

Circumscribed palmoplantar hypokeratosis

Hipoceratose palmar circunscrita

Flávia R. Ferreira^{1,2*} , Elisangela M.A. Lima^{1,2} , and Márcia L.A. Lira² 

¹Departamento de Medicina, Disciplina de Dermatologia; ²Serviço de Dermatologia. Hospital Municipal Universitário de Taubaté (HMUT), Taubaté-SP, Brazil

Woman, phototype III, 84 years old, presenting with a single asymptomatic, erythematous, slightly depressed, and very well-defined plaque on the palm of her right hand (thenar region), present for 8 years with no significant modification during its evolution (Figs. 1 and 2). She denied local trauma before the condition. In the personal history, actinic keratoses and a sclerosing basal cell carcinoma on the right nasal wall. An incisional biopsy was performed with the clinical hypotheses of Bowen's disease, porokeratosis, palmoplantar psoriasis, and the histopathological examination showed hypokeratosis of the stratum corneum with no changes in the underlying epidermis or dermis (Fig. 3).

Circumscribed palmoplantar hypokeratosis (CPH) is a benign chronic dermatosis, with few cases in the literature, characterized by the abrupt reduction of the stratum corneum without alteration of the dermis or adjacent tissue and without local inflammation, affecting the palmar region and more rarely the plantar region^{1,2}.

The first case was described by Pérez et al. in 2002². In the literature, there is a predominance of women (4:1) and over 40-60 years old^{1,3}. Clinically, it is characterized by nummular, circumscribed, erythematous lesions with a slightly hyperkeratotic halo, asymptomatic, single or multiple, located most commonly in the thenar and



Figure 1. Right hand (thenar region): single, erythematous, slightly depressed, and very well-defined plaque.

hypothenar regions of the palms and the medial portion of the soles¹.

***Correspondence:**

Flávia R. Ferreira
E-mail: dermagica@uol.com.br
2795-501X / © 2024 Portuguese Society of Dermatology and Venereology. Published by Permanyer. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Received: 05-07-2024

Accepted: 17-07-2024

DOI: 10.24875/PJDV.24000060

Available online: 05-08-2024

Port J Dermatol and Venereol. 2025;83(1):68-70

www.portuguesejournalofdermatology.com



Figure 2. Right hand (thenar region): single, erythematous, slightly depressed and very well-defined plaque.

The diagnosis is established by skin biopsy and histopathological examination, showing a focus of abrupt reduction in the stratum corneum, causing an unevenness between the lesion and the perilesional skin, responsible for the depressed clinical appearance. The granulosa layer is slightly reduced and there is no atypia of keratinocytes or cornoid lamella. Due to corneal thinning, blood circulation is better visualized, giving an erythematous appearance, but without vasodilation¹.

The etiopathogenesis is still poorly understood. Initial reports suggest a correlation with local trauma, which is reported only in a minority of cases. Correlation with human papillomavirus subtypes 4 and 6 was not confirmed by immunohistochemistry and polymerase chain reaction techniques. More recently, CPH was correlated with epidermal hyperproliferation associated with keratinocyte fragility, with increasing expression of keratin 16 and Ki-67 and abnormal expression of antigens associated with epidermal differentiation and keratinocyte proliferation-inducing deregulation in the desquamation process^{1,4,5}.

Differential diagnoses include: palmoplantar psoriasis, palmoplantar porokeratosis, Bowen's disease, dermatophytosis, and palmoplantar syphilides¹.

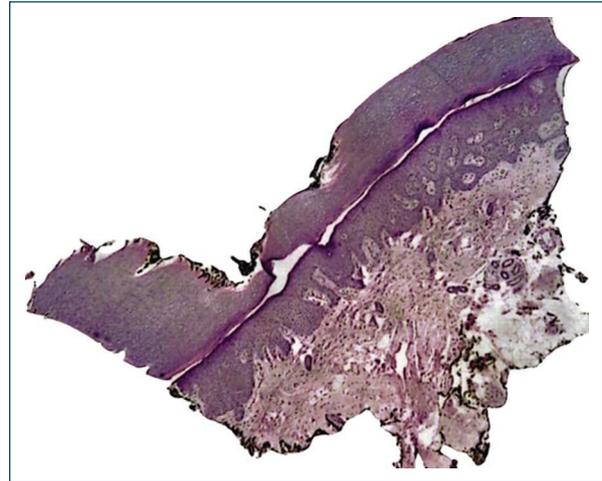


Figure 3. Histopathological examination showing hypokeratosis.

There is no agreement on CPH treatment. In most cases, expectant management is preferred due to the chronic, asymptomatic, and benign nature of the dermatosis. However, Kanitakis et al. reported a case associated with actinic keratosis, confirmed by histology and immunohistochemistry, in a patient with significant sun exposure, suggesting that the absence of the stratum corneum could facilitate photocarcinogenesis. Surgery, cryotherapy, photodynamic therapy, and topicals, such as calcipotriol, corticosteroids, and retinoids, showed unsatisfactory results^{1,5}. In this case, the patient's lesion remains stable and asymptomatic, however, given her previous history of skin neoplasms and premalignant dermatoses, the option was for follow-up.

Funding

None.

Conflicts of interest

None.

Ethical considerations

Protection of humans and animals. The authors declare that no experiments involving humans or animals were conducted for this research.

Confidentiality, informed consent, and ethical approval. The authors have followed their institution's confidentiality protocols, obtained informed consent from patients, and received approval from the Ethics

Committee. The SAGER guidelines were followed according to the nature of the study.

Declaration on the use of artificial intelligence.

The authors declare that no generative artificial intelligence was used in the writing of this manuscript.

References

1. Rocha L, Nico M. Hipoqueratose circunscrita palmoplantar: relato de 2 casos brasileiros. *An Bras Dermatol*. 2013;88:634-7.
2. Pérez A, Rütten A, Gold R, Urbina F, Misad C, Izquierdo MJ, et al. Circumscribed palmar or plantar hypokeratosis: a distinctive epidermal malformation of the palms or soles. *J Am Acad Dermatol*. 2002;47:21-7.
3. Ramos-Garibay A, Navarrete-Franco G, Venadero-Albarran F, Domínguez-Gómez A, Trejo-Acuña JR, Salazar-DelValle JJ, et al. Circumscribed hypokeratosis: report on a series of 7 Mexican cases and review of the literature. *Am J Dermatopathol*. 2016;38:399-408.
4. Ishiko A, Dekio I, Fujimoto A, Kameyama K, Sakamoto M, Benno Y, et al. Abnormal keratin expression in circumscribed palmar hypokeratosis. *J Am Acad Dermatol*. 2007;57:285-91.
5. Kanitakis J, Lora V, Balme B, Roby J. Premalignant circumscribed palmar hypokeratosis: a new form of circumscribed palmar hypokeratosis? Case report and literature review. *Dermatology*. 2010;220:143-6.