



## Onychocytic matricoma of the hallux: a rare nail neoplasm at an unusual site

*Matricoma onicocítico em hálux: neoplasia ungueal rara em localização incomum*

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### ABSTRACT

Onychocytic matricoma (OCM) is a rare benign neoplasm of the nail matrix that presents as longitudinal pachymelanonychia with striking onychogenic capacity. Few cases have been reported in the literature, mostly involving the fingernails. Treatment consists of complete surgical excision of the lesion, which is curative in most cases. We report a case of OCM on the great toenail, contributing to the clinical and histopathologic recognition of this entity.

**Keywords:** Nails; Rare Diseases; Neoplasms

### RESUMO

O matricoma onicocítico (MOC) é uma neoplasia benigna rara da matriz ungueal que se apresenta como paquimelanoníquia longitudinal e com grande capacidade onicogênica. Há poucos casos relatados na literatura, sendo a maioria em unhas das mãos. O tratamento é cirúrgico, com excisão completa da lesão, o que é curativo na maioria dos casos. O presente relato descreve um caso de MOC localizado no hálux, contribuindo para o reconhecimento clínico e histopatológico dessa entidade.

**Palavras-chave:** Unhas; Doenças Raras; Neoplasias

### Case Report

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## INTRODUCTION

Onychocytic matricoma (OCM) is a benign, monodactylous neoplasm arising from the nail matrix, first described by Perrin *et al.* in 2012. It is characterized by striking onychogenic capacity, manifesting as thickening of the nail plate associated with longitudinal melanonychia — a clinical presentation termed longitudinal pachymelanonychia.<sup>1,2</sup> Since its initial description, few cases have been reported in the literature, with fingernail involvement predominating.

Most reported cases have occurred in adults between the fourth and sixth decades of life, with a slight male predominance.<sup>3-5</sup> Toenail involvement is uncommon, with only a few documented cases.<sup>3-8</sup> Alvarez *et al.* reported the first case in a Black patient, also involving the great toenail, confirming that OCM may occur across different skin phototypes.<sup>9</sup>

Despite its indolent behavior, OCM frequently mimics malignant tumors, such as subungual melanoma and Bowen's disease, raising diagnostic concern and often prompting surgical intervention.<sup>4,6,9</sup>

In a recent review of 14 cases, Perrin *et al.* emphasized the rarity of toenail involvement, identifying only 4 cases at this site.<sup>3</sup> We report a case of OCM on the great toenail, contributing to the clinical and histopathologic recognition of this entity.



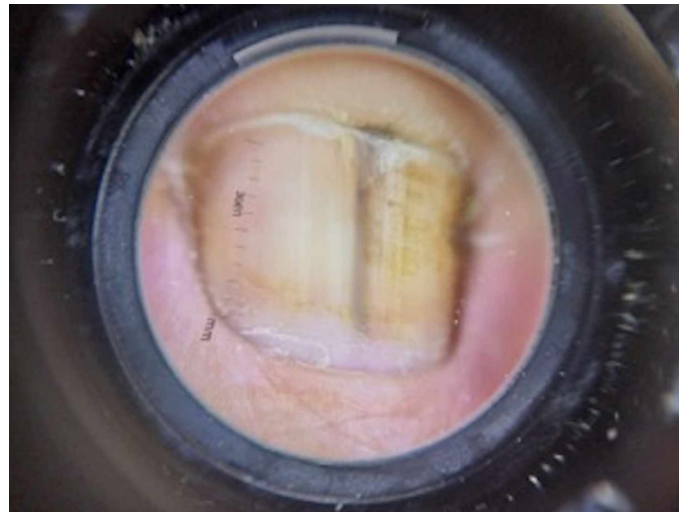
**FIGURE 1:** Black longitudinal band of the nail plate with localized subungual keratosis on the left great toenail.

