International Journal of Research in Medical Sciences
Mohankumar V et al. Int J Res Med Sci. 2016 Jun;4(6):1959-1965
www.msjonline.org
pISSN 2320-6071 | eISSN 2320-6012

DOI: http://dx.doi.org/10.18203/2320-6012.ijrms20161741

Research Article

Prevalence of mucocutaneous manifestations in human immunodeficiency infection - learning from a rural centre in Tamilnadu, India

Mohankumar Vedhanayagam[1]*, Rajesh Rajagopalan[2]

[1]Associate Professor, [2]HOD & Professor, Department of Skin and Sexual Transmitted Diseases, IRT Perundurai Medical College, Perundurai, Erode, Tamilnadu-638053, India

Received: 14 March 2016
Accepted: 22 April 2016

***Correspondence:**
Dr. Mohankumar Vedhanayagam,
E-mail: vethusubha@gmail.com

ABSTRACT

Background: Ever since its recognition in 1981, HIV continues to ravage all the continents of the world. HIV infection produces a panorama of mucocutaneous manifestations ranging from the macular rash seen in acute 'sero conversion' syndrome to extensive end-stage Kaposi's sarcoma. Skin disease may be the first presenting feature of the disease and it raises the suspicion to screen for HIV infection. Disease progression may result in significant morbidity.
Methods: This study was undertaken in 116 People living with HIV, who attended the well health clinic in Department of Skin and STD, IRT Perundurai Medical College, Erode, in rural Tamilnadu, from 15th June 2005 to 14th August 2005. The study patients were interviewed after pre and post-test counselling. All the patients underwent a complete physical and genital examination with keen clinical analysis for the mucocutaneous manifestations of HIV infection.
Results: 96% of HIV positives in our study had mucocutaneous manifestations. Commonest disease observed was oral candidiasis n=63 (56.25%). Dermatophytosis n=46 (41.07%) was the second most common infection followed by papular and follicular eruptions in HIV (n=34, 30.3%).
Conclusions: Respiratory system illnesses were the commonest presenting opportunistic illnesses followed by the gastrointestinal tract.

Keywords: Rural centre, HIV, Mucocutaneous manifestations

INTRODUCTION

Ever since its recognition in 1981, HIV/AIDS continues to ravage all the continents of the world. HIV infection produces a panorama of mucocutaneous manifestations which may be the presenting features of the disease ranging from the macular, roseola like rash seen in acute 'seroconversion' syndrome to extensive end-stage Kaposi's sarcoma. Skin disease may be the first presenting feature of the disease and it raises the suspicion to screen for HIV infection. Oral candidiasis and seborrhoeic dermatitis are seen with increased frequency and severity. The skin is not only a target organ for drug reactions but is also responsible for cosmetic changes which are troublesome to the affected patients. The importance of other sexually transmitted infections in the transmission of HIV is well known and hence it is necessary to screen and manage them at the earliest to prevent complications and the resultant morbidity.

In India, HIV prevalence rate in 15 - 49 years is about 0.75%. Maharashtra alone accounts for about half of all AIDS cases in India. Three states Maharashtra, Tamilnadu, Manipur accounts for 77% of total estimated

HIV / AIDS cases. 90% of total reported AIDS cases occur in sexually active and economically productive age groups (15-44 years). A mere 0.1% increase in the prevalence rate would increase the number of adults with HIV /AIDS in India by over half a million.[1]

Skin disease may provide the first suspicion of the diagnosis of HIV infection and can cause significant morbidity as the disease progresses and point to a diagnosis with important systemic complications. Like CD4 T-cell count, number of mucocutaneous diseases, is also a prognostic indicator of the development of AIDS and overall survival[2].

