-7
4. Menter MA, Morrison JGL. Lichen verrucosus et reticularis of Kaposi (porokeratosis striata of Nekam): a manifestation of acquired adult toxoplasmosis. Br J Dermatol 1976;94:645-54.
5. Escanilla C, Truffello D, Cevallos C, et al. Keratosis lichenoides chronica: First case reported in Chile. Dermatol Online J 2019;25.
6. Ozturk A, Acar A, Yaman B, Karaarslan I. Keratosis Lichenoides Chronica (Nekam Disease): Dermoscopic and in Vivo Reflectance Confocal Microscopy Findings. Dermatol Pract Concept 2023;e2023232.
7. Wang W-L, Lazar A: Lichenoid and interface dermatitis. In: McKee's Pathology of the Skin. 4th ed. Edited by Calonje E, Brenn T, Lazar A, McKee P. Elsevier Saunders, 2012.
8. Tang J, Liu F, Liao W, Zhu G. Treatment of Keratosis Lichenoides Chronica With Upadacitinib. JAMA Dermatol 2024;160:681-2.

Figure 1. Erythrosquamous lesions clinically seen a) on the thigh and b) upper extremity. c,d) Dermatoscopy revealed white scales arranged linearly, covering purple structureless areas alongside dotted and linear vessels.

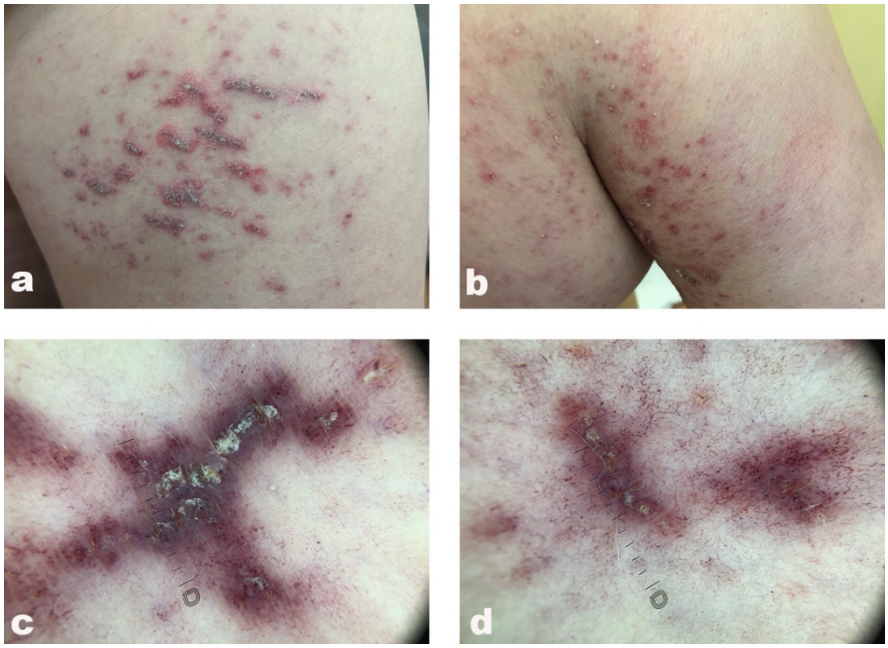

Figure 2. a,b) 20 MHz scans of KLC with hyperechogenic and irregular entrance echo (red arrow), perpendicular shadowing corresponding to the scales covering the lesions (white star), and the alternately arranged conical hypoechogenic structures (red star) and hyperechogenic lines ingrowing to the dermis (white arrow).

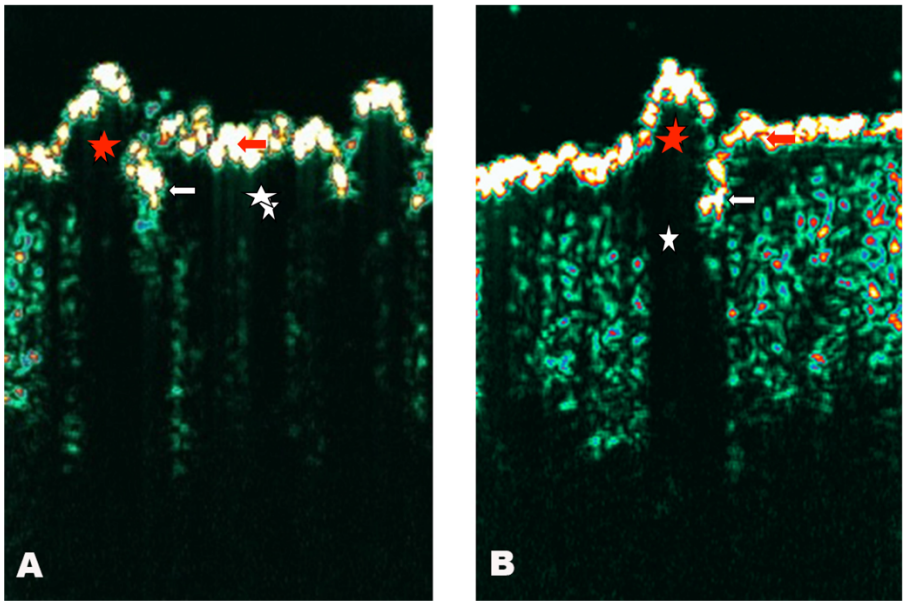

Figure 3. Histopathology. (a) Acanthotic epidermis, irregular rete ridges, hyperkeratotic surface with follicular plug, dense band-like lichenoid infiltrate, and dilated blood vessels surrounded by inflammatory infiltrates (original objective magnification 4x, H&E); (b) hydropic degeneration of basal keratinocytes, cytoid body, parakeratosis in the hair follicle, and lympho-histiocytic infiltrate (original objective magnification 10x, H&E).