

AIDS Dementia Complex with Tinea Faciei with Very Low CD4 Count: An Unusual Case Report

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ABSTRACT

Dermatophyte infections are common in HIV infected patients and can occur at some point during their illness but Tinea faciei not a common presentation in adults, although a few cases have been described in HIV-infected patients. We are presenting an unusual case of 40 years old female

who presented with fever, generalized weakness, loss of memory and ringworm infection on face with seropositivity for HIV. Patients CD4 count was very low and hence she was diagnosed ad AIDS dementia complex with Tinea faciei.

Keywords: Dermatophyte infection, HIV, Neurocognitive disorder

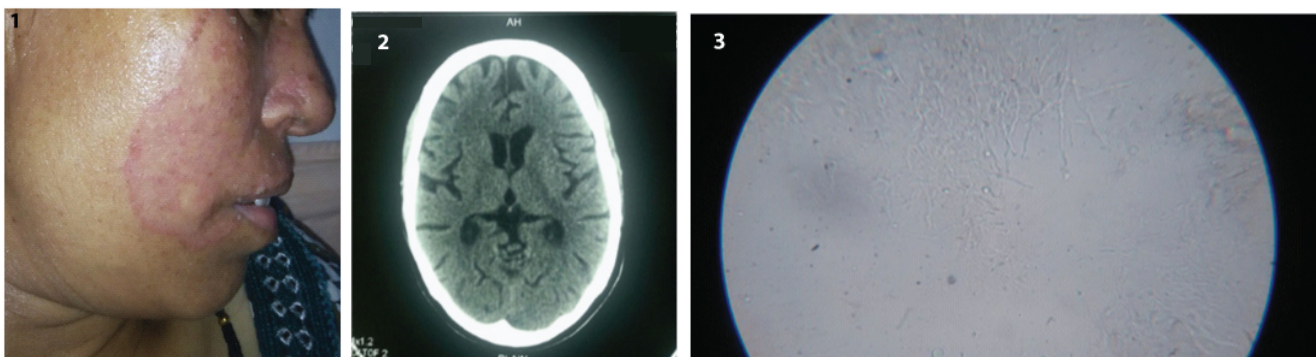
CASE REPORT

A 40 years old lady who came from rural background presented with complaints of on and off fever, generalized weakness and loss of memory for last one year. Her attendant also gave history of impaired ability to concentrate, difficulty in doing her daily activities, increased forgetfulness and motor problems like unsteady gait and poor balance. On examination, she was conscious, oriented. Her BP was 100/60 mmHg and PR was 92/min. She was afebrile at the time of examination. She was found to have red, scaly, macular, pruritic rash on right side of face also involving the upper lip [Table/Fig-1]. She did not have similar kind of lesions on any other part of the body. Her oral examination also showed oral thrush. Other systemic examination did not reveal any significant abnormality. Dementia in a young adult, the differential diagnosis could be depression, HIV associated

dementia, Vitamin B deficiencies, alcohol intoxication, drug misuse, and thyroid abnormalities.

On investigation, her haemoglobin and total leukocyte counts were found to be in normal range. Liver function and kidney function tests were also normal. After taking written informed consent from the patient, viral markers testing revealed her HIV status to be positive. Her absolute CD4 count was found to be very low i.e 14 / μ L. India ink testing as well as antigen testing (Crypto-LA) for Cryptococcus fungal infection was negative. Her spouse was also investigated for HIV and found to be non- reactive. Patient did not reveal any history of promiscuity outside her marriage. But patient gave history of blood transfusion 7 years back in primary health centre. CT-scan of head showed cerebral atrophy [Table/Fig-2].

Scaly lesions of face showed thin, septate fungal hyphae with numerous microconidia on KOH mount which was



[Table/Fig-1]: Red, scaly, macular, pruritic rash on right side of face. **[Table/Fig-2]:** CT scan of Brain showing cerebral atrophy. **[Table/Fig-3]:** KOH mount of skin lesion (face) showing thin, septate fungal hyphae with numerous microconidia suggestive of Trichophyton species

suggestive of dermatophyte infection, Trichophyton species [Table/Fig-3]. Patient and her husband were given thorough counselling on HIV and AIDS. Patient was discharged with medications like fluconazole, Terbinafine, cotrimoxazole, sertraline, ranitidine and cetirizine. For treatment of AIDS, patient was referred to ART centre for further management.

DISCUSSION

The term AIDS dementia complex was first introduced by Navia and colleagues in 1986 [1]. Human immunodeficiency virus (HIV) enters the central nervous system (CNS) early in the course of infection and damage to CNS may be due to direct result of viral infection of the CNS macrophages or glial cells or release of neurotoxins. It may lead to HIV encephalopathy or AIDS dementia complex [2-3]. AIDS dementia complex consists of a constellation of signs and symptoms of CNS disease. It is the initial AIDS defining illness in ≈3% of patients with HIV infection [4]. The risk of severe neurocognitive disorders in patients with HIV is seen more in patients who are not receiving highly active antiretroviral therapy (HAART) and who have a low CD4+ lymphocyte count [5]. In the early 1980s, diseases of the skin and mucous membranes were among the first recognised clinical manifestations of AIDS [6]. They can help in predicting severity and progress of the disease and can be correlated well with CD4 counts [7].

Dementia was a common source of morbidity in HIV-infected patients before the advent of highly active antiretroviral therapy (HAART) [8]. In this study, a lady patient with very low CD4 counts i.e 14 cells/μL presents with AIDS dementia complex (ADC) and superficial fungal infection as the AIDS defining illness. According to a study the prevalence of ADC increases sevenfold with a CD4+ count of less than 100/μL and women with HIV are more prone to have rapid progression of neurological symptoms and signs [9-11].

In HIV-positive patients, majority of fungal infections are mucosal candidiasis and dermatophyte infections as also seen in our patient. Tinea faciei is a superficial dermatophyte infection of the skin of the face. In female patients, the infection may appear on any surface of the face, including the upper lip and chin [12]. A study from South India showed Tinea corporis to be the commonest dermatophyte infection (53.7%) in HIV positive patients [13]. The most common causes of dermatophytosis in HIV-infected patients are Trichophyton rubrum and Trichophyton mentagrophytes. The dermatophyte infections seen in HIV-infected patients are more severe, atypical in presentation and difficult to treat [14]. A case report from Narang K et al., reported atypical presentation of tinea capitis in the form of concentric rings in HIV-positive adult female on antiretroviral therapy [15]. Some of these clinical presentations serve as markers of the stage of HIV infection and correlate with CD4 count. In a

study by Sachin et al., dermatophytosis showed to be an important proxy indicator of advanced immunosuppression to start anti-retroviral therapy in the absence of CD4 cell count report [16]. In this case patient most probably got HIV infection through blood transfusion.

CONCLUSION

From this case report, we want to highlight certain facts that when a young patient presents with dementia and cerebral atrophy on CT scan, HIV/AIDS should be immediately suspected in such cases. Also superficial fungal ringworm infection can be taken as proxy indicator if facility for CD4 count is not available. In developing countries like India, blood transfusion is still a cause of concern for HIV transmission either due to non screening of every donor blood unit or failure to detect virus in window period. Hence, it is recommended that all the blood transfusion units should test their blood units with nucleic acid amplification testing.

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