

Cutaneous Manifestations in HIV: A Study of 100 Cases in a Tertiary Hospital

Dr. Mangala HC¹, Dr. Sneha Gandhi², Dr. S B Muruges³

JJM Medical College, Davangere

Abstract: Dermatologic diseases are common in the HIV-infected population. More than 90% of patients develop skin lesions at some time during the disease. In some patients, skin is the first organ affected. This study was conducted in a tertiary hospital for a period of three months from September 2016 to December 2016. Physical examination was performed to identify all possible skin disorders. In cases with doubtful clinical diagnosis of skin disorder, skin biopsies were taken for histopathological examination and also relevant lab tests were performed. Most common HIV-related dermatological manifestations were seborrheic dermatitis (54%), xerosis (49%), pruritic papular eruption (46%), dermatophyte infection (39%), generalized skin hyperpigmentation (26%), scabies (15%), onychomycosis (14%), oral candidiasis (17%) and photo dermatitis (15%)

Keywords: HIV, Muco-cutaneous manifestations, CD4

1. Introduction

Dermatologic diseases are common in the HIV-infected population. More than 90% of patients develop skin lesions at some time during the disease. In some patients, skin is the first organ affected.¹ Though most of these dermatoses are not unique to this group, most of them are known to present with severe, atypical forms that are either resistant or known for their recurrence. These unusual features of some of the diseases in AIDS may contribute to misdiagnosis. Thus, proper histological diagnosis of skin manifestations is very important as it may serve as the earliest manifestation to suspect a case of HIV infection.² This study attempts to focus on the cutaneous deramtoeses related to HIV.

2. Materials And Methods

This study was conducted in a tertiary hospital for a period of three months from September 2016 to December 2016. Physical examination was performed to identify all possible skin disorders. In cases with doubtful clinical diagnosis of skin disorder, skin biopsies were taken for histopathological examination and also relevant lab tests were performed. The most recent CD4 counts (cell/mm³) of the patients were obtained from patients medical records after physical examination. The CD4 counts were assessed by flow cytometry (gold standard for CD4 T lymphocytes measurements).

3. Results

Among 100 patients males were 71(65%) and females were 29(29%) with skin lesions. Of these, most patients, 41%, were in 30-39 years age group (24 males and 17 females). The majority of patients (73%) were residents of rural areas. Of these sufferers, 68% belonged to lower socioeconomic status; only 3% were from high socioeconomic status. Regarding the occupations of the subjects, the largest group were constituted by house wives (29%), followed by drivers (26%) and labourers (20%). The majority of patients were of poor educational status, 27% educated only upto seventh standard and 32% upto tenth standard while 23% were illiterate. A total of 84% subjects were Hindus, the

remainder from other religions (Table 1). A total of 81 patients had recent CD4+ cell count, among them 26 patients had counts less than 250/ μ l and 55 patients had more than 250/ μ l. Most common HIV-related dermatological manifestations were seborrheic dermatitis (54%) (figure 1), xerosis (49%), pruritic papular eruption(46%), dermatophyte infection (39%) (figure 2), generalized skin hyperpigmentation (26%), scabies (15%), onychomycosis (14%), oral candidiasis (17%) and photo dermatitis (15%). Other dermatoses seen in less than 5% of the cases were pityriasis versicolor, molluscum contagiosum, lichenoid drug eruptions, furuncle, intertrigo, actinic lichen planus, herpes zoster(figure 3), tinea capitis (figure 4), aphthae and addisonian pigmentation.

4. Discussion

The dermatological manifestations in HIV patients, including many opportunistic infections, are every common. In the current study, majority (73%) of the infected patients belonged to rural areas and belonged to lower socioeconomic strata (68%). This indicates poor nutritional status, which itself can accelerate the progression of HIV. These findings were in concordance with the study of Chawhan et al.²

In this study in 67% of the patients, at least one skin lesion was detected, while the rest had more than one lesion. The prevalence and pattern of skin diseases vary from region to region ranging from 41.7-98.3% in different studies. This could be explained by differences in status of self health care, climatic and environmental conditions.³

This study mainly studied the dermatological manifestations of HIV positive patients attending a tertiary care center for treatment. Seborrheic dermatitis (54%) was the most common dermatological disorder according to our study, which is consistent with other studies.^{4,5}

The other frequent dermatologic manifestations in the present study were xerosis (49%) and pruritic papular eruption (46%) which were more common in the present

study when compared to the previous studies by Spira et al and Jeffrey et al.^{6,7}

The dermatological manifestations increase both in frequency and severity with the progression of HIV and decline in CD4+ cell counts.