## CASE REPORT

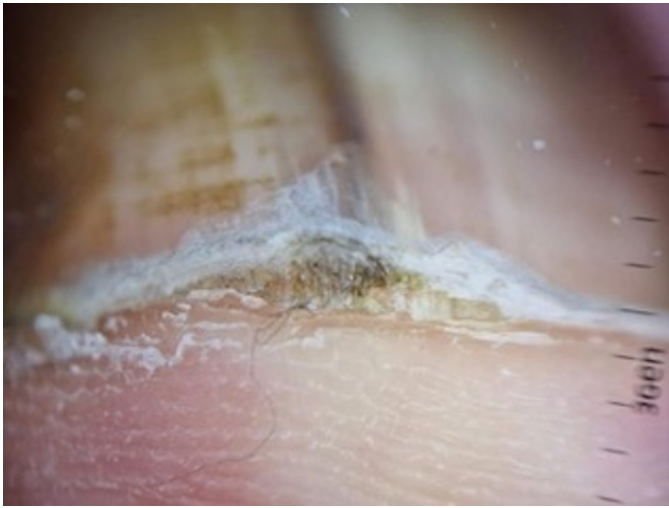
A 54-year-old man with Fitzpatrick skin phototype III presented with an asymptomatic “black line” on the left great toenail that had been present for 3 years. He reported gradual progression of the pigmentation over the preceding months.

Physical examination revealed a black longitudinal band approximately 3 mm wide, associated with focal/localized thickening of the nail plate, mild distal onycholysis, and absence of Hutchinson's sign (Figure 1). Dermoscopy showed homogeneous longitudinal melanonychia and localized subungual keratosis (Figures 2, 3, and 4).

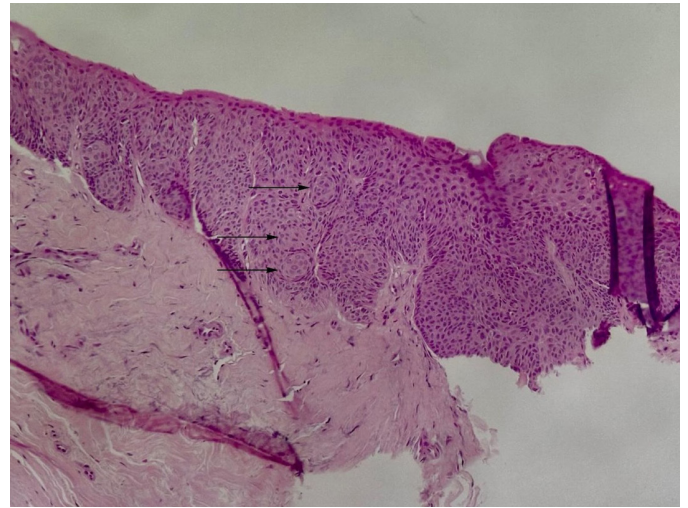
Given the clinical suspicion of pigmented onychopapilloma or OCM, an excisional biopsy was performed. After aseptic preparation and antisepsis, a proximal digital nerve block was performed, followed by distal elevation of the nail plate, reveal-



**FIGURES 2 AND 3:** Dermoscopy of the nail plate showing longitudinal melanonychia and mild distal onycholysis.



**FIGURE 4:** Dermoscopy of the free edge of the toenail showing localized subungual keratosis with areas of pigmentation.



**Figure 6.** Nail plate showing numerous nail pearls (arrows) and hyperkeratosis (hematoxylin and eosin, ×40).



**FIGURE 5:** Intraoperative photograph showing a longitudinally oriented pigmented lesion in the nail matrix.

ling a longitudinally oriented pigmented lesion arising from the nail matrix (Figure 5). The lesion was then removed by shave excision, and the specimen was sent for histopathologic examination.

Histopathologic examination revealed an intraepidermal epithelial proliferation composed of basaloid cells arranged in nests and cords, with formation of nail pearls. There was scant

melanin pigmentation and no cytologic atypia or mitotic figures; dermal elastosis and fibrosis were also identified (Figure 6).

Based on the clinical, dermoscopic, and histopathologic findings, a diagnosis of OCM of the acanthotic subtype was established. The patient achieved complete healing, with no recurrence after 18 months of follow-up.

## DISCUSSION

Clinically, OCM presents as a solitary, monodactylous longitudinal pigmented band that may be associated with pachyonychia and distal subungual keratosis. Absence of pain and a history of trauma is common, and the clinical course is slow and asymptomatic.<sup>1,3,5</sup>

Dermoscopy findings described by Perrin *et al.* include round or oval white dots and clods, regular longitudinal ridges, splinter hemorrhages, and free-edge thickening of the nail plate.<sup>3</sup> These findings reflect abnormal keratinization and localized thickening of the nail plate.