Classification of dermatosis in HIV infection/AIDS[3]

Infectious dermatosis

A) Viral infections

1. Acute exanthem of HIV disease
2. *Herpes simplex virus* infection
3. *Varicella zoster virus* infection
4. *Epstein-Barr virus* (EBV)infection
5. Molluscum contagiosum
6. *Cytomegalovirus* infection

B) Bacterial infections

1. Staphylococcal infections
2. Mycobacterial infections
3. Bacillary angiomatosis
4. *Treponema pallidum* infection
5. Others: Infections due to *pseudomonas, salmonella, nocardia, Hemophilus influenza, Rhodococcus, Hemophilus ducreyi, C. granulomatis, Chlamydia*

C) Fungal infections

1. Superficial dermatophytosis
2. Candidiasis
3. Other superficial mycosis: *M. furfur, trichosporosis, alternariosis, Curvularia* species
4. Deep infection and systemic mycosis: Cryptococcosis, histoplasmosis, coccidioidomycosis, sporotrichosis, penicilliosis, blastomycosis, aspergillosis

D) Parasitic infestations

1. Arthropod infestations: Scabies, demodicidosis
2. Protozoal infestations: Extrapulmonary pneumocystosis, leishmaniasis, cutaneous toxoplasmosis, acanthamoebiasis

2. Non-infectious dermatoses

a) Disorders of epidermal cell kinetics: Seborrhoeic dermatitis, psoriasis, Reiter's syndrome, ichthyosiform dermatosis

b) Papular and follicular eruptions of HIV
c) Pigmentary disorders
d) Adverse cutaneous drug reactions
e) Neoplasms: Kaposi's sarcoma, lymphoma, melanoma
f) Miscellaneous dermatoses: Pityriasis rubra pilaris, idiopathic thrombocytopenic purpura, pityriasis rosea, photosensitivity

3. Nail and hair changes

In general, mucocutaneous manifestations in HIV usually present four broad challenges to the physician and dermatologist.

1. An opportunity to make the initial diagnosis of HIV in patients with a seroconversion illness or with subtle or florid manifestations of one or other dermatoses associated with underlying HIV infection.
2. Whether a skin problem is caused by HIV infection or by HIV therapy.
3. Physician's therapeutic imagination and experience is occasionally tested.
4. Complications of HIV-associated skin diseases for the better understanding of the skin in health and disease[4].

In acute primary HIV infection / seroconversion, exanthema, enathema, urticaria, toxic erythema, erythema multiforme, oropharyngeal candidiasis, acute genitocrural intertrigo, oral and genital ulceration are noticed. Rashes are found in up to 75% of seroconversion. Symmetrical exanthema notably of face, palms, soles are described. In established HIV infection, pruritus, xerosis, icthyosis are common and variably symptomatic. Only 1-3% of the general population has seborrhoeic dermatitis compared with 20-85% of patients with HIV. Although found in seropositive individuals who are otherwise well, its severity is increased at CD4 T cell counts below 100c/cm. Extensive refractory seborrhoeic dermatitis appears to occur in particular conjunction with pulmonary tuberculosis and HIV/AIDS.[5] Pruritic papular eruption is a common cutaneous manifestation of HIV, the prevalence varying between 10-45% depending on the geographical area. It presents as excoriated, erythematous, urticarial papules associated with eosinophilia and elevated IgE.[6]

Aims and objectives of the study are to assess the prevalence of mucocutaneous manifestations in HIV infected clients and to compare the clinical diagnosis with laboratory results.

METHODS

It was a prospective observational study. And 116 People living with HIV (PLHIV) who attended the well health clinic, Department of Skin and Sexually Transmitted Diseases, IRT- Perundurai Medical College Hospital were screened in the study period of 2 months from 15th June 2005 to 14th August 2005. The study patients were

interviewed for their presenting complaints, sexual history, past history of venereal diseases, other systemic illnesses and any treatment taken for that. All the patients were given pre-test and post-test counselling. The patients underwent a complete physical examination (head to foot) including genital examination. All these patients were clinically analyzed for the mucocutaneous manifestations of HIV infection and laboratory investigations for confirmation in selected cases. Screenings for other sexually transmitted diseases were done. Serological test for syphilis (VDRL) was performed in all the patients. Affordable patients were analyzed by surrogate markers of HIV disease like CD4+ T cell count. Routine baseline laboratory analysis including complete blood count, renal function tests, random blood sugar, urine analysis, chest X-ray and mantoux were done for all. Sputum smear for AFB, culture and sensitivity were also done. In needed symptomatic patients, opinion from concerned specialists like dental, ophthalmology, cardiology, psychiatry, ENT, neurology and gastroenterology were obtained.

