

Dermatological Manifestations of HIV - Study of 100 Cases

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Abstract

Background: Skin is one of the most frequently involved organ in human immunodeficiency virus (HIV) infection and mucocutaneous manifestations may be one of the earliest markers of AIDS. The prevalence of cutaneous abnormalities in HIV approaches nearly 90%.

Aims And Objectives Of The Study: To determine the pattern of mucocutaneous manifestations in 100 HIV-positive patients

Materials & Methods: This cross-sectional study included 100 HIV-infected patients seen at the ART centre and Dermatology Outpatient Department - Government Mohan Kumaramangalam Medical College & Hospital, Salem, India, over a period of 12 months.

Results: The most prevalent infection was candidiasis, seen in 47 patients (47%). Prevalence of infectious diseases like dermatophytosis, herpes simplex, herpes zoster, molluscum contagiosum (MC), non-infectious diseases like seborrheic dermatitis, adverse drug reaction, nail pigmentation, xerosis and diffuse hair loss differed statistically according to the clinical stages of HIV infection.

Conclusion: Results of our study suggest that mucocutaneous findings occur throughout the course of HIV infection. Infectious dermatoses like dermatophytosis show an inverse relation with advanced stage, and these dermatoses can be used as an indicator of advanced immunosuppression.

Keywords: cutaneous manifestations of HIV, HIV & skin, skin manifestations of HIV, Dermatological manifestations of HIV, Mucocutaneous manifestations of HIV

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I. Introduction

The skin harbors specialized subsets of antigen presenting dendritic cells (Langerhans cells and dermal dendritic cells). Impairment of skin immune system, a well recognized consequence of pharmacological immunosuppression leads to microbial invasion. During HIV infection total number of Langerhans cells decreased. Impairment of the skin immune system is believed to be responsible for the frequent occurrence of both infectious and non-infectious skin diseases even before the development of full immunodeficiency (1).

II. Materials And Methods

100 HIV seropositive adult patients attending the ART centre, dermatology department were included in our study. All the patients were screened for mucocutaneous disorders. The duration of the study was from June 2016 to May 2017. The clinical diagnosis was confirmed with laboratory procedures like microscopy (KOH preparations, Tzanck smear) and histopathological evaluation whenever necessary. Serological test for syphilis was done using RPR (Rapid plasma reagin) in all the 100 subjects. A titer of 1:8 or above considered active. TPHA was done to confirm the diagnosis.

III. Discussion

Skin is commonly affected in the course of HIV disease and in many cases skin finding may be the earliest sign of HIV.

Infectious Dermatoses

Acute exanthem of HIV disease

The earliest manifestation of HIV is acute HIV exanthem, which may develop in about 75% of the patients with HIV infection (1). Patients develop a pruritus, erythematous eruption of macules and papules involving the trunk, extremities, head and neck area resemble those seen in any other acute viral infection.

Herpes simplex virus infection

Recurrent oral and anogenital herpes infection is common in HIV. Lesions may become confluent and result in chronic ulceration without typical vesicles. Widespread varicelliform eruptions are occasionally seen.

Varicella – zoster virus infection

Herpes zoster may be the first sign of immunosuppression and its occurrence should always raise the issue of the need for HIV screening. Atypical presentations like multidermatomal, recurrence with the same dermatome and systemic dissemination can occur.

Human papilloma virus infection

Due to diminished cell mediated immunity, higher incidence of genital warts, common warts are reported and sometimes they unusually widespread, recalcitrant lesions. HPV associated complications include extensive flat & filiform warts on the beard area of the face, cauliflower – like plaques or the anogenital region, HPV induced malignancies such as Bowenoid papulosis can occur.

molluscum contagiosum

This presents as pearly white, umbilicated papules on genital & extragenital sites, Giant MC, widespread infection of the face also common.

