



ATYPICAL TINEA CRURIS IN A HIV PATIENT: A CASE REPORT

Dermatology

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ABSTRACT

HIV is a major health problem across the world. Dermatophytic infections are common in HIV infected patients. We present a case of 27 year old male patient with atypical tinea cruris. These atypical skin changes help clinicians to recognize previously undiagnosed HIV infection.

KEYWORDS

Tinea cruris, Dermatophytic infections.

INTRODUCTION:

HIV is a major health problem across the world. Cutaneous manifestations were among the first recognised clinical manifestations of HIV infections¹. Dermatophytic infections are common in HIV infected patients². Dermatophytes or tinea are a type of fungi that infect keratinized tissues. These infections are categorised by their anatomical location and typically caused by one of the three main species microsporum, epidermophyton or trichophyton³. Dermatophytic infection involving the groins is called Tinea cruris.

It predominantly occurs in males and is also known as dhobi's itch or jock itch.⁴

Dermatological manifestations in person with HIV are atypical, more severe and less responsive to treatment otherwise.

Case History:

A 27 year old male patient reported to our out patient department with a chief complaint of itchy dark lesions over the groins and thighs for 2 months.

A detailed marital and sexual history was taken.

On examination, multiple erythematous to hyperpigmented ,well-demarcated ,annular plaques with raised borders, ranging from 10x5cm to 6x4cm with overlying pustules, oozing and superficial crusting were noted over bilateral thighs, groins, scrotum and penis.



Fig 1. Multiple, Larger Sharply Marginated Areas Of Hyperkeratosis With Pustules, Oozing And Crusting Seen Over The Crural Area And Surrounding Skin.



Fig 2. Multiple, Sharply Marginated Areas Of Hyperkeratosis With Pustules, Oozing, Crusting And Ulcers Seen Over The Buttocks And Surrounding Skin.

Routine blood investigations were performed and were within normal limits. Serological testing for HIV (ELISA) was positive. VDRL and HBsAg tests were negative. 10% KOH mount after taking skin scrapings from the lesions showed fungal hyphae. Radiological investigations like Chest X-ray and abdominal ultrasound were performed to rule out systemic involvement.

Fungal culture was done on sabouraud's dextrose agar supplemented with chloramphenicol and cycloheximide which revealed creamy white color, downy to glabrous colony with a pale yellow brown reverse pigment. After 5 days of incubation, growth of a brown colored flat spreading powdery surface was observed. Lactophenol cotton blue preparation from colonies demonstrated tear-drop shaped (pyriform) microconidia attached to the hyphae at narrow end. These suggested infection with Trichophyton species infection.

Patient was treated with Itraconazole 200 mg once daily for one month. It was supplemented with topical Luliconazole cream once daily at night time along with systemic antihistamines.

Patient was started on anti-retroviral treatment. Patient was counselled about the nature and course of Tinea cruris in the background of HIV seropositivity, compliance towards the prescribed treatment and regular follow up.

DISCUSSION

Dermatophytes are aerobic fungi that produce proteases that digest keratin and allows colonization, invasion and infection of stratum corneum of skin, hair shaft and nail.

The infection is generally cutaneous and restricted to non-living cornified layers because the fungi is not able to penetrate the deeper tissue or organ of healthy immunocompetent host.

Dermatophyte infections are common in HIV infected patients and can occur at some point during their illness. The severity and variability of presentations are more common in HIV/AIDS. Prevalence of dermatophytosis is four times higher amongst HIV infected population and it usually follows a normal pattern but atypical or extensive forms may occur. The extensive form of tinea cruris occurs in hot, humid climates and may be seen at all levels of immunosuppression.⁶

Degree of impairment of the immunological status due to HIV may interfere with the clinical presentation of dermatophytosis and extensive multiple or atypical skin lesions may be more common in advanced stages of Immunosuppression. Other factors like anti-retroviral therapy or use of systemic antifungal agents for prophylaxis of opportunistic infection may alter the clinical presentation, increase the severity and may become difficult to treat.⁷

Immune dysregulation with skewed immune response towards Th2 cytokines with high levels of IgE and IgG4 antibodies may be responsible for some of these chronic, atypical and unusual clinical forms⁸

A study conducted in Telangana by Ali et.al showed that superficial fungal infections are common, yet significant problem in HIV infection, most commonly caused by *T. rubrum*⁹

A study conducted by Kumaraswamy et.al in south India, showed that among the various skin manifestations of HIV, extensive dermatophytosis was common. Familiarity with these manifestations facilitate early diagnosis and management which are vital for improving the quality of life of these patients.¹⁰

CONCLUSION:

HIV positive individuals present with atypical and extensive forms of dermatophytic infections, which are less responsive to routine lines of treatment. Extensive presentation of dermatophytes can be an early sign of HIV infection. These atypical skin changes can help clinicians to recognize previously undiagnosed HIV infection.

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