RESULTS

For demographic characteristics of the study population; a total of 116 patients were included in which 71 were male and 45 were females. Among the study group, majority of the patients belonged to low socio-economic status (78, 67.24%) and middle income group (38, 32.76%). No patients in the study group belonged to high socio economic status.

Table 1: Age and sex-wise distribution.

Age (years)	Male	Female	Total
<20	3 (4.2%)	4 (8.8%)	7
21 – 25	3 (4.2%)	9 (20%)	12
26 – 30	6 (8.4%)	15 (35.5%)	21
31 – 35	14 (19.7%)	7 (15.5%)	21
36 – 40	21 (29.5%)	5 (11.1%)	26
41-45	15 (21.16%)	3 (6.66%)	18
>45	9 (12.67%)	2(4.44%)	11
Total	71	45	116

Regarding the occupation of the patients, 46% (54) belonged to agriculture workers followed by transport employees (12%, 15), textile workers (10%, 12), merchants (7%, 8) etc. In females 37 (82%) of them were housewives. Major mode of transmission was heterosexual 95% (111, 68 males and 43 females). In our study, marital contact was recorded in 48 males and 43 females (total 91, 78%), 19 were unmarried and 6 were widowed, premarital contact was noted in 54 males and extramarital contact was noted in 30 males. Mother to child transmission was recorded in 1 male child and 2 female children.

History of blood transfusion was recorded in 1 male and 1 female patient each. The male patient had received blood after a road traffic accident and the female patient received blood for anaemia in the past. In our study we had also noticed discordant couples, 3 males and 1 female patient were positive for HIV infection, their partners were negative and under regular follow up.

Among the study subjects, males in the age group of 36-40 years were most commonly affected by HIV infection. Females were most commonly affected in the age group of 26-30 years. We have recorded the youngest age as 2 years old male and 3 years old female children. The oldest age in our study included 63 years old male and 50 years old female.

Table 2: Cutaneous lesions-sex-wise distribution.

Cutaneous lesions	Male	Female	Total
Dermatophytosis	31 (67.4%)	15 (32.6%)	46
Papular & follicular eruptions in HIV	18 (52.9%)	16 (47.1%)	34
Hair disorders	25 (86.2%)	4 (13.7%)	29
Seborrheic dermatitis	19 (73.0%)	7 (27.0%)	26
Ichthyosis	13 (86.2%)	2 (13.3%)	15
Herpes zoster	8 (72.7%)	3 (27.3%)	11
Genital ulcer disease	6 (75%)	2(25%)	8
Molluscum contagiosum	3 (50.0%)	3 (50.0%)	6
Scabies	4 (66.6%)	2 (33.3%)	6
Drug eruptions	3 (60.0%)	2 (40.0%)	5
Genital warts	5 (100%)	0	5
Psoriasis	4 (100%)	0	4
Stasis eczema	4 (100%)	0	4
Acne vulgaris	3 (75%)	1 (25%)	4
Cutaneous warts	2 (66.6%)	1 (33%)	3
Postherpetic neuralgia	1 (50%)	1 (50%)	2
Lichen planus	1 (100%)	0	1
Scrofuloderma	1 (100%)	0	1
Solar dermatitis	0	1 (100%)	1
Polymorphic light eruptions	0	1 (100%)	1
Lymphogranuloma venereum	0	1(100%)	1

In our study, most of the patients attended well health clinic with the complaints of skin rash (28). Other common complaints were generalized / limb weakness, oral sore / throat pain, weight loss, diarrhea, fever, breathlessness, loss of weight, loss of appetite, fatigue, chest pain, abdominal pain, nausea / vomiting, nights sweats / chills, etc. A total of 112 (96.5%) subjects had

mucocutaneous lesions at presentation. Common cutaneous lesions of HIV are given in the Table 2.

Dermatophytosis (46) [Tinea cruris (25)>Tinea corporis (13)>Tinea faciei (8)] was the most common cutaneous infectious condition mostly found in males. 32 of them had more than one area involvement of dermatophytosis. This is followed by papular and follicular eruptions in HIV (34), hair disorders (29), seborrhoeic dermatitis (26), ichthyosis (15) and herpes zoster (11). These skin changes were also most frequently found in males. Among females, dermatophytosis followed by papular and follicular eruptions, hair disorders, herpes zoster, molluscum contagiosum and ichthyosis were frequently seen.