Bacterial infections

A compromised cell mediated immunity and abnormal macrophage function result in loss of protection against some bacterial pathogens (2). Staphylococcus aureus is the most common bacterial pathogen in HIV disease causing cutaneous and systemic infections. In HIV infections following patterns are described: impetigo, bullous impetigo (3), ecthyma, papular and plaque like folliculitis (4), furuncles, carbuncles, botryomycosis (5).

Mycobacterial infections

M. tuberculosis is one of the most common systemic infections in HIV disease. Cutaneous tuberculosis occurs following infection with M. tuberculosis from an exogenous source or by autoinoculation or endogenous spread from another site. Haematogenous dissemination may result in either acute military tuberculosis (6), lupus vulgaris or metastatic tubercular abscess (7).

Oral hairy leukoplakia

OHL, a specific oral manifestation of HIV disease caused by Epstein-Barr virus has been reported in up to 28 percent of HIV infected patients, and it is a marker for advanced disease progression (1).

Adverse cutaneous drug reactions

The incidence of adverse cutaneous drug reaction from a variety of drugs especially anti-retroviral agents, antibacterials is high in HIV disease. The most common offending agents are sulfonamides, and can cause life-threatening Toxic epidermal necrolysis and Stevens Johnson Syndrome. Morbilliform eruptions, Lichenoid eruptions, nail and mucosal hyperpigmentation also common (9). Altered drug metabolism and increased basophil reactivation are possible factors.

Fungal infections

Over a third of HIV patients have dermatophytosis (8). Some infections may be unusually widespread (10). Tinea manuum, and tinea pedis with marked hyperkeratosis resembling keratoderma blenorrhagicum have been reported (11).

Candidiasis

This is extremely common in all stages of HIV infection, affecting mouth, genitalia and intertriginous area (12). Oral candidiasis and oral hairy leukoplakia indicate HIV infection and progression to AIDS. They also parallel this decline in the CD4 cell count.

Parasitic Skin Diseases

HIV patients are more liable to experience crusted (Norwegian scabies) in which the number of mites can be millions. Generalized scaling to marked hyperkeratosis in crusted scabies may resemble psoriasis, Keratoderma blenorrhagicum of Reiter's Syndrome or Darier's disease (13,14).

Sexually Transmitted diseases

Syphilis may co-exist with HIV infection and may alter the usual course of either disease or when occurring alone. Increased severity of clinical manifestations can occur (15).

Non infectious skin diseases

Seborrheic dermatitis; Clinically, Seborrheic dermatitis in HIV infection is unusual only in severity, involving the hair region of the scalp, face, axillae and pubic region and is resistant to the usual treatment. Psoriasis vulgaris, Ichthyosiform dermatoses, papular and follicular eruptions, HIV associated eosinophilic folliculitis also common.

IV. Results

Of the 100 HIVseropositive patients screened ,68 were males and 32 were females.Majority of the patients were in the age group of 31-45 years. Total of 100, 52 % patients had mucocutaneous lesions at the time of presentation. Most of the patients were in WHO clinical stage 2 and 3 and had severe immunosuppression. Most of the patients had itching as the main symptom.Generalized pruritus was observed in 21 (21%) individuals. Candidiasis (13%) was the commonest oral lesion followed by gingivitis. The most frequently observed fungal disease of the skin among the study subjects was dermatophytosis (17%). Combination of tinea at 2 or more sites was noted in 7 cases (7%). Multidermatomal, recurrent herpes zoster was noted on (2%) individuals.Oral hairy leukoplakia noted in one patient .Adverse cutaneous drug reactions noted in 11% of the patients .Most of the reactions are due to ART, sulphonamides. One patient developed SJS/TEN due to phenytoin. Extensive seborrheic dermatitis noted in 2 patients. 7 patients had infectious as well as non-infectious pathology. We found 3 cases of psoriasis. We did not get any case of Kaposi's sarcoma, lymphoma or any other cutaneous malignancies.

