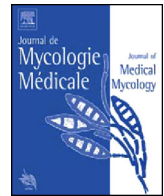




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Case report

Monascus ruber: A new of onychomycosis in the north of Morocco (Tetouan)

Monascus ruber: un nouveau agent d'onychomycose au Nord du Maroc (Tétouan)

Khadija Bouksir^{a,b,*}, Mohamed Kazzaz^a, Hanie Fassi Fehri^b, Hassan Bouziane^a, Hajar Bouksir^a, Fatima El Haskouri^{a,b}

^a Department of biology, Laboratory of Applied Botany, Faculty of Sciences, University Abdelmalek-Essaâdi, Tetouan, Morocco

^b Department of Microbiology, Laboratory Fassi-Fehri of Medical analysis, Tetouan, Morocco

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ABSTRACT

We report a case of onychomycosis caused by *Monascus ruber* from 57-year old women. The diagnosis was based on culture morphological characteristics on Sabouraud's Dextrose agar one with antibacterial (chloramphenicol) and the other with cycloheximide. The identification of specie was confirmed by DNA sequencing.

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R É S U M É

On reporte un cas d'onychomycose à cause de *Monascus ruber* chez une femme âgée de 57 ans. Le diagnostic est basé sur les caractéristiques morphologiques de la culture sur Sabouraud dextrose agar l'un additionné d'un antibactérien (chloramphénicol) et l'autre avec le cycloheximide. L'identification de l'espèce est confirmée par le séquençage d'ADN.

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1. Introduction

Onychomycosis is defined as a fungal infection of finger and toe nails that may involve any component of the nail unit. Definition and Clinical impact of Onychomycosis, traditionally referred to a non dermatophytic infection of the nail, is now extended to denote any fungal nail infection [1]. It occurs worldwide and is mainly caused by yeasts, dermatophytes and non-dermatophytes molds (NDM) [2]; mixed infection is probable but scarce. Of these, dermatophytes are more common in the temperate western countries while *Candida* and NDM in the hot and humid tropical regions.

The prevalence of onychomycosis varies from one region to another due to socioeconomic and cultural factors. In recent years,

NDM have also been implicated as probable causative agents of onychomycosis. The increasing prevalence of nail infection is related to an expanding number of elderly and Immuno-compromised patients [3]. Although fungal nail infections are not life-threatening, yet they are associated with secondary bacterial infection, chronicity of disease, therapeutic failures and disfigurement like hyperkeratosis, discoloration of nail plate, and brittle nails [4]. Onychomycosis can cause pain, discomfort, and may produce serious physical and occupational limitations, as well as reducing quality of life.

The importance of onychomycosis is often underestimated. Far more than being a simple cosmetic problem, infected nails serves as a chronic reservoir of infection which can give rise to repeated mycotic infections of the skin.

NDM are filamentous fungi which are commonly found in soil as well as plant debris and mostly considered as saprophytes and plant pathogens [5]. NDM causing onychomycosis include

* Corresponding author. Laboratory of Applied Botany, Faculty of Sciences, University Abdelmalek-Essaâdi, Mhannech II, 2121 Tetouan, Morocco.
E-mail address: Khadija_kb83@hotmail.com (K. Bouksir).

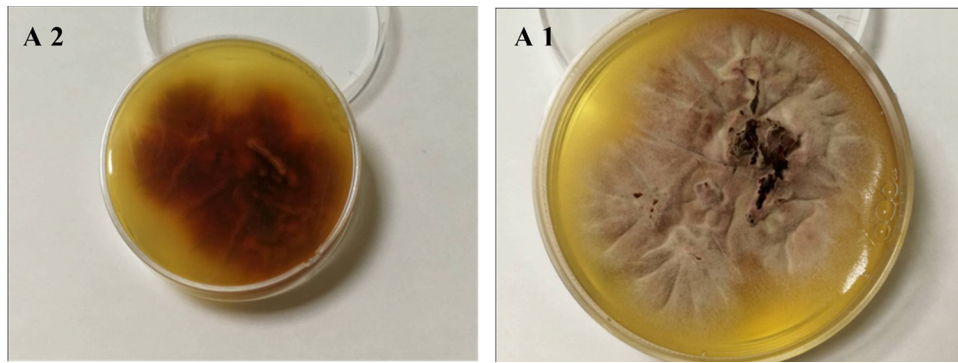


Fig. 1. *Monascus ruber*: Macroscopic aspect after growth on Sabouraud Agar medium for 7 days at 37 °C. (A1): The mycelium is a little flaky. (A2): the reverse side of the culture with red pigment.