Patients with herpes zoster n=11 (9.8%) showed involvement in various and multiple dermatomes and 2 patients with recurrent genital herpes were also observed in our study. Multi dermatomal herpes zoster was noted in 8 patients. Post herpetic neuralgia was observed in 2 females and 1 male. In our study one female patient with multi dermal herpes zoster was complicated by varicella (Zoster varicellosis)and meningoencephalitis. Herpes zoster involving dermatomes T6 (male), T10 (female) and S1 (male) are also commonly observed in our study.

The present study recorded papular pruritic dermatitis, seborrhoeic dermatitis, ichthyosis, molluscum contagiosum, acne vulgaris, scabies, genital warts, drug reactions, lichen planus, scrofuloderma, psoriasis, stasis eczema and solar dermatitis. We have noted 2 cases of extra genital molluscum contagiosum, highly characteristic of HIV. Psoriasis and lichen planus was also recorded. Straightening of hairs that become thick, coarse and could not be combed properly resulting in palm-tree like appearance was recorded in males (25), diffuse alopecia was noted in 4 men and 1 woman.

In our study all the patients were screened for VDRL test. Of them, 4 (3.44%) patients were reactive for VDRL and the rest were non-reactive for the same. Genital ulcer diseases were noted in 8 (M=6, F=2) patients. In VDRL reactive clients, 2 had primary syphilitic ulcers, remaining 2 were having early latent syphilis. Genital herpes was noted in 2 (M=1 F=1).

One of them had genital ulcer lesions as drug eruptions to co-trimoxazole. Rest of the two patients was having balanoposthitis and non-syphilitic genital ulcers. Genital warts were noted in 5 males.

In our study, drug eruptions were noted in 5 (M=3, F=2) patients. Among them, 2 patients (M=1, F=1), were receiving nevirapine.

The female patient on nevirapine had clinical and laboratory evidence of hepatitis. The offending drug was stopped and they were given alternative drugs with supportive management for hepatitis. She showed remarkable recovery. Two patients developed exanthematous drug eruptions to antituberculous therapy (Rifampicin) and one patient developed drug eruptions to co-trimoxazole.

Regarding nail changes, we had noticed clubbing in 11, leukonychia in 9, longitudinal melanonychia in 3, onychomycosis and paronychia each 2. We did not observe encounter the nail pigmentation changes due to Zidovudine in our clients on ART.

Table 3: Oral lesions - sex-wise distribution.

Oral conditions	Male	Female	Total
Oral candidiasis	40 (63.4%)	22 (34.9%)	62
Oral hairy leukoplakia	15 (88.2%)	2 (11.7%)	17
Aphthae	9 (90%)	1 (10%)	10
Pigmentation of tongue	4 (100%)	0	4
Gingivitis	4 (100%)	0	4
Pharyngitis	1 (100%)	0	1
Tonsillitis	1 (100%)	0	1

In our study, candidiasis (62) was the commonest oral condition lesion followed by oral hairy leukoplakia (17). The patients also presented with aphthae, black pigmentation of tongue, gingivitis, pharyngitis and tonsillitis. Males were found to suffer from more oral diseases than females which can be attributed to their smoking, betal nut / pan chewing and other habits which are injurious to oral mucosa.

In our study, CD4 cell count was done for 28 patients (24.13%) who were affordable. A 31 years aged patient living with HIV had the least CD4 cell count, 31cells/µl. He had oral thrush, oral hairy leukoplakia and aphthosis. Dermatophytosis, papular and follicular eruptions, hair disorders, seborrhoeic dermatitis were the dermatological lesions in that patient. We also observed highest CD4 cell count in a 40 years male patient, being 666cells/µl. He had no oral lesions, but found to suffer from tinea infection and seborrhoeic dermatitis.

