

Trichophyton rubrum dermatophytosis in a patient under chronic use of systemic corticoids: an exuberant presentation*

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DOI: <http://dx.doi.org/10.1590/abd1806-4841.20154009>

A 71-year-old female white patient had a 6-month history of annular, non-pruritic, erythematous plaques, measuring up to 12 cm in diameter, on her face, scalp, neck and arms. (Figure 1). On examination, the patient had Cushingoid features. She reported having an unspecified endocrinopathy, for which she had been on continuous use of prednisone (25 mg/day) for 6 years. To make the diagnosis, we performed direct examination, fungal culture and histopathological analysis. Direct examination showed hyaline septate hyphae. Mycological culture of the scalp lesion revealed growth of *Trichophyton rubrum*. Histopathological analysis showed the presence of spores and filaments in the stratum corneum. (Figure 2). The patient was treated with griseofulvin (500 mg/day) for 60 days. Griseofulvin is known to have a good action against dermatophytes. There was complete resolution of the lesions. (Figure 3)

Tinea corporis is a cutaneous fungal infection that most commonly occurs on the trunk and the extremities. It is generally restricted to the stratum corneum. *Trichophyton rubrum* is the most prevalent pathogen involved in tinea corporis. It acts as an opportunistic agent in patients with hypercortisolism.¹ Hypercortisolism may occur due to prolonged exposure to high levels of topical or systemic glucocorticoids, even in so-called non-immunosuppressive doses of the drug. In fact, the most common cause of



FIGURE 1: Plaques with erythematous borders and mild infiltration - some covered with honey-colored crusts - on the face, scalp and neck

Received on 08.09.2014.

Approved by the Advisory Board and accepted for publication on 29.03.2015.

* Study conducted at the University Hospital of Brasilia - University of Brasilia (HUB-UnB) - Brasilia (DF), Brazil.

Financial Support: None.

Conflict of Interest: None.

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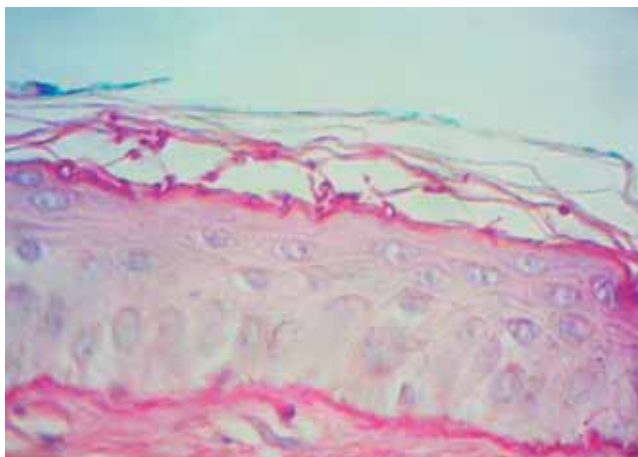


FIGURE 2: Numerous fungal structures in form of spores and filaments (PAS staining)

hypercortisolism is the exogenous administration of this hormone.

The clinical presentation of the patient makes differential diagnosis with other dermatological conditions, such as figured erythema. Figured erythema was the first possible diagnosis in this case, because dermatophytosis of the scalp is rare in adults.

The predisposition of patients with hypercortisolism to infection is related to the fact that high levels of glucocorticoids in the body exert an immunosuppressive effect, primarily affecting cellular immunity in these patients. The components of cellular immunity that are most affected are phagocytic cells (neutrophils and macrophages) and Th1 lymphocytes. This increases the risk of opportunistic infections.² Some authors also advocate the possibility of dermatophyte dimorphism in atypical clinical features (widespread).³

In the presence of hypercortisolism, the fungal

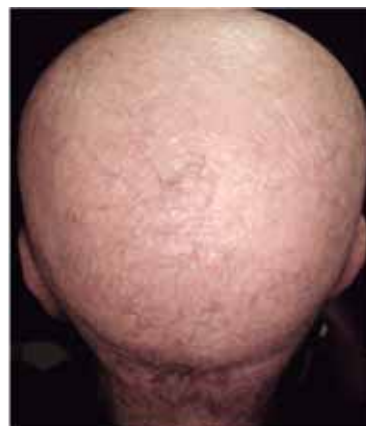


FIGURE 3: Complete remission of lesions after treatment with griseofulvin

infection has the clinical characteristic of being more extensive and pauci-inflammatory, often without associated symptoms, such as itching, which was absent in this case.² Dermatophytoses related to hypercortisolism are usually caused by fungi the genus *Trichophyton* sp, and *T. rubrum* is the most commonly found species.¹

As opportunistic fungal infections are associated with glucocorticoid dose and duration of treatment, every effort should be made so that the lowest dose of medication is used for the shortest time possible.^{4,5} Moreover, dermatologists should always be aware of atypical presentations of superficial mycoses. □

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How to cite this article: Sena LB, Oliveira DC, Paula CDR, Costa MC, Franceschi LEAP, Costa IMC. *Trichophyton rubrum* dermatophytosis in a patient under chronic use of systemic corticoids: an exuberant presentation. *An Bras Dermatol* 2015; 90(4):598-9.