



Case Report

Malignant Transformation under Long-standing Chromomycosis Lesion

Ilanna Naoli S Miranda^{1*}, Júlia Miqueleto B Santoro¹, Carolina Heleno C Carvalho², Walter Belda Jr³

¹Medical Resident in Division of Dermatology, Hospital das Clínicas, Faculty of Medicine, University of São Paulo, São Paulo, Brazil

²Volunteer Dermatologist in Division of Dermatology, Hospital das Clínicas, Faculty of Medicine, University of São Paulo, São Paulo, Brazil

³Professor in Division of Dermatology, Hospital das Clínicas, Faculty of Medicine, University of São Paulo, São Paulo, Brazil

***Corresponding author:** Ilanna Naoli S Miranda, Medical Resident in Division of Dermatology, Hospital das Clínicas, Faculty of Medicine, University of São Paulo, São Paulo, Brazil

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Abstract

Chromomycosis is a chronic granulomatous dermatosis, characterized by verrucous and nodular cutaneous lesions, caused by various dematiaceous fungi, primarily of the genus *Fonsecaea* or *Cladophialophora*. The disease affects men aged 40 to 50 in tropical and subtropical regions, including South America. Currently, chromomycosis is considered a neglected tropical disease and is not included in the list of notifiable diseases, complicating the accurate assessment of its incidence and prevalence in the Brazilian population. However, it is known that most cases are concentrated in the northern states of the country. Diagnosis can be made through direct mycological examination with 10-20% potassium hydroxide, visualizing medlar bodies. However, species identification requires tissue culture. Treatment is individualized, considering comorbidities, patient tolerance and adherence, lesion size, and histopathological characteristics, presenting a challenge due to the recalcitrant nature of the disease, especially in severe clinical forms

Case Report

The case presented illustrates the chronicity of chromoblastomycosis and underscores the importance of periodic dermatological examinations and high suspicion regarding difficult-to-treat ulcers and their possible differential diagnoses. The patient in question is an 89-year-old man with a history of hypertension and diabetes, who has had lesions on his left lower limb since 2014, being diagnosed with chromoblastomycosis in 2017 through the identification of medlar bodies in direct mycological examination. Since then, the patient has been treated with itraconazole 200 mg/day combined with 5% imiquimod on the lesions. Additionally, intermittent use of terbinafine 250 mg on alternate days was attempted, but this medication was discontinued due to worsening

renal function. Over the years, the patient underwent sequential histopathological examinations of verrucous lesions and ulcers, with findings consistent with chromoblastomycosis and no signs of malignancy. Since 2017, the patient intermittently presented with 1: an ulcerated plaque with elevated and well-defined borders, a homogeneous granulomatous base, measuring approximately 3 cm in diameter on the anteromedial pretibial portion of the left leg, with biopsies revealing chronic nonspecific ulcer with no evidence of malignancy. A venous ulcer was the considered diagnosis (Figure 1).

During a consultation in April 2023, a new lesion was identified: 2: a vegetative and friable plaque located distally on the medial wall of the left tibia. A punch biopsy was performed, and the

diagnosis revealed superficially invasive moderately differentiated squamous cell carcinoma (SCC) (Figure 2A).

Upon the patient's return, lesion 2 appeared verrucous and was growing towards lesion 1, with approximately 1 cm separating the ulcers. A decision was made to perform a new biopsy at the edge of the larger ulcer (lesion 1) at two points to determine the appropriate therapy. Histopathological examination revealed moderately differentiated invasive SCC (Figure 2B).

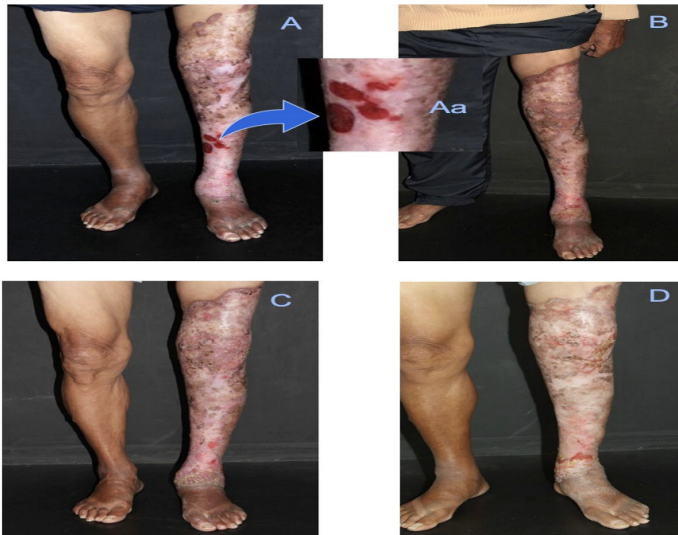


FIGURE 1: Patient in 2018 (A), 2019 (B), 2020 (C) e 2022 (D). In detail (Aa), Lesion 1: An ulcerated plaque with elevated and well-defined borders and a homogeneous granulomatous base.

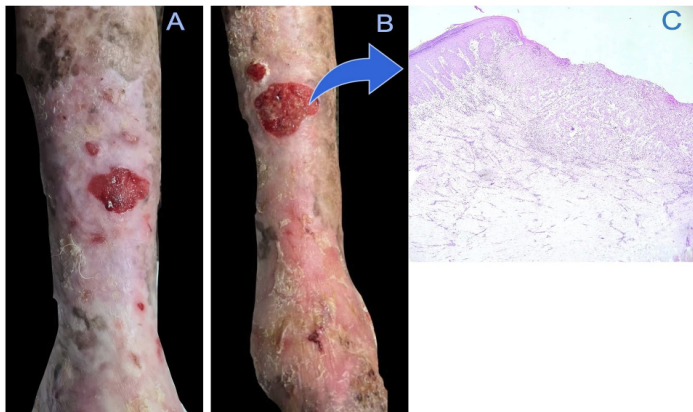


FIGURE 2:
A. Lesion 2: Vegetative and friable plaque located distally on the medial wall of the left tibia.
B. Lesions 1 e 2: Lesion 2 is verrucous, with both lesions 1 and 2 growth.
C. Histopathology of Lesion 1: Moderately differentiated invasive SCC.

Discussion

The pathogenesis of SCC formation over verrucous lesions is not yet clear. It is believed that the chronic healing process with activation of the inflammatory cascade acts as a constant trigger, alongside the potential involvement of mutations in the Fas gene. It is important to emphasize that the patient developed neoplastic lesions Independently of long-term antifungal therapy with itraconazole 200 mg and topical imiquimod applied 5 times per week. Currently, there are few studies demonstrating neoplastic complications in chromoblastomycosis lesions, with such events being considered rare. The main factor involved is the duration of infection. Therefore, it is concluded that periodic dermatological evaluation, with thorough skin exploration and a high degree of suspicion, in addition to serial histological assessment of more chronic lesions, is necessary in cases of chromoblastomycosis due to the increased risk of hidden neoplastic lesions under verrucous plaques or malignant transformation.

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