

Mucocutaneous Manifestations In Hiv-Infected Patients At A Tertiary Care Centre In Andhra Pradesh

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Abstract:

Background And Aims: Mucocutaneous features are a common occurrence in HIV patients, which may be the first pointer towards the presence of HIV infection. This study was done to note the different mucocutaneous manifestations occurring in the PLHA's.

Methods: One hundred and fifty consequent HIV seropositive patients attending the outpatient department were included in the study.

Results: The mean age of the study population was 32 years and male to female ratio was 2:1, majority were illiterates. Number of manifestations in the patients varied from 01 to 05. Dermatophyte infections (37%) followed by oral candidiasis (27%) were the most common infections seen in this study. PPE and SD were the most common non-infectious manifestations seen in this study. Genital herpes was the most common STI. The type, number and severity of mucocutaneous manifestations were inversely proportional to CD4 count. Inverse relation was seen between CD4 count and number of manifestations.

Keywords: HIV/AIDS, PLHAs, Cutaneous manifestations, STI, CD4 count

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I. Introduction

Globally there are about **36.7 million** PEOPLE LIVING WITH HIV AND AIDS (PLHA's). Human Immunodeficiency Virus (HIV) prevalence in India is about **0.21%**¹ Several dermatological conditions have proved to be useful markers for diagnosis and progression of HIV infection. More than 90% PLHA's develop skin disease during the course of their illness some or other time.² These conditions can also occur in the general healthy population, their occurrence in PLHA'S is often atypical, severe and explosive and require longer durations of treatment.

II. Aims And Objectives

- 1) To study dermatological manifestations in PEOPLE LIVING WITH HIV & AIDS (PLHA'S) attending DVL OP GGH Kurnool.
- 2) To compare the cutaneous manifestations with CD4 count & stage of HIV disease (WHO staging).

III. Patients And Methods

It was a prospective observational study done over 150 known HIV positive individuals attending DVL OPD with symptoms suggestive of skin disease. Ethical clearance for the study was taken from ethical committee of Kurnool Medical College, Kurnool. Detailed history taking with complete physical examination were done in all cases. Wherever necessary, relevant investigations were done to confirm the diagnosis in patients. The investigations that were sent included complete blood picture, ESR, biopsy, KOH mount, complete urine examination, Mantoux test, LFT, RFT and x-ray chest PA view, were ever necessary.

IV. Observation And Results

Among the 150 cases studied, 100 were male, and 50 were female. The majority of the patients were in the age group of 31–40 years (32%) [Figure 1]. Most of the patients were in WHO stage 2 [Figure 2]. Most of the patients had CD4 count 201-500 (49%) [Table 1].

Figure 1: Age and sex wise distribution of patients

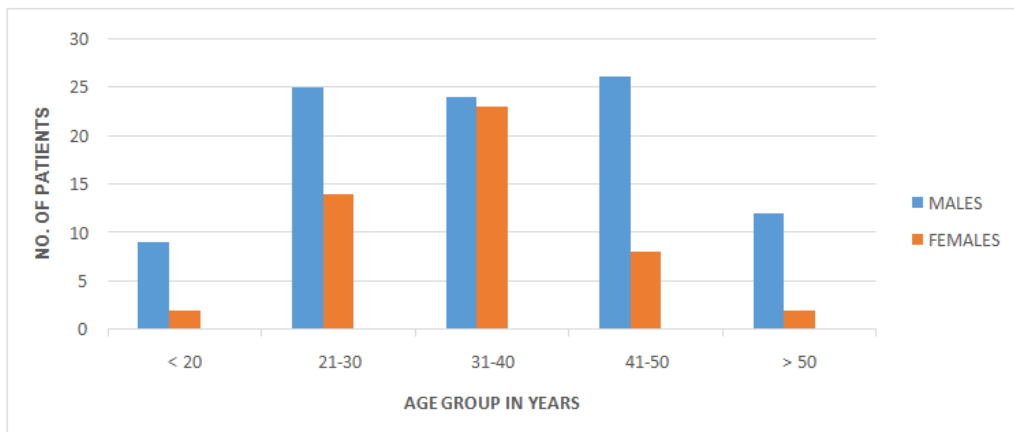


Figure 2: Distribution of cases according to WHO staging

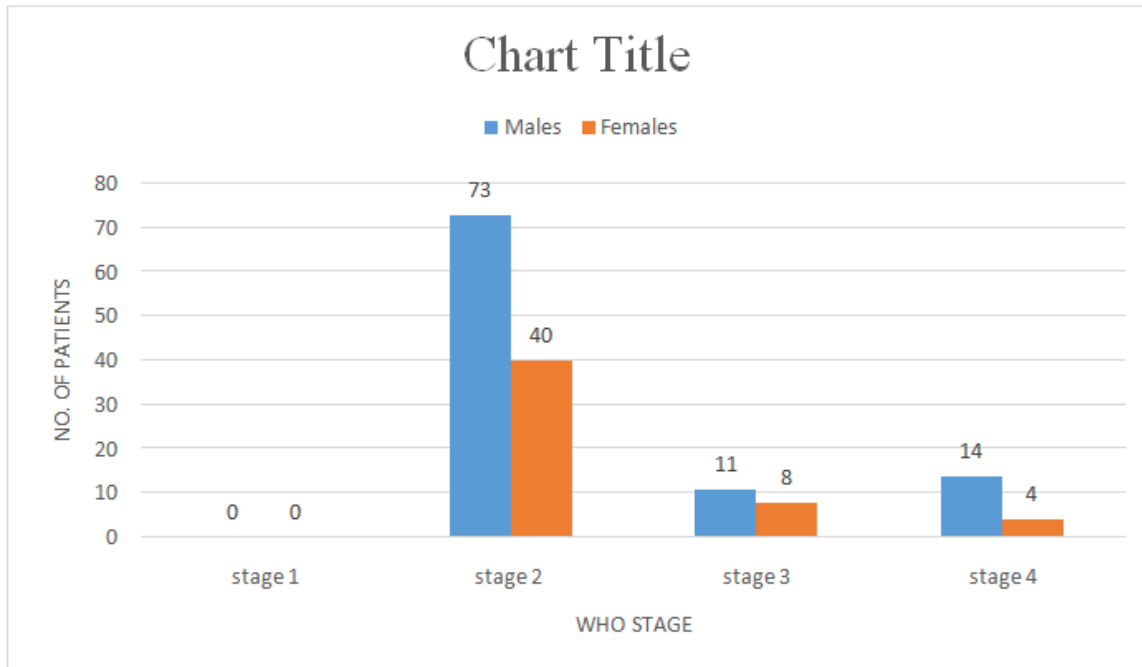


Table 1: Distribution of patients with different CD4 counts

CD4 cell Count in cells/ μ l	No. of patients	Percentage
< 200	46	31%
201 - 500	74	49%
> 500	30	20%
Total	150	100%

Among patients with dermatological 40% had both infectious and non-infectious manifestations [Table 2]. Majority of the patients had single manifestation 62 (42%) and as the CD4 count declined the multitude of manifestations increased [Table 3]. Papular pruritic eruptions and seborrheic dermatitis both represented most common non-infectious manifestations seen in 21 (33%) in both [Table 4]. Majority of the infections were caused by fungi (51), majority of the bacterial infections were represented by pyogenic bacterial infections (11) majority of the fungal infections were represented by Tinea infections mainly tinea cruris and tinea corporis (27), followed by oral candidiasis (10) and among viral infections majority of the cases were represented by Herpes zoster (17) followed by herpes genitalis (15) [Table 5].

Table 2: Grouping of patients with different dermatological manifestations seen in the study.

Dermatological manifestations	Number of patients	Percentage
Infectious	50	34%
Non-infectious	40	26%
Both infectious & non-infectious	60	40%
Total	150	100%

Table 3: Grouping of patients as per number of manifestations

No. of manifestations	No. of patients	Average age	Average CD4 count
Single	62	33	339
Two	49	38	315
Three	27	37	300
Four	10	40	276
Five	02	34	149

Table 4: Number of Non-infectious cutaneous manifestations and their mean CD4counts

Disease	Total patients	Percentage	CD4 count			Mean CD4 count
			< 200	201-500	>500	
PPE	21	33%	11	08	02	283
ADR	02	03%	00	02	00	435
SD	21	33%	08	13	00	245
Psoriasis	05	07%	02	02	01	315
Lichen planus	04	06%	02	02	00	236
Xerosis/ichthyosis	12	18%	03	07	02	338
Total	65	100%	26	34	05	308

Table 5: Various infections seen in the study group and their CD4 count

Infections	No. of patients	CD4 count			Percentage	Mean CD4 count
		<200	201-500	>500		
Pyogenic bacterial infection	11	06	04	01	55%	300
Syphilis	05	01	04	00	25%	234
Gonococcal urethritis	01	00	01	00	05%	117
Hansens disease	02	02	00	00	10%	121
Scrofuloderma	01	01	00	00	05%	189
Tinea infections	27	06	17	04	37%	345
P Versicolor	10	02	06	02	14%	317
Oral candidiasis	19	08	10	01	27%	253
Onychomycosis	03	00	01	02	04%	466
Candidial BP	08	01	05	02	11%	353
Vulvovaginal candidiasis	05	03	01	01	07%	328
H zoster	17	10	07	00	36%	198
H genitalis	15	04	07	04	32%	446
H labialis	03	00	02	01	06%	568
Warts	08	00	07	01	17%	339
MC	04	01	01	02	09%	415



Figure 1: Scrofuloderma



Figure 2: Secondary syphilis



Figure 3: Herpes zoster (ulcerative lesion)

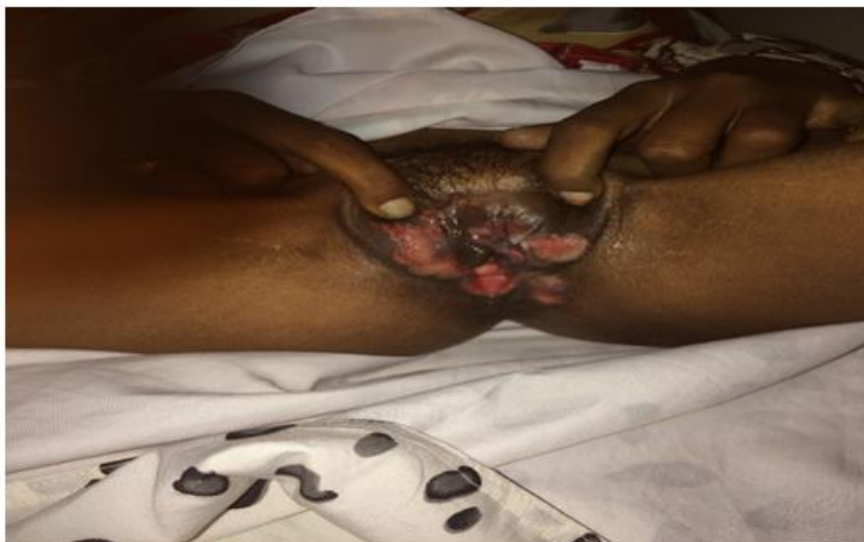


Figure 4: Herpes Genitalis

V. Discussion

This prospective study included 150 HIV seropositive patients attending DVL out-patient department of Kurnool Medical College, Kurnool, presenting with dermatological and STIs manifestations. Out of 150 patients included in the study, 112 patients (74%) had only dermatological manifestations, 13 (08%) had only STIs and 25 (18%) had both STIs and dermatological manifestations.

The male:female ratio in the present study was 2:1, which is close to the study done by Sen et al in which it was 2:1^[03] and also close to the study done by Vijayakumari et al^[04] who reported it to be 1.6:1. Among the 150 patients, a majority of cases 48 (32%) belonged to age group of 31-40 years. This shows that the majority of HIV infected patients belong to the most sexually active population group. This is comparable to the study done by Dr. A Kiranraju et al⁰⁵ who reported 46% of cases belonging to age group 31-40 and study by Vijay Kumari et al⁰⁴ who reported a prevalence of 47% in the same age group. Majority of the patients in this study were illiterates (48%). The percentage of illiterates is comparable to study by the Jindal et al in which it was 52.6%⁰⁶. Majority of patients (55%) were unskilled workers. The percentage of unskilled workers among PLHAs in the present study (55%) is higher as reported by Jindal et al in which it was 39%⁰⁶ and study by Kiran Raju et al⁰⁵ who reported 40%.

Majority of patients in the study group (80%) had a CD4 count less than 500 cells/ μ l, out of which 31% had CD4 count <200/cumm. In comparison, the study done by Munoz-Perez et al showed that 53% of patients had CD4 count < 200/ μ l⁰⁸. The mean CD4 count was 349 cells/cumm which is higher to the study done by Lt. Col. Biju Vasudevan et al showing 249 cells/cumm⁰⁷ and A Vijaya Kumari et al 274 cells/ μ l⁰⁵. The range of CD4 count in the present study was 17-1400 cells/cumm. Number of manifestations in the patients varied from 01 to 05, signifying the occurrence of multitude of manifestations in a single patient and reinforces the need for complete examination of the patient. 62 patients (41%) had single manifestation, 49 patients (32%) had two manifestations, 27 patients (18.5%) had three manifestations, 10 patients (07%) had four manifestations with mean CD4 count of 276 cells/cumm and 02 patients (1.5%) had five manifestations with mean CD4 count of 149 cells/cumm. Here we can see the inverse relation between CD4 count and number of manifestations. The most common diseases to occur simultaneously was SD & PPE seen in 08 patients with mean CD4 of 232 cells/cumm.

Infections due to fungi were the most commonly observed infections in this study. Dermatophyte infections were seen in 27 patients (18%). Extensive tinea infection was seen in 09 patients with a mean CD4 count of 273 cells/cumm. The number of patients presenting with oral candidiasis was 19 (13%) which is similar to study by Kiran Raju et al - 15%⁰⁵. The average CD4 count in those with oral candidiasis is 204 cells/cumm. Pyoderma was the most common bacterial infection seen in our study- 11 cases. Folliculitis was the most common pyoderma seen. The mean CD4 cell count associated with pyoderma in this study was 320 cells/cumm is close to the study done by Munoz – Perez et al (357 cells/cumm)⁰⁸. The incidence of pyoderma in this study was found to be 7% almost same as study by Jindal et al -7.9% [06] and higher than as reported by Sivayathom A- 5.6%¹⁰.

Herpes zoster was the most common viral infection observed in this study. The mean CD4 count in patients with HZ was 198 cells/cumm. Herpes genitalis was seen in total 15 patients accounting for 10% of cases and was the most common cause of STI in the study which is in concordance with most other studies like by Shobana et al - 8%. 02 patients had chronic non-healing ulcers which took about 02 months to heal in both patients, 01 had ulcers in perineal and penile area with a CD4 count of 17 cells/cumm and the other patient a MSM had large ulcer in the perineal area with CD4 count of 48 cells/cumm. Pruritic papular eruptions 21 (14%) and seborrheic dermatitis 21 (14%) were the common non-infectious manifestation. The mean CD4 count was 283 cells/cumm for PPE and the mean CD4 count in those with seborrheic dermatitis was 245 cells. Xerosis/ Ichthyosis was seen in 12 patient (08%) occurring at a mean CD4 count of 338 cells/cumm. In the present study 05 patients had psoriasis with a prevalence of 3.5%. Mean CD4 count seen was 315 cells/cumm. All patients had extensive involvement of the body and all had scalp involved.

A total of 53 (28%) scalp and hair changes were seen in 150 patients in this study. The mean CD4 count in those with hair changes was 303 cells/cumm. They include diffuse non scarring alopecia, seborrheic dermatitis, and psoriasis.

VI. Conclusion

The commonest age group affected is 21-40 years (58%) which represents the most sexually active group and confirms sexual route being the major route of transmission. The gender wise distribution showed M:F ratio of 2:1. Most of the PLHA's are illiterates and from rural areas. Of the dermatological manifestations, occurrence of both infectious and non-infectious manifestations (40%) was the most frequent manifestation followed by infectious (34%) and non-infectious (26%). Most of the patients had CD4 count of 201 - 500 cells/cumm (49%). Most common infectious manifestation was various forms of tinea seen in 27 patients (18%) occurring at mean CD4 of 345 cells/cumm. Most common non-infectious manifestation was PPE & SD seen in

21 patients each (14%). PPE associated with mean CD4 of 283 and SD with 245 cells/cumm. Most common oral manifestation was oral candidiasis seen in 19 patients (13%) with mean CD4 of 253 cells/cumm. Herpes genitalis was the most common STI.

H Zoster (198), SD (245), OC (253) and PPE (283) were associated with relatively lower CD4 counts and hence can be used as a clinical marker for progression of the AIDS.

Most of the PLHA's had multiple manifestations (60%). Most of the manifestations are atypical, chronic, recurrent and recalcitrant to treatment. Occurrence of PPE, OC and HZ in young patients should prompt the clinician to check for sero-reactive status of the patient.

Limitation: As the sample size is small (150), the results obtained may not represent the actual occurrence in large groups of PLHA's. Many more such studies on large sample at different places are required.

References

- [1]. NACO Annual report 2016-17.
- [2]. Sanjay M Chawhan, Dharitri Bhat, Seema Solanke Dermatological manifestations in human immunodeficiency virus infected patients: Morphological spectrum with CD4 correlation. IJSTD 2013, VOL 34, No 2, page 89
- [3]. Sen S, Halder S, Mandal S, Halder A, Bhaumik P. Clinico-epidemiological profile of cutaneous manifestations among HIV positive patients in sub-Himalayan region IJDVL 2009;75:403-5.
- [4]. Vijaya AK, Sreenivasulu RN, Deepthi M, Penchaliah K study of skin, hair and nail changes among HIV patients and their correlation with CD4 count ANN Int Med DEN Res 2017;3(3):DT01-DT04.
- [5]. Dr Ampajwalam Kiran Raju, Dr G Venkateswara rao. Mucocutaneous manifestations in HIV patients in a tertiary care centre. IOSR-JDMS 16.7 (2017): 58-64
- [6]. Jindal N, Aggarwal A, Kaur S. HIV seroprevalance and HIV associated dermatoses among patients presenting with skin and mucocutaneous disorders. IJDVL 2009;75:283-6.
- [7]. MJAFI 2012; 68:20–27, page 21
- [8]. Manoz-Perez MA, Pichardo RA, Camacho F, Colmenero MA, 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 of Dermatology 1998;139:33-9.
- [9]. Shobana A, Guha S K, Neogi D K .Mucocutaneous manifestations of HIV infection. Indian journal of dermatology venereology lepro 2004;70:82-6.
- [10]. Kumaraswamy N, Solomon S, Madhivanan P, Ravikumar B, Thyagarajan SP, Yesudian P, Dermatological manifestations among HIV patients in south India , INT. Journal of dermatology 2000; 39:192-5.

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