

# Pityriasis versicolor circinata: isolation of *Malassezia sympodialis* - Case report

Pitiríase versicolor circinata: isolamento de *Malassezia sympodialis* - Relato de caso

Valéria Maria de Souza Framil<sup>1</sup>

Márcia S.C. Melhem<sup>2</sup>

Maria Walderez Szesz<sup>3</sup>

Elaine Cristina Corneta<sup>4</sup>

Clarisse Zaitz<sup>5</sup>

**Abstract:** The authors report a case of pityriasis versicolor circinata whose isolated etiologic agent was *Malassezia sympodialis* in a 34-year-old woman. The isolation and identification of *Malassezia sympodialis* were accomplished with modified Dixon's agar, and the molecular method used to confirm the species was polymerase chain reaction and restriction fragment length polymorphism analysis (PCR-RFLP).

**Keywords:** Clinical evolution; *Malassezia*; Pityriasis

**Resumo:** Os autores descrevem caso de pitiríase versicolor circinata, cujo agente etiológico isolado foi *Malassezia sympodialis* em uma mulher de 34 anos. O isolamento e identificação da *Malassezia sympodialis* foi em ágar Dixon modificado e o método molecular para confirmação da espécie foi PCR-RFLP (polymerase chain reaction and restriction fragment length polymorphism analysis).

**Palavras-chave:** Evolução clínica; *Malassezia*; Pitiríase

## INTRODUCTION

Pityriasis versicolor is a disease of universal distribution. Until recently, *Malassezia furfur* was considered the only etiologic agent of pityriasis versicolor. Several species of *Malassezia* have been described since the 1990s. The genus *Malassezia* is part of the normal skin microbiota, especially of the hair follicle. It needs predisposing factors for multiplication and subsequent conversion into its pseudo-filamentous parasitic form.

An epidemiologic study involving the frequency and distribution of each species is not sufficient for clarification of the pathogenicity of the yeast in pityriasis versicolor.<sup>1</sup>

## CASE REPORT

Female patient, 34 years old, white, has been showing pruriginous macules on her skin for 5 years. Dermatologic examination revealed hypochromic follicular lesions that evolved into erythematous, scaly lesions of circinate aspect, pruriginous, affecting her trunk and upper extremities. Lesions were positive for Zireli's sign (Figure 1). Direct microscopic examination (potassium hydroxide\_20%) revealed the presence of yeast-like cells resembling a bunch of grapes and pseudohyphae. The clinical material was cultivat-

ed in modified Dixon's agar. The isolation of *Malassezia* was achieved after 15 days (Figure 2) and the identification of the species was performed through the molecular biology method PCR-RFLP (polymerase chain reaction and restriction fragment length polymorphism analysis)<sup>2</sup> (Figure 3). The patient was treated with ketoconazole (200 mg/day for 30 days) with total regression of lesions.

## DISCUSSION

Clinical manifestations of pityriasis versicolor are characterized by multiple macular lesions, perifollicular at first, with light scaling. Stretching of the affected skin may help see scaling of lesions. This procedure is known as Zireli's sign. The clinical variants of pityriasis versicolor show variable coloration, from white to chestnut-brown. It can rarely become erythematous, which justifies the denomination of pityriasis versicolor.<sup>3</sup>

Among the clinical variants of pityriasis versicolor, the majority of cases described in the literature replicate the classical clinical symptoms of the disease, such as hypochromic macules. There are reports of less frequent clinical forms of the disease; for instance, hyperchromic macules and association

Received October 28<sup>th</sup>, 2008.

Approved by the Peer Review Board and accepted for publication on November 27<sup>th</sup>, 2009.

\* Study conducted at the Dermatology Clinic of Irmandade da Santa Casa de Misericórdia de São Paulo and Mycology Division of Adolfo Lutz Institute - São Paulo (SP), Brazil.

Conflict of interest: None / *Conflito de interesse: Nenhum*

Financial funding: None / *Suporte financeiro: Nenhum*

<sup>1</sup> Assistant Professor at the Faculty of Medical Sciences of Santa Casa de São Paulo, and Second-year Assistant Physician at the Dermatology Clinic of Santa Casa de São Paulo - São Paulo (SP), Brazil.

<sup>2</sup> Level IV Scientific Researcher at Adolfo Lutz Institute - São Paulo (SP), Brazil.

<sup>3</sup> Scientific Researcher at Adolfo Lutz Institute- São Paulo (SP), Brazil.

<sup>4</sup> Master's degree student in Microbiology/ICB-USP with a scholarship from CAPES - Coordination for the Improvement of Higher Education Personnel - São Paulo (SP), Brazil.

<sup>5</sup> Professor, Ph.D., at the Faculty of Medical Sciences of Irmandade Misericórdia da Santa Casa de São Paulo - São Paulo (SP), Brazil.