As described by Spaccarelli *et al.*, hypopigmented OCM may mimic onychomatricoma, presenting with thickening of the nail plate without visible pigmentation.<sup>6</sup> OCM is considered the epithelial counterpart of onychomatricoma and may manifest clinically as longitudinal melanonychia, xanthonychia, or leukonychia, generally associated with localized thickening of the nail plate.<sup>3,5,7</sup> In contrast, the pigmented subtype presents with melanonychia resulting from melanin deposition in the basal layer of the nail matrix, without melanocytic proliferation.<sup>1,4</sup>

Histopathologic examination is essential for diagnosis. OCM exhibits an intraepithelial proliferation of onychocytic cells with gradual maturation, resulting in abrupt keratinization and formation of nail pearls.<sup>1,3,4</sup> Three main subtypes have been described: 1) acanthotic – characterized predominantly by thickened epithelium without papillomatosis; 2) acanthotic-papillo-

matous – characterized by superficial epithelial papillae containing spheres of prekeratogenous and keratogenous cells; and 3) keratogenous – characterized by a prominent keratogenous zone and delayed maturation.<sup>3,8</sup>

The present case exhibited an acanthotic pattern, whereas the acanthotic-papillomatous subtype has been the most frequently observed in the reviews by Perrin *et al.*<sup>3</sup>

OCM should be distinguished from subungual melanoma. In contrast to melanoma, OCM is characterized by the absence of cytologic atypia, dermal invasion, and melanocytic proliferation.<sup>4,6</sup> Differentiation from seborrheic keratosis (SK) is also important. Whereas OCM cornifies with spheres of eosinophilic nuclei-retaining onychocytes, SK shows pseudohorn cysts. Pseudohorn cyst-like areas in OCM have 2 distinct layers, the prekeratogenous and keratogenous zones, which are absent in SK.<sup>9</sup>

Immunohistochemistry may assist in distinguishing among nail matrix tumors. OCM demonstrates positivity for

LEF-1, an onychogenic marker useful in differentiating OCM from onychocytic carcinoma and subungual keratosis.<sup>3,9</sup>

Treatment consists of complete surgical excision of the lesion and is curative in most cases.<sup>3,5</sup> No malignant transformation or metastasis has been reported, and recurrence is rare and associated with incomplete excision. The prognosis is favorable, with preservation of the aesthetic appearance of the nail after appropriate surgical repair

## CONCLUSION

OCM is a rare benign neoplasm of the nail matrix that may clinically mimic malignant tumors, particularly subungual melanoma. Recognition of its clinical, dermoscopic, and histopathologic patterns is essential to avoid misdiagnosis. This case reinforces the importance of including OCM in the differential diagnosis of longitudinal melanonychia and subungual pachyonychia, especially in cases involving the toenails. ●

## REFERENCES:

1. Perrin C, Cannata GE, Bossard C, Grill JM, Ambrossetti D, Michiels JF. Onychocytic matricoma presenting as pachymelanonychia longitudinal: a new entity (report of five cases). *Am J Dermatopathol*. 2012;34(1):54–9.
2. Perrin C, Cannata GE, Langbein L. Acquired localized longitudinal pachyonychia and onychomatric tumors: a comparative study of onychomatricomas and onychocytic matricomas. *Am J Dermatopathol*. 2016;38(6):1–8.
3. Perrin C, Coutts M, Boukari F, Ambrossetti D. Onychocytic matricoma: a clinical, dermoscopic, and pathological analysis of 14 cases. *Am J Dermatopathol*. 2024;46(5):259–70.
4. Kusutani N. Onychocytic matricoma as an underrecognized benign mimicker of subungual malignant melanoma and Bowen's disease. *J Dermatol*. 2016;43(7):1–2.
5. Vieira LFdA, Jeunon T, Leverone AP, Nakamura R. Matricoma onicocítico. *An Bras Dermatol*. 2019;94(4):214–7.
6. Spaccarelli N, Wanat KA, Miller CJ, Rubin AI. Hypopigmented onychocytic matricoma as a clinical mimic of onychomatricoma. *J Cutan Pathol*. 2013;40(6):591–4.
7. Perrin C, Ambrossetti D. A new, important nail-unit tumor mistaken for a foreign body. *JAMA Dermatol*. 2014;150(3):1–3.
8. Song H, Qu F, Dang N, Sun X. Onychocytic matricoma: report of an Asian case. *Ann Dermatol*. 2017;29(3):355–6.
9. Alvarez G, Kha C, Selim MA, Fresco A. Onychocytic matricoma presenting as longitudinal melanonychia in a skin of color patient. *Skin App Dis*. 2023;9(3):1–6.

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