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Case Report

Had crural by *Trichophyton violaceum*: Case Report

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Clinical case report was confirmed by mycological and technical DNA exams. Patient, feminism, 28 years old, after scraping of region with reused shavers, disseminated dissemination, multicircinated and marginalized aspect, pruritic, pustular with purulent secretion. The worsening of the clinical picture hospitalization and empirical treatment with oxacillin. In the permanence of the picture, the mycological diagnosis was suggested. Direct examination of the biological material treated with 20% potassium hidroxide, culture positive DNA, confirmed the violaceum of Trichophyton, anthropophilic dermatophyte cutaneous mycosis agent. Oral griseofulvin was instituted for more than a week and left the remaining medications, providing a cure for the patient.

Keywords: Trichophyton violaceum, It had crural, Vulvar dermatophytosis.

INTRODUCTION

Dermatophytoses are cutaneous, cutaneous hairy infections caused by dermatophyte fungi belonging to the genera Epidermophyton, Microsporum and Trichophyton. They have affinity for consultations and present varied manifestations of activities (Moraes et al., 2009).

This type of mycosis is prevalent in tropical and subtropical countries, varying the incidence in relation to age, season, contact with animals and hygiene conditions (Lana et al., 2016; Aquino et al., 2007).

The World Health Organization states that 25% of the population is affected by dermatophytes and about 30% to 70% of adults are asymptomatic carriers. Transmission occurs through fomites, by direct contact with contaminated animals or humans (Peres et al., 2010).

The topographic classification varies according to the anatomical location of the lesions, made with support in the word Tinea, and the Latin name of the site of the affected body (Santos et al., 2005).

The clinical diagnosis is made through anamnesis and physical examination, observing the location of the lesions, symptoms, duration, course, previous episodes, among other characteristics (Van Puijenbroek et al., 2014). Microscopic laboratory tests, such as direct microscopic examination of biological material clarified with KOH, isolation in fungal-selective culture media and Polymerase Chain Reaction (PCR), are performed to confirm the genus and dermatophyte species (Santos et al. ., 2005).

The basis of treatment is topical and / or systemic antifungal. However, the development of resistance to conventional therapy is a problem, leading to failure of the drug response and increased relapse. For treatment of lesions involving the hair, there is a need for oral treatment (Lana et al., 2016).

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Figure 1. Aspect of the lesion in the crural region

The aim of this study was to report a case of Tinea crural disseminated by Trichophyton violaceum in a 28-year-old woman, attended at the Department of Gynecology and Obstetrics of Santa Casa de Misericórdia, Vitória, Espírito Santo, Brazil. This report, in which the clinical manifestations, diagnosis, mycological analysis, treatment and clinical outcome, was approved by the Ethics and Research Committee (CEPES).

CASE REPORT

A 28-year-old female patient with three previous vaginal deliveries using IUD for five years, sought the HSCMV Gynecology Service for vulvar lesions associated with purulent discharge, two months previously, without fever. Reported previous use of sulfamethoxazole / trimethoprim 800 / 160mg VO 12 / 12h 7d, cephalexin 500mg VO 6 / 6h 7d, doxycycline 100mg VO 12 / 12h and aciclovir 400mg VO 4 / 4h 5d, without improvement. The patient did not present previous comorbidities or medications of continuous use.

At physical examination, vulval of normal piling for age, with presence of pustular, crustous, granulomatous lesions in the region of large lips and pubic mountain, associated with hyperchromic, edemaciate and erythematous areas, as shown in figure 1. Specular examination and vaginal touch bimanual avoided by painful complaint, with negative serologies for syphilis, afebrile. The antibiotic therapy with clindamycin IV 600mg 6 / 6h 7d was hospitalized and started.

After seven days of antibiotic therapy, from 4/8/15 until 11/8/15, without improvement of the clinical picture, by an opinion of the infectology team, it was suggested to performing image examination to check for deep store existence (although the physical examination does not suggest). It was also hypothesized to be a bacterium resistant to routine antibiotics or a noninfectious condition, just an inflammatory condition. The imaging examination showed no profound alterations; therefore, antibiotic therapy was discontinued and vulvar hygiene was indicated with 12 / 12h degermant solution for 14 d.