FIGURE 1- Erythematous, scaly lesions with circinate aspect and positive Zireli's sign



FIGURA 2- *M. sympodialis* in modified Dixon's medium

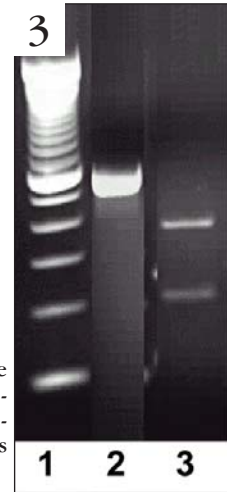


FIGURE 3- Protein Band Profile  
1 - molecular marker 100-pb; -  
CRP product - 580pb - RFLP -  
*M. sympodialis*

between hypochromic and hyperchromic macules.<sup>4-6</sup>

A few authors describe follicular lesions of pityriasis versicolor in the literature.<sup>5-7</sup> A clinical variant with intense skin depigmentation may occur in melanodermic individuals, called parasitic achromia. Pityriasis versicolor atrophicans is also described, a rare form of the disease in which lesions are depressed by the prolonged used of topical corticosteroids.<sup>8,9</sup>

There are reports in the literature of pityriasis versicolor in the inguocrural region, which simulate erythrasma<sup>10</sup>, and one case of pityriasis versicolor mimicking pityriasis rubra pilaris.<sup>11</sup>

The present case report shows a clinical variant of pityriasis versicolor with hypochromic follicular lesions chronically evolving into pruriginous, erythematous, scaly lesions of circinate aspect. *Malassezia sympodialis*, the isolated etiologic agent, needs proper culture medium and temperature for growth and identification. After the clinical and laboratory diagnosis of pityriasis versicolor, appropriate treatment was implemented with an excellent therapeutic response. Differential diagnosis for pityriasis versicolor circinata includes tinea corporis, pityriasis rosea, erythema annulare centrifugum, and even secondary syphilis. □

**ACKNOWLEDGEMENTS**

The authors would like to thank CAPES – Coordination for the Improvement of Higher Education Personnel – for their financial support.

**REFERENCES**

1. Crespo Erchiga V, Delgado Florêncio V. Malassezia species in skin diseases. Curr Opin Infect Dis. 2006;15:133-42.
2. Corneta , Melhem MSC, Chioccola VLP, Pires MC, Keiko LO, Framil VMS, et al. Molecular identification of Malassezia species isolated from pityriasis versicolor and seborrheic dermatitis Brazilian patients. Paris: ISHAM; 2006. (International Society for Human & Mycology.)
3. Zaitz C. Micoses superficiais propriamente ditas. In: Zaitz C, Campbell I, Marques AS, Ruiz LR, Souza VM. Compêndio de micologia médica. São Paulo: Medsi; 1998. p.65-79.
4. Chetty GN, Kamalam A, Thambiah AS. Pityriasis versicolor: a study of 200 cases in a tropical skin clinic. Mykosen. 1979;22:234-6.
5. Forjaz MHH, Freire EL, Gama MP, Fischman O, De Lamonica Freire E. Pitiríase versicolor: estudo epidemiológico em voluntários da Universidade Federal de Mato Grosso (Brasil). An Bras Dermatol. 1983;58:249-52.
6. Framil VMS. Pitiríase versicolor: influência de fatores etiológicos, imunológicos, familiares, constitucionais, clínicos e de hábitos pessoais no seu desencadeamento e na sua recidiva: estudo de uma amostra ambulatorial [tese]. São Paulo: Faculdade de Ciências Médicas da Santa Casa de São Paulo; 2006.
7. Maeda M, Makimura KC, Yamaguchi H. Pityriasis versicolor rubra. Eur J Dermatol. 2002;12:160-4.
8. Aspiroz Sancho MC, Saenz de Santamaria MC, Moreno Borraz LA. Afecciones cutâneas relacionadas con Malassezia furfur. Rev Clin Esp. 1997;197:420-8.
9. Romano C, Maritati E, Ghilardi A, Miracco C, Mancianti F. A case of pityriasis versicolor atrophicans. Mycoses. 2005;48:439-41.
10. Aste N, Pau M, Aste N. Pityriasis versicolor on the groin mimicking erythrasma. Mycoses. 2004;47:249-51.
11. Darling MJ, Lambiase MC, Young RJ. Tinea versicolor mimicking pityriasis rubra pilaris. Cutis. 2005;75:265-7.

ENDEREÇO PARA CORRESPONDÊNCIA / MAILING ADDRESS:  
Valéria Maria de Souza Framil  
Rua Sete de Abril, 296. 1º andar / CJ: 11  
01044000 República - São Paulo / SP  
Tel./fax:11 9966 1960 11 3257 8978  
E-mail: souza.valeria@terra.com.br

How to cite this article/Como citar este artigo/: Framil VMS, Melhem MSC, Szeszs MW, Corneta , Zaitz C. Pityriasis versicolor circinata: isolation of Malassezia sympodialis - Case report. An Bras Dermatol. 2010;85(2):227-8.