Dermatophytosis (13) was the commonest cutaneous manifestation in patients with CD4 count less than 200 /µl, followed by papular and follicular eruptions (9), hair disorders (grey, brittle, thin hair and diffuse alopecia) - 8, seborrhoeic dermatitis (6), ichthyosis (5), herpes zoster (3), molluscum contagiosum (2), scabies (2), stasis eczema (2), cutaneous warts (2), drug eruptions (2), genital ulcer disease (1), lichen planus (1) and acne vulgaris (1) . The commonest oral condition was oral candidiasis (17) followed by oral hairy leukoplakia (8), pigmentation of tongue (4), oral aphthae (3) and gingivitis (2).

Mucocutaneous lesions in PLHIV on anti-tuberculosis/ antiretroviral therapy

It is significant that the mucocutaneous lesions in PLHIV receiving anti-tuberculosis / anti-retroviral therapy should be given a particular attention, because this institution evolved from tuberculosis sanatorium. In our study, 27 patients were on antituberculous therapy. 9 of them completed the course of antituberculous therapy under the schedule of Revised National Tuberculosis Control Programme (RNTCP). In these patients, oral candidiasis (22=M 13+ F 9) was the common presentation followed by oral hairy leukoplakia (12=M7+F5), aphthosis (6= M 5+F 1), pigmentation of tongue (2=M2), gingivitis and tonsillitis (1=M1). The commonest skin finding noticed was dermatophytosis (19=M10+F9) [Tinea cruris (9)> Tinea corporis (6)>Tinea faciei (4)]. They also presented with seborrhoeic dermatitis (8=M5+F3), ichthyosis (8=M5+3), hair disorders (6=M4+F2), papular and follicular eruptions (5=M3+F2) , molluscum contagiosum (5=M3+F2) , herpes zoster (4=M3+F1), drug eruptions (2=M1+F1) and psoriasis (2=M1+F1). We had 11 patients on antiretroviral therapy. Among them, oral hairy leukoplakia (6=M2+F4) was commonly seen asymptomatic mucosal finding. They presented with oral candidiasis (5=M3+F2), tonsillitis (3=M1+F2), aphthosis (1=M1) and pigmentation of tongue (1=M1). Common cutaneous finding was dermatophytosis (8=M5+F3); (Tinea cruris>Tinea corporis > Tinea faciei], followed by seborrhoeic dermatitis (M1+F2=3), papular & follicular eruptions (M1+F2=3), hair disorders (M2+F1=3), drug eruptions (M1+F1=2), herpes zoster (F1=1), scabies (M1 =1), and molluscum contagiosum (M1=1).

Table 4: Association of mucocutaneous manifestations and CD4 cell count.

CD4 cell count/ µl	No of patients	Oral lesions	Cutaneous Manifestations
< 50	4	Oral candidiasis Oral hairy leukoplakia Aphthae Pigmentation of tongue	Dermatophytosis Seborrheic dermatitis Papular & follicular eruptions Scabies Acne vulgaris Hair disorders Drug eruptions
50-100	7	Oral candidiasis Oral hairy leukoplakia	Dermatophytosis Seborrheic dermatitis Genital ulcer disease Ichthyosis Herpes zoster Hair disorders
100-200	8	Oral candidiasis Pigmentation of tongue Gingivitis	Dermatophytosis Seborrheic dermatitis Papular & follicular eruptions Molluscum contagiosum Lichen planus Ichthyosis Herpes zoster Cutaneous warts Stasis eczema
200-400	5	Oral candidiasis Aphthae Gingivitis Pharyngitis	Dermatophytosis Papular & follicular eruptions Molluscum contagiosum Hair disorders (grey, brittle, thin hair)
400-600	2	Oral candidiasis Gingivitis	Dermatophytosis Seborrheic dermatitis Diffuse hair loss
>600	2	------	Dermatophytosis Papular & follicular eruptions

Systemic opportunistic illnesses

In our study, most common other systemic opportunistic illnesses were respiratory illnesses including tuberculosis (37=M22+F15), gastrointestinal (17=M10+F7), central nervous system disorders (5=M3+F2) and ophthalmic conditions (3=M2+F1). Six of them had multi system involvement.

DISCUSSION

Circumstances of modern life facilitated the transformation of AIDS from isolated infection to widespread epidemic. On an important note, