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Case Report

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A Case report of Recurrent Tinea cruris and Tinea corporis

Dr. Bhawna Sharma[1], Dr. Payal Dutta[2], Dr. Gaurav Bhaskar[3] and Dr. Neeru Bhaskar[4]

[1]MD Microbiology, MMIMSR Mullana, Ambala, Haryana 133007, India
[2]MD Microbiology, MMIMSR Mullana, Ambala, Haryana 133007, India
[3]DVD Dermatology and Venereology, Medical Director, B. S. D.Hospital, Karnal, Haryana. 132001.
[4]MD Biochemistry, MMIMSR Mullana, Ambala, Haryana 133007, India
*Corresponding author: *dr.bhawnasharma20@gmail.com*

Abstract

Superficial fungal infections of the skin are a major health problem and are associated with morbidity due to chronic itching and inflammation of skin.[1] Superficial fungal infections of skin are caused mainly by dermatophytes namely *Trichophyton*, *Microsporum* and *Epidermophyton* species and also due to Candida and *Malessesiasp*.[2] Superficial dermatophytic infections has been classified according to the site of involvement. They affect 20%-30% of the world's population and carries significant modbidity due to chronic itching and reduce the quality of life.[1] Dermatophytes are aerobic fungi and feed on dead keratin on body so mainly infest skin, hair and nails that are rich in keratin. The classic presentation of dermatophytosis is that of an annular or ring-shaped red scaly plaque with central clearing, often associated with severe pruritus. Treatment includes systemic and topical antifungals with variable duration depending upon the site of infection and the antifungal chosen.

Keywords: Recurrent Tinea cruris, Tenia corporis, Dermatophytes, Fungal infections.

Introduction

History:

A 20yrs old male patient presented with multiple, red colored, itchy annular lesion with scales from past 4wks.

H/o present illness: Patient presented with multiple red, itchy annular scaly lesions over the groins and the adjoining areas along with few annular lesions present over the abdomen and chest since 4 wks. Lesions are increasing in size with central clearing and peripheral spreading. Lesions in the groins have coalesced and enlarged in size.

Past History: No H/o similar lesions in the past. No H/o of DM, TB in the past.

Treatment History: Patient has taken treatment previously from the local doctors and chemist in the form topical creams but it re appears after few days of stopping the treatment. However the name of the medicines is not known to the patient.

Family History: No H/o similar complaints in the family.

Bowel Habits: Normal.

Examination:

General examination: Patient is conscious,co-operative and well oriented to time, place and person. No pallor, no icterus, no cyanosis, JVP not raised, no clubbing, no lymphadenopathy and no oedema.

Respiratory rate is normal. No CVS or CNS abnormality.

Local examination: Multiple erythematous, annular scaly plaques are present over the groins, abdomen and chest. Plaques show central clearing with peripheral spreading. Multiple excoriation marks are present. Lesions in the groins are very large in size due to multiple lesions coalescing together.

Scalp: Normal
Nails: Normal
Mucosa: Oral and genital mucosae are normal.
Palms and Soles: Normal.

Diagnosis/ differential diagnosis:

From the history and examination the diagnosis is **Tinea cruris with Tinea corporis**.

However certain differential diagnosis must be rules out. They include **Guttate Psoriasis** (multiple scaly, itchy, scaly and erythematous lesions all over the body few centimeter in size, however usually the groins are spared), **Pityriasis Rosea** (Multiple small, annular, scaly erythematous lesions over the trunk with history of herald patch, usually groins are spared), **Secondary Syphillis** (multiple small erythematous scaly lesions over the whole body with VDRL positive).

Investigations:

Routine investigations include complete blood counts, urine routine and microscopy, blood sugar, blood urea, SGOT?PT were done and were within normal limits. VDRL test was negative, to rule out Secondary Syphilis.

Specific investigation includes KOH mount which was prepared using 10% KOH that showed multiple septate and branching hyphae amongst epithelial cells.

Treatment:

Patient was advised Tab Terbinafine 250mg once daily for 6wks and topical sertaconazole cream twice daily for 6wks. Patient responded well to the treatment but recurrence occurred after 4wks of stopping the treatment. So patient was again put on Tab terbinafine and topical luliconazole for 4wks. After clearing of the lesions patient was advised to use terbinafine dusting powder topically for another 4 months. This time no relapse occurred.

In cases of relapse of fungal infections antifungal powders can be prescribed for longer duration of time to prevent relapse.

Discussion

Dermatophytic infections of skin are a major health related problem and lead to decreased quality of life.[1,2] Tinea corporis is mainly caused by *T. rubrum*. The organism responsible for tinea corporis invades the stratum corneum, possibly aided by warm, moist and occlusive conditions, and resides in it.[3]

This patient presented with multiple lesions on the chest, abdomen and groins. After KOH mount preparation the diagnosis was clear to be Tinea corporis and cruris. KOH mount was prepared and was positive for fungal hyphae. Patient was then advised tab Terbinafine 250 mg once daily and topical sertaconazole cream for 6 wks but relapse occurred after stopping treatment. Later he was again prescribed tab terbinafine 250mg and topical luliconazole cream once daily for 4wks and later topical terbinafine dusting powder for 4months to prevent relapse. Till 4 months after the initiating dusting powder no relapse was seen.

Superficial fungal infections are usually caused due to hot and humid environment and direct skin to skin contact. Relapse of infection is a major concern. So some dusting powder must be given to the patient after completion of initial therapy.

From this case we learned that

1. Superficial Fungal infections are an important health concern and reduce the quality of life.
2. Most common fungal infections are due to dermatophytes and among them *T. rubrum* are most common cause of Tinea corporis and cruris.
3. Various diseases have similar presentation as tinea infection and need to be differentiated on the basis of clinical examination and investigations.
4. Antifungal treatment needed to be given for the specific duration of time depending on the site of infection and the antifungal agent chosen.
5. Proper treatment if taken by the patient can lead complete cure of the disease, but for prevention of relapse some antifungal dusting powders must be continued far longer duration of time.

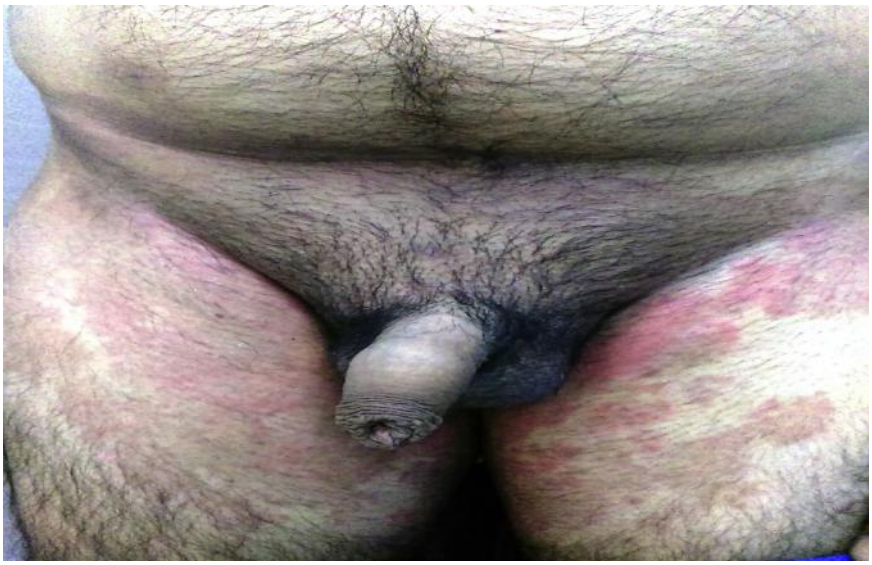

Figure 1: Tinea corporis and cruris infections

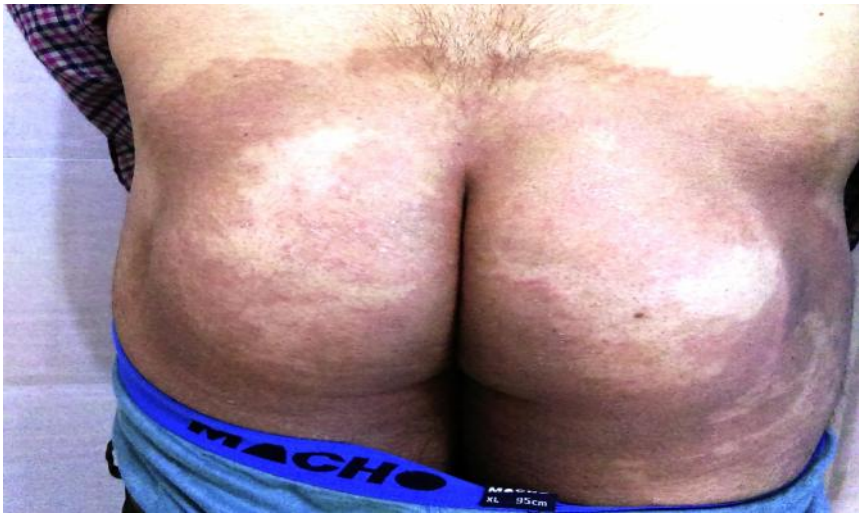

Figure 2: Tinea corporis and cruris infections

Summary:

Superficial fungal infections are a common problem in hot and humid climate as in India.[4] Dermatophytic infections are the most common form of fungal infections of humans. According to World Health Organization (WHO), the prevalence rate of superficial mycotic infection worldwide has been found to be 20-25%. [5] Its prevalence varies in different countries. [6, 7] according to a study done by **A. Lakshaman et al**, *Trichophyton rubrum* was the commonest species (79%) and *Candida* (60%) the commonest non-dermatophytic species. Tinea corporis was the commonest (78%) clinical presentation.[8] Tinea corporis and cruris usually present as annular, itchy, erythematous and scaly lesions over the trunk and groins respectively. The lesions have central clearing and peripheral spreading. Concentric rings known as Tinea imbricata may be seen and is caused due to *T. concentricum*.[9]Tinea infection if wrongly treated with steroids or immunosuppressive agents like Tacrolimus gives rise to Tinea incognito.

KOH mount preparation are the most cost effective and fast tool for the diagnosis of tinea infections and can be done in the OPD. However to identify the species of the fungus cultures can be done. A new and fast method for the identification of fungal species is PCR or the restricted fragment length polymorphism. [10] Combination of traditional methods and molecular techniques considerably improves identification of dermatophytes in the species level in clinical laboratories, which can lead to properly antifungal therapy and successful management of infections. [10]

Treatment for superficial fungal infections includes topical and systemic antifungals. The duration of treatment depends on the site of involvement and the drug chosen for treatment. An important mechanism of host defense against these pathogens is the keratinization which is the process of epithelial desquamation leading to removal of the fungus. [11] Resistance to antifungals have been reported in the past and relapse is also a major concern. Many newer topical antifungals are coming up to treat the problem of resistance to treatment.

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