Majocchi's granuloma - Case report*

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Abstract: We report the case of a three-year-old child who, following long term treatment with topical corticosteroids and their associations for a case of ringworm on the face developed a form of folliculitis known as Majocchi's Granuloma. Treatment with oral Griseofulvin was successful.
Keywords: Adrenal cortex hormones; Granuloma; Steroids; Tinea

INTRODUCTION

Majocchi's Granuloma was described in 1883 in Italy by Domenico Majocchi.[1] It is a rare infection, possibly associated with depilation or with use of high potency topical corticosteroid therapy in areas of dermatophyte infection in immunocompetent patients.[2] The authors report a case of Majocchi's Granuloma during childhood.

CASE REPORT

Female patient, three years old, white, from Rio de Janeiro, presenting an exulcerated lesion of desquamative edges in the left malar region with 8 months of evolution (Figure 1). It was reported that she had been using an association of topical corticoids, antifungals, antibiotics, antibiotic therapy and oral corticotherapy during this period with no improvement. She was also taking Pimecrolimus 0.03% twice a day for a period of 30 days with relative improvement during the use of the medications and worsening after ceasing their use. General state with no systemic changes. Drugs were suspended after 15 days and cutaneous biopsy was performed with histopathological examination. Direct mycological examination negative and culture for *Microsporum gypseum* positive. Histopathologics showed presence of hyphae and positive PAS spores in topography of follicular canal, abscess and outline of perifollicular granulomatous reaction compatible with fungal folliculitis, Majocchi's granuloma (Figures 2 and 3). Patient was treated with griseofulvin 250mg/day for 8 weeks presenting remission of the condition (Figure 4).

Figure 1: Exulcerated lesion, erythematous, with desquamative edges in the left malar region of the face

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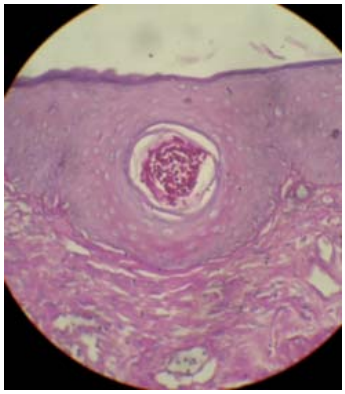

Figure 2: 40X: Topography of follicular canal reveals presence of hyphae and positive PAS spores, abscess and outline of perifollicular granulomatous reaction

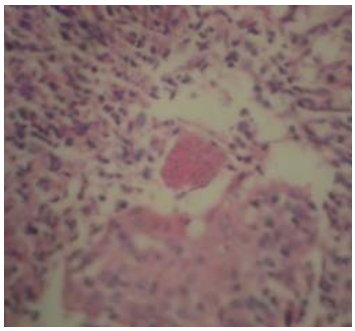

Figure 3: 200X: Topography of follicular canal reveals presence of hyphae and positive PAS spores, abscess and outline of perifollicular granulomatous reaction compatible with fungal folliculitis, Majocchi's granuloma

Figure 4: Results after treatment

DISCUSSION

Tinea corporis is a dermatophytic infection with greater incidence in the skin, mainly on the trunk and extremities, usually restricted to the stratum corneum. The atypical deep involvement is called Majocchi's granuloma, and it can be perifollicular secondary to traumas or the subcutaneous nodular type in the immunocompromised patient.[3]

This granuloma constitutes a nodular perifolliculitis with formation of foreign body granuloma, due to the infection of dermis and subcutaneous tissue by dermatophytes. Among the etiological agents described, *Trichophyton rubrum* is the most frequent one, followed by *Trichophyton violaceum*, *Trichophyton mentagrophytes*, *Microsporum audouinii*, *Microsporum gypseum*, *Microsporum canis* and *Epidermophyton floccosum*.[1,4]

In immunocompetent patients, clinical findings are typically characterized by a localized area with erythematous papules, perifollicular or small nodules. Pustules may also be present.[5] Immunocompromised patients may present similar symptoms as immunocompetent patients or with subcutaneous nodules and abscesses.[6-8] Trauma is also considered an incitation factor in these cases. Cell-mediated immune depression and inflammatory response, important for inhibition of infections by dermatophytes, may contribute for the progression of the disease.[9,10] Systemic dissemination seldom occurs.[10]

In immunocompetent patients, the use of topic corticosteroids on a surface may lead to infection by dermatophytes by local immunosuppression, and promote the development of Majocchi's granuloma.[4] The diagnosis is performed through direct mycological examination, culture and histopathology. In histopathology, in response to the agent or due to the releasing of follicular content with cellular immune reaction, there is formation of giant cell and foreign body granuloma containing the fungus. The histopathological as well as the mycological examination may not reveal fungal elements, and for this reason the best test for that is the culture of homogenate, and treatment guided by the result of culture with local antifungal. Surgical excision of lesion has also been reported with good results.[5]

A noteworthy fact is that tinea barbae is a fungal infection common to the beard and its surrounding area of teenage and adult males who shave, and is rare during infancy. *Microsporum gypseum* is a geophilic fungus. Deep reactions with high inflammatory lesions are common and respond well to therapy.[4]

Indiscriminate use of topical corticoids, by diminishing local defense, may favor fungal infection and trigger Majocchi's granuloma, with penetration of hair follicle by the dermatophyte. Fungal infection diagnosis must be always remembered in the presence of lesions refractory to treatment with correct antibiotic therapy, elucidating the importance of tracking with direct mycological examination and culture of lesion, for they are low cost tests and of easy execution. ❑

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