Genital lesions

13 of the study subjects(13%) had past history of either Genital Ulcer Disease (GUD) or Genital Discharge Disease (GDD). Genital herpes (7%) was the commonest genital lesion observed among the study participants followed by genital warts (3%).Extensive genital and perianal wart seen in 2 patients.Genital MC seen in one patient.Genital herpes with systemic dessimation seen in one patient.

RPR and its association with STDs

Among the 100 study subjects, 11(11%) were RPR positive. Secondary syphilis with mucocutaneous manifestations seen in 5 patients .Few patients had more than one infectious lesion. Because most skin diseases are amenable to diagnosis by clinical examination, evaluation of skin remains an important tool in the diagnosis of HIV infection.

Results of our study suggest that mucocutaneous findings occur throughout the course of HIV infection. Variety of infectious skin lesions were observed such as viral, bacterial, fungal and parasitic infections. Some of the infectious dermatoses like candidiasis, MC and dermatophytosis are useful clinical predictors for advanced immunosuppression. The presentations of mucocutaneous manifestations in HIV patients are atypical and less responsive to treatment.

References

- [1]. Tschachler E, Bergstressor PR, Stingl G. et al, HIV related skin disease Lancet 1996; 348: 659-63,
- [2]. Kinlock S, Vanhems PH, Hirshel B, et al. Primary HIV infection; A prospective and retrospective study. poster presentation 8th International conference on AIDS, Amsterdam, 1992, ; 19-24
- [3]. Donovan B, Rohrsheim R, Basselt I, et.al, Bullous impetigo in homosexual men – a risk marker for HIV – 1 infection ? Genitourin med 1992; 68; 159-61
- [4]. Becker BA, Frieden IJ, Odom RB , et. Al, Atypical plaque like staphylococcal folliculitis in human immunodeficiency virus infected persons. J Am Acad Dermatol 1989; 21;1020-4
- [5]. Toth IR, Kazar HL, Botryomycosis in AID. Arch pathol Lab Med 1987; III: 246-9
- [6]. Stack RJ, Bickley LK, coppel IG, et al millary tuberculosis presenting as skin lesions in a patient with acquired immunodeficiency syndrome. J Am Acad Dermatol 1990; 23; 1031-5
- [7]. Lupatkin H, et al Tuberculous abscesses patients with AIDs Clin Infect Dis 1992; 14: 1040-4
- [8]. Husak R et al : Oral Hairy leukoplakia in 71 HIV seropositive patients; Clinical symptoms, relation to immunologic status, and prognostic significance J AM Acad Dermatol 35; 928, 1996
- [9]. Saiag P, Caumes E, Chosidow O, et al.Drug induced toxic epidermal necrolysis in patients infected with human immunodeficiency virus. J am Acad Dermatol 1992; 26 : 567 – 74
- [10]. Torssander J, Karisson A, Morfeldt – Man son L et al. Dermatophytosis and HIV infection.A study, in homosexual men, Acta Derm venereol 1988, 68: 53 – 6
- [11]. Kaplan MH, Sadick N, et. al, Dermatologic findings and manifestations of AIDS. JAAD; 1987: 485 (12) Johnson RA: Dermatophyte infections in human immune deficiency virus disease. J Am Acad Dermatol 43 : S120, 2000
- [12]. Pankhurst C, Peakman M. Oral candidiasis in HIV infection. Lancet 1989 ; 2: 1491 – 2
- [13]. Donabedian H, Khazan B Norwegian scabies in a patient with AIDS. Clin infect Dis 1992; 14: 162 -4
- [14]. Inserra DW, Bickley LK. Crusted scabies in AIDS . Int J Dermatol 1990; 29: 287 – 9
- [15]. Daniel M.et al .Effect of HIV infection on course of Syphilis and response to treatment Ann Int Med 1992; 113 : 872



Figure 1. Erythema multiforme with Stevens-Johnson syndrome in a HIV patient



Figure 2. Extensive genital warts in a HIV patient

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