On the thirteenth day of hospitalization, the lesions initiated spontaneous drainage of bloody material, as well as an increase in hyperemia for the gluteus and anterior medial thigh phase. The patient reported onset of white vaginal secretion with lumps, and fluconazole 150 mg single dose for the treatment of candidiasis. With 16 hospital admission, oxacillin was started 500mg of 6 / 6h 5d.

Next, scales and secretion were collected under aseptic conditions for direct mycological examination and culture for fungi. In the clarified direct examination with 20% KOH, the presence of septate, hyaline, arthrosporated hyphae and conidia were observed in filled fields (figure 2).

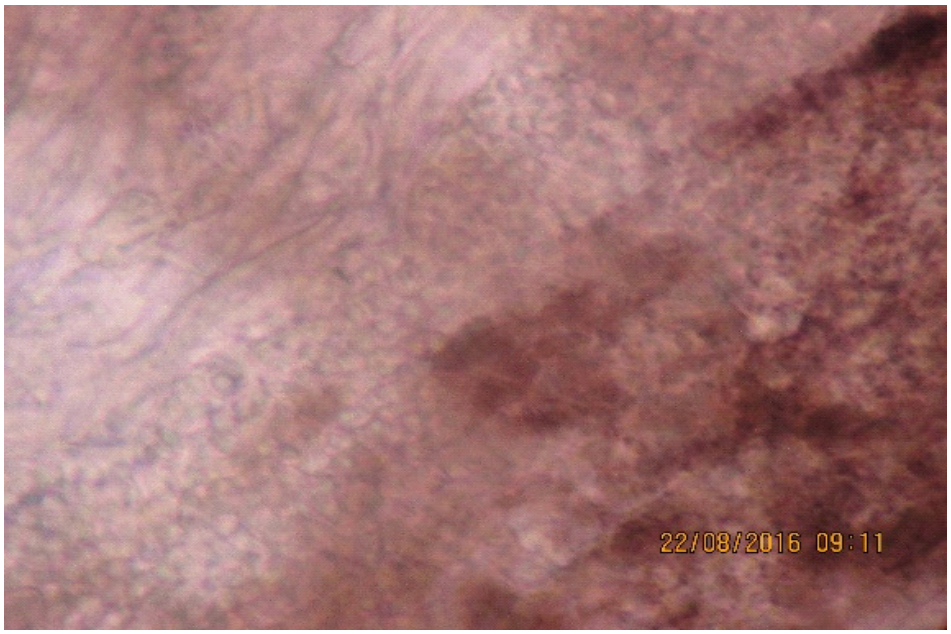

Figure 2. Direct examination with septate, hyaline, arthrosporate and spore hyphae

After 21 days, the growth of white, lightly lilac-ridged colonies on Sabouraud-glucose Agar and Mycosel Agar (Figure 3) was observed, and the reverse was unchanged.

Figure 3. Velvety colony with unaltered lilac and reverse appearance.

It was noticed a varied color morphology, which initially made it difficult to identify the fungus and suggested a DNA test for the differentiation between T. rubrum and T. violaceum. But the reverse was unchanged. Then, the molecular characterization of the fungus was performed by amplifying a specific region in the Ribosomal 25S RNA gene (LOCUS EF3633372942 bp linear DNA PLN 11-APR-2008) of the fungus Trychophyton violaceaum (GenBank: EF363337.1) by the Chain Reaction of the Real-Time Polymerase (PCR), following an in-house protocol. The DNA samples were submitted to PCR amplification using the Primers and specific probe designs obtained by Primer Express (Primer Express ™ Software v3.0.1 License - Catalog number: 4363991) and the synthesis of these by Thermo Fisher Scientific . Following is the drawing of the Primers and probe:

* Forward Primer: AGTCCCTGTGTTTGGGTTCCT
Start bp (2336) Stop bp (2356) Tm (58)
* Reverse Primer: CTAGGGCTGAAGGTCTTGACATC
Start bp (2400) Stop bp (2378) Tm (58)
* Probe: TTTGCTAGGATCGGTCC (MGB probe)
Start bp (2359) Stop bp (2375) Tm (68)

The PCR amplification reaction protocol for the target region of Trychophyton violaceaum was performed according to the informations: Reagents/ Volume / unit = Water: 2; Master Mix: 10; First Initiator: 1; Reverse Primer: 1; Probe: 1; DNA 5. Totalizing 15Mix +5 DNA.

