

## A CLINICAL STUDY OF MUCOCUTANEOUS MANIFESTATIONS IN HIV/AIDS PATIENTS ATTENDING A TERTIARY CARE HOSPITAL IN ANDHRA PRADESH

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### ABSTRACT

#### INTRODUCTION

India has the third largest HIV epidemic in the world. In 2013, there were about 2.1 million people living with HIV. <sup>(1)</sup> The prevalence in India varies geographically. Andhra Pradesh seconds the list amongst the five states with highest prevalence in India. East Godavari District of AP has a high incidence of HIV/AIDS patients, next only to Guntur. Dermatological diseases are very common in HIV infected patients and are often its presenting features. So, this study was undertaken to evaluate the incidence of various mucocutaneous manifestations in HIV patients and their socio demographic determinants. This cross-sectional study was conducted in D.V.L department, KIMS, Amalapuram, East Godavari District, AP over a period of 18 months extending from July 2013 to December 2014. The study population consisted of 200 patients. Out of these, 46 patients were those who attended the D.V.L OP of KIMS, Amalapuram with various mucocutaneous diseases and found to be positive for HIV infection and the rest 154 patients were from amongst established cases of HIV admitted in other departments of KIMS and showing mucocutaneous manifestations. This study emphasizes the need for meticulous search for various mucocutaneous manifestations in HIV patients. Their presence mandates HIV testing in patients who are not screened for HIV.

#### KEYWORDS

HIV/AIDS, Mucocutaneous.

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**INTRODUCTION:** HIV/AIDS is a global pandemic. Since the start of the epidemic in 1981, about 75 million have become infected with HIV and an estimated 36 million have died worldwide. As of 2012, approximately 35.3 million people have HIV worldwide, with the number of new infections that year being about 2.3 million, it resulted in about 1.34 million deaths in 2013. <sup>(1)</sup> As per NACO guidelines there are about 2.08 million people living with HIV in India in 2011. In 2013 HIV prevalence in India was an estimated 0.27%, with Andhra Pradesh accounting for 20% of the AIDS patients in India. <sup>(2)</sup> Dermatological diseases are amongst the first recognized clinical manifestations of HIV infection seen at every stage of the disease, from the macular, roseola like rash seen with acute 'seroconversion' syndrome to extensive end stage Kaposi's sarcoma. Some common skin diseases like candidiasis, viral infections, seborrheic dermatitis etc. may present with florid manifestations in a HIV positive patient. So it is important that all physicians, particularly dermatologists, have a high

level of suspicion for HIV infection in their mind. So the present study was undertaken to determine the spectrum of mucocutaneous lesions in HIV positive patients at KIMS, Amalapuram, East Godavari District.

**MATERIALS & METHODS:** This is a prospective cross-sectional study conducted with prior approval from Institutional Ethics Committee over a period of 18 months extending from July 2013 to December 2014. The study population consisted of 200 patients. Out of these, 46 patients were those who attended the Dermatology OPD of KIMS, Amalapuram with various mucocutaneous diseases and found to be positive for HIV infection and the rest 154 patients were from amongst established cases of HIV admitted in other departments and showing mucocutaneous manifestations.

The patient's complete history, which included the presenting complaints, duration demographic characters and the risk behavior for the HIV infection, were recorded. A thorough and meticulous clinical examination was done in all the patients. A pretest counseling was given and an informed consent was taken and the patients sent to the ICTC centre of KIMS, Amalapuram, for serological examination. In ICTC all serum samples are screened by Micro ELISA using Tridot kit for antibodies to HIV. The kits used are SD Biotine, Coomb AIDS, Pareekshak (Triline), Pareekshak trispot and AIDS CAN (trispot).

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Wherever required, Gram staining, serum VDRL for syphilis, Tzanck smear for herpes, KOH mount for dermatophytes & candidiasis were done. Skin biopsy was carried out for HPE in certain conditions. A complete blood picture including TC, DLC, Hb% & ESR was done to every patient along with routine urine examination.

**OBSERVATION & RESULTS:** Out of the 200 patients examined, 132 patients (66%) showed various mucocutaneous manifestations as shown in Table 1. The age and sex wise distribution along with their sociodemographic profile is shown in Table 2. The most common infectious condition observed was oral candidiasis, followed by tinea cruris, herpes, and molluscum contagiosum and so on. The most common non-infectious manifestation was pruritic papular eruption followed by seborrheic dermatitis. In about 17% of the HIV seropositive patients, more than one mucocutaneous lesion was found to be present.

Disease	No. of patients	%
Oral Candidiasis	30	15
Dermatophytosis	16	8
Molluscum contagiosum	7	3.5
Herpes zoster	10	5
Oral hairy leukoplakia	1	0.5
Folliculitis	4	2
Furunculosis	6	3
Scabies	5	2.5
Pruritic papular eruption	20	10
Seborrheic dermatitis	15	7.5
Herpes genitalis	6	3
Condyloma acuminata	5	2.5
Secondary syphilis	2	1
gonorrhoea	2	1
Chancroid	1	0.5
Drug rash	4	2
Xerosis	11	5.5
Diffuse hair fall	6	3
Nail discoloration	2	1
Vitiligo	1	0.5

**Table 1: Incidence of various mucocutaneous manifestations**

Variables		Total No. of patients	(%)
Age in years	0-10	4	2
	11-20	10	5
	21-40	167	83.5
	>40	19	9.5
Sex	Males	131	65.5
	Female	69	34.5

Geographical distribution	Rural	115	57.5
	Urban	85	42.5
Educational status	Illiterate	116	58
	Up to 8th standard	28	14
	10th standard and above	56	28
Occupation	Housewife	36	18
	Unskilled workers	72	36
	Lorry, Truck & taxi drivers	78	39
	Students	14	7
Marital status	Married	148	74
	Unmarried	35	17.5
	Widow/Divorced/ Separated	17	8.5
Socio-economic status	Low	130	65
	Middle	60	30
	High	10	5
Mode of transmission	Heterosexual	186	93
	Homosexual	6	3
	Mother to child	4	2
	Blood Transfusion	4	2

**Table 2: Socio-Demographic Profile**

**DISCUSSION:** The incidence of various mucocutaneous manifestations in HIV/AIDS was found to be 66%. This is higher in comparison to other Indian studies where the incidence is found to be around 40%, (Kumaraswamy et al).<sup>(3)</sup> In the current study, 84% of patients were in the age group of 21-40 years, which is quite similar to that documented by NACO. The reason for this being it is the most sexually active age group in India. The main mode of transmission of disease in this age group is through heterosexual contact. Males outnumbered females in our study, perhaps due to more exposure to the outside world than females, or may be due to the promiscuous behavior of men in the society. In most females the husband has been found to be the source of HIV infection. The high incidence of disease is found to be in truck drivers, in accordance to that noted by other workers. They act as bridge population and transmit the disease from core population (CSWs, i.v. drug abusers) to the general population while travelling. They also have multiple sexual exposures with multiple partners. The other factors contributing to the high prevalence of the disease are illiteracy, low socio-economic status, marital disharmony, etc.

In the present study oral candidiasis (15%) was the most common mucocutaneous manifestation observed which is in accordance with Sachin et al<sup>(4)</sup> (16.2%) but much lower when compared with the findings of other workers (Chopra S et al<sup>(5)</sup>:32.22%; Shobhana A et al<sup>(6)</sup>:36%). The next common manifestation in our patients was pruritic papular eruption (10%), similar to the findings of Chopra S et al<sup>(5)</sup> (7.77%) whereas other workers reported it to be 33.23% (Goh B et al). The second most common infectious manifestation in our patients was Dermatophytosis (8%), which is lower than the study done by Shobhana A et al<sup>(6)</sup>, where the incidence was 13%. Seborrheic dermatitis was the

second common non-infectious manifestation associated with HIV in our study (7.5%), which is similar to that documented by Chopra S et al (8.5%).<sup>(5)</sup> This is a common non-infectious skin condition in India with a prevalence rate of 8.1-21% (Kar HK et al).<sup>(7)</sup>

Herpes zoster could be an initial sign of underlying immunodeficiency. Atypical presentations like multidermatomal herpes zoster and recurrent herpes zoster were seen. Ophthalmic zoster with hemorrhagic lesions was seen in our study. The incidence of herpes zoster in our study is 5%, which is in accordance with that of Dr. Shobhana and Guha et al (6%).<sup>(6,8)</sup> Its prevalence in various studies varied from 1.68-14%. According to a study by Sachin D Kore et al<sup>(4,7)</sup>, the presence of molluscum contagiosum in asymptomatic patients not on HAART can be considered a proxy indicator for initiating HAART when facilities for CD4 counts are not available. We recorded 7 cases of molluscum contagiosum with one patient presenting with a giant molluscum over the face (photo 3). Similar giant lesions have also been recorded by Shobhana A et al (1 case).<sup>(6)</sup>

Bacterial infections like folliculitis and furunculosis (2% and 3% respectively) are in accordance to the work done by Kumaraswamy et al<sup>(3)</sup> (2.9%) but in contrast to the study done by Pai Ganes (25%). Scabies was the only parasitic infestation found in our study (2.5%); all the 5 patients required both systemic and topical treatment. Its prevalence in other studies was 4-5% (Sachin D Kore et al:5%,Goha et al:4%).<sup>(4,7,8)</sup> In this study we recorded 4 patients of drug rash, 3 of them were attributed to Nevirapine, and 1 to Anti Tuberculous Therapy. Other studies done by Goh et al showed a prevalence of 17% which shows a high difference. In our study, Xerosis and diffuse hair fall were seen in 5.5% and 3% respectively. Nail discoloration due to Zidovudine comprised 1% of our cases. Oral hairy leukoplakia and vitiligo were seen in one patient each. We did not record any Kaposi's sarcoma although Indian incidences of this condition are on the record (Kumaraswamy N et al).<sup>(3)</sup>

STDs in HIV hold importance as they share a common mode of transmission of HIV. The spectrum of genital diseases, especially STDs, sound warning for behavioral change in key subpopulation which will go miles in preventing and managing HIV disease. In the current study the incidence of genital herpes was 3% which is in accordance with that of Jing W & Ismail R (5.5%), but much lower than that reported by Sachin D Kore et al (9.5%)<sup>(4)</sup> and Shobhana A et al (8%).<sup>(6)</sup> Most of the patients presented with large ulcers and in spite of adequate treatment the condition was recurrent. The other genital lesions recorded in our study were syphilis (2 cases), Gonorrhoea (2 cases) and Chancroid (1 case), which are comparable to that of Chopra S et al<sup>(5)</sup> (2.22%) but lower than that of Shobhana A et al (8%).<sup>(6)</sup> The incidence of genital growths in our study consisted of 5 patients (2.5%) of condyloma acuminata. One patient presented with both molluscum contagiosum and condyloma acuminata (photo 5). The incidence is lower than that recorded by Chopra S and Arora U (7.7%).<sup>(5)</sup> In our study incidence of genital discharge was 1%, while an

incidence of 4.4% (leucorrhoea) and 3.3% of genital discharge (male) was reported by Chopra S et al.<sup>(5)</sup> The overall incidence of STD in our study is very low for reasons unknown to us. The only reason we could think of is that our study material, which consisted of 154 cases of well-established HIV/AIDS patients admitted in KIMS Amalapuram, were mainly of opportunistic infections (systemic) which masked the STDs or their lesions might have healed due to prior treatment or that the VDRL test for syphilis gave false negative result due to HIV infection. Only two patients in our study showed a positive result to VDRL test.



**Fig. 1: Oral Candidiasis**



**Fig. 2: Extensive Tinea Corporis**



**Fig. 3: Molluscum Contagiosum**



**Fig. 7: Seborrhoeic Capitis**



**Fig. 4: Herpes Zoster Ophthalmicus**



**Fig. 8: Pruritic papular eruption with secondary infection**



**Fig. 5: Condyloma Acuminata & Molluscum Contagiosum**



**Fig. 6: Herpes Genitalis**

**SUMMARY AND CONCLUSION:** This study confirmed that mucocutaneous manifestations are useful predictors of HIV infection and can serve as prognostic markers. The mucocutaneous manifestations are florid and in bizarre clinical appearances. A high degree of clinical suspicion along with scrupulous and meticulous search is mandatory for all physicians, particularly dermatologists. Recognition of mucocutaneous manifestations and associated STDs help in the early diagnosis and better management of HIV/AIDS.

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