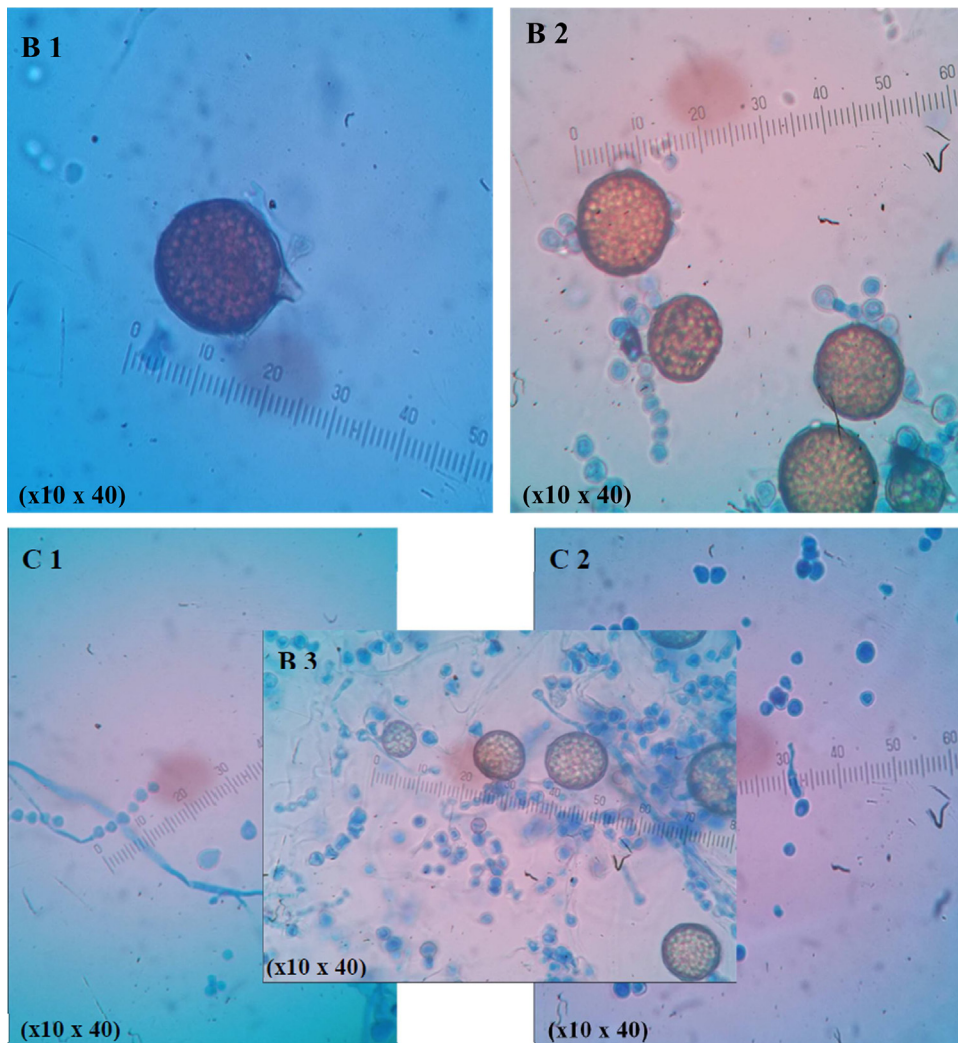


Fig. 2. The microscopic characteristics of *Monascus ruber* with two types of reproduction: the sexual form with thin-walled ascocarps containing ovals ascospores (B1, B2, B3), and the asexual form with a chains of round conidia (C1, C2)

Alternaria, *Aspergillus*, *Cladosporium*, *Fusarium*, *Paecilomyces*, *Penicillium*, *Scopulariopsis*, *Ulocladium*, etc [6–8].

Monascus ruber (anamorph: *Basipetospora rubra*) is a filamentous Ascomycete fungi (family Monascaceae, order Eurotiales) [9] and it is a rare cause of non dermatophytic onychomycosis. Here we report one case of onychomycosis due to *M. ruber*.

2. Case report

A 57-year old female, resident of Tetouan, (NW) Morocco, with a pathological history that presents diabetes, was presented at the Laboratory of medical analysis FASSI FEHRI with discoloration of his nails.

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