The DNA test was identified as Trichophyton violaceum (Figure 4) in the confirmation of the sample.

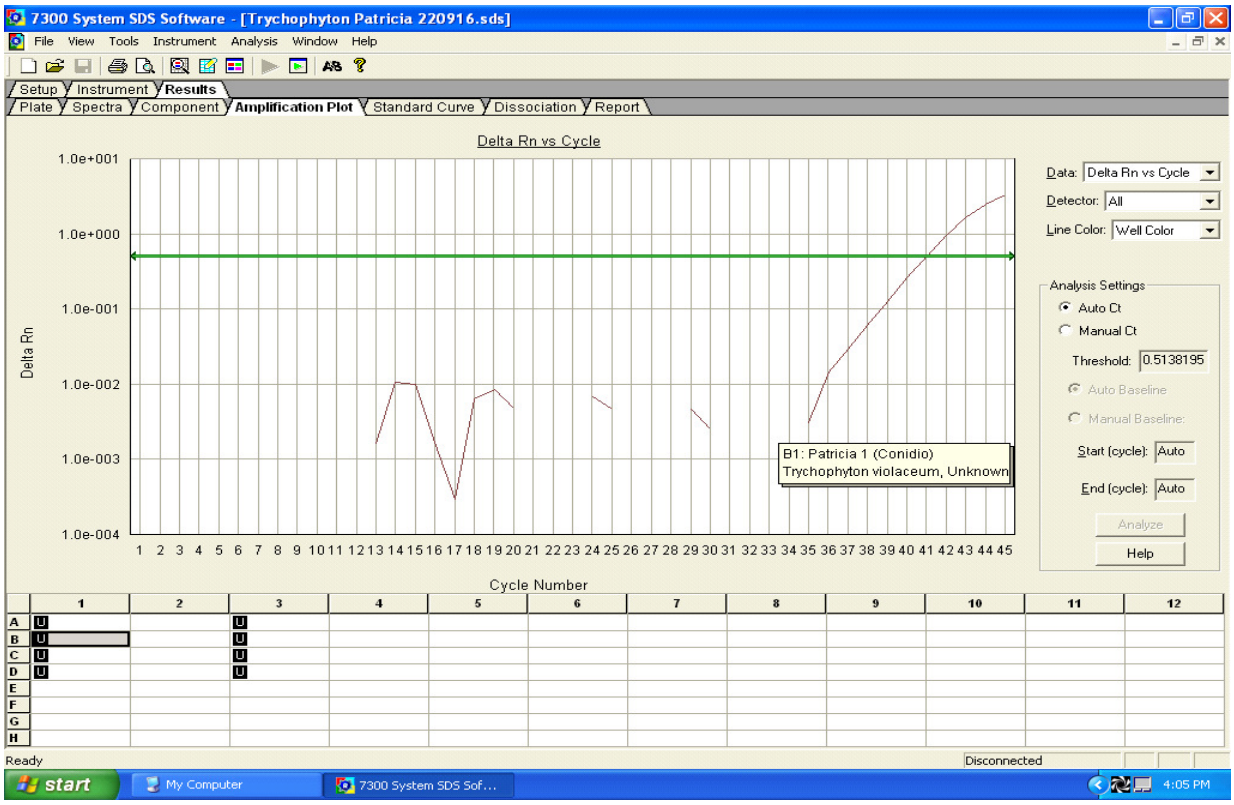

Figure 4. Sample 01 (B1) of the patient in conidia culture representing a detection and amplification of the genetic material of the fungus Trychophyton violaceaum.

With this DNA amplification result, the HSCMV dermatology team started the oral griseofulvin treatment 10 to 20 mg / kg / day and 1% butenafine, topical application for the region 1x / day, preferably at night, for 30 days. It was also recommended to leave the region dry, with the use of antiseptic powder, twice a day.

After two days of treatment, there was a slight improvement of the crustal lesions in the region of large lips, pubic mountain and perineum, violet coloration on the basis of lesions, with a healthy skin. It presented spontaneous trichotomy points due to the lesions, but without improvement of serosanguinolent secretion output and a slight worsening of regional edema with erythema.

After that, cyclopirox olamine 10 mg / g cream was added every 12 hours, anti-candela anti-shingles with miconazole.

It was observed the improvement of the secretion and the extension of the violet coloration (Figure 5).

The patient was discharged from hospital, was instituted on the continuity of griseofulvin without patient follow-up in the period of four weeks, evaluating the clinical improvement and cure.

Figure 5. Cure and regeneration of skin and previous tretments with griseofulvin

DISCUSSION

Tinea cruris reaches the groin, thigh and buttock regions, the main cause being Trichophyton rubrum. The manifestation of symptoms varies according to the immune status of each person (Peres et al., 2010). T. rubrum has a high prevalence, presenting about 70% of dermatophytoses, mainly on onychomycosis (Rocha and Vieira, 2014).

T. violaceum is mainly related to the cases of tinea corporis, tinea capitis and tinea ungueal (Lana et al., 2016; Zoulatia et al., 2018). It is characterized by slow growth, about 2 to 4 weeks, producer of small colonies, anthropophilic dermatophyte (Farina et al., 2015).

It is considered the most isolated dermatophytic agent in Africa and endemic in Europe, the Middle East and Asia. The epidemiology of dermatophytoses in Europe has changed due to increased tourism and economic and social improvements. And to Brazil arrived by means of the Italian immigrants (Rodrigues et al., 2008).

Clinical manifestations have also undergone changes in the last three decades due to the appearance of this agent in unusual places. This can lead to misdiagnosis and treatments that do not lead to satisfactory results.

Differential diagnoses can be made with bacterial folliculitis and other skin infections (Bakardzhiev et al., 2016).

Some characteristics of T. violaceum infections: high transmission rate, varied clinical features with alopecia associated with black spots, or presence of exudative and painful lesions, and may develop into crusts. Thus, difficulties arise in microbiological diagnosis due to low frequency (Rodrigues et al., 2008).

Other antifungal agents have been used for the treatment of such infections. Inside them to terbinafine, fluconazole and itraconazole (Pires et al., 2014).

The choice of treatment should be individualized, as it depends on some factors, such as the affected site, the extent of the infection and the isolated species. It may be topical, systemic or an association of the two methods (Farina et al., 2015); (Sardanha et al., 2018). Selenium sulphide shampoo may be associated with ketoconazole, especially tinea capitis. Treatment may range from two to six weeks (Farina et al., 2015).

Creams with ketoconazole, isoconazole, miconazole, clotrimazole, bifonazole, terbinafine, butenafine and cyclopirox olamine may be used. Systemic therapy is indicated when therapeutic failure, recurrence of the condition, generalized lesions or chronic lesions occur. Systemic therapy is primarily performed with terbinafine, griseofulvin, ketoconazole and fluconazole (Aquino et al., 2007).

About the medications used, the case in question was seen in the literature in which cyclopirox olamine is very effective (Tauber and Muller-Goyman, 2014). Butenafine is effective for treating tinea pedis, tinea cruris and tinea corporis (Lana et al., 2016). And griseofulvin is considered a therapy of choice for the treatment of tinea, as it is widely distributed through keratinized tissues, inhibiting mitosis (Lana et al., 2016); (Peres et al., 2010). There are also reports that terbinafine shows good results for not very extensive lesions (Kakourou and Uksal, 2010).

CONCLUSION

Tinea cruris is a contagious infection. The varied clinic can lead to diagnostic doubts, exposing the patient to erroneous treatments. Thus, adequate collection of samples and mycological confirmation of the pathogen are very important for the treatment of the patient. In places with limited resources, it is quite challenging to follow up on patients and thus gain healing control.

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