Sivayathorn reported several conditions with prevalence rates higher than 5% including oral candidiasis (34.3%), pruritic papular eruption (32.7%), seborrheic dermatitis (21.0%), herpes zoster (16.1%), oral hairy leucoplakia (14.9%), herpes simplex (10.9%), onychomycosis (9.3%), cutaneous ringworm (7.7%), psoriasis (6.5%) and folliculitis (5.6%).³

Wiwanitkit concluded that xerosis (73.33%) and oral candidiasis (54.17%) were the most common skin disorders, followed by seborrheic dermatitis (46.67%), pruritic papular eruption (36.67%), oral hairy leucoplakia (12.50%), folliculitis (11.67%), herpes zoster (9.17%) and alopecia (6.67%). Furthermore, variation in sample size in the different studies may influence the different outcome observed.⁸

Previous studies showed that CD4 counts <200 cells/cumm were associated with increase in infections. Munoz Perez et al stated taht infections like genital herpes, HSV, candidial eruptions, psoriasis, verruca vulgaris, drug eruptions, oral hairy leukoplakia could be used as clinical markers of disease progression due to their strong association with CD4 counts.⁹

References

- [1] Coldiron BM, Bergstresser PR. Prevalence and clinical spectrum of skin disease in patients infected with human immunodeficiency virus. Arch Dermatol. 1989;125:357-61.
- [2] Chawhan S, Bhat D, Solanke S. Dermatological manifestations in human immunodeficiency virus infected patients: Morphological spectrum with CD4 correlation. Indian J Sex Transm Dis. 2013 Jul-Dec; 34(2): 89-94.
- [3] Premanadham, Kante M, Reddy P. HIV Patients with Dermatological Manifestations Correlated with CD4 N. Int.J.Curr.Microbiol.App.Sci (2015) 4(2): 575-581
- [4] Goodman DS, Teplitz ED, Wishner A. Prevalence of Cutaneous disease in patients with AIDS or AIDS-related complex. J Am Acad Dermatol 1987;17:210-20
- [5] Coldiron BM, Bergstresser PR. Prevalence and clinical spectrum of skin disease in patients infected with human immunodeficiency virus. Arch Dermatol 1989;125:357-61
- [6] Spira R, Mignard M, Doutre MS. Prevalence of cutaneous disorders in a population of HIV-infected patients. Arch Dermatol 1998;134:1208-12
- [7] Jeffrey HS, Muz P, Cabral P, Jhamb K. Dermatological manifestations in HIV-infected patients. Mayo Clin Proc 1999;74:658-60
- [8] Wiwanitkit, V. Prevalence of dermatological disorders in Thai hivinfected patients correlated with different CD4 lymphocyte count statuses: A note on 120 cases. Int. J. Dermatol,2004;43:265-8.

- [9] Muñoz-Pérez, M.A., Rodriguez-Pichardo, A., Camacho, F., Colmenero, M.A. Dermatological findings correlated with CD4 lymphocyte counts in a prospective 3 year study of 1161 patients with human immunodeficiency virus disease predominantly acquired through intravenous drug abuse. Br. J. Dermatol 1998;139:33-9.

Table 1: Epidemiological profile of 100 cases

Total number of patients	100
Male to female ratio	2.22:1
Most common age group	30-39 years
Location	Rural in 73% patients
Socio-economic strata	68% belonged to lower socio-economic strata
Most common occupation	House-wives (29%)

Table 2: HIV related dermatoses

Seborrheic dermatitis	54%
Xerosis	49%
Pruritic papular eruption	46%
Dermatophyte infection	39%
Generalized skin hyperpigmentation	26%
Scabies	15%
Onychomycosis	14%
Oral candidiasis	17%
Photo dermatitis	15%



Figure 1: 22 year old male with multiple erythematous patches with scaling on face: Seborrheic dermatitis



Figure 2: Dermatophytic infection:



Figure 3: 36 year old female with atrophic scarring of face secondary to herpes zoster



Figure 4: Six year old by showing well defined patch of alopecia with erythematous active margin and scaling diagnosed as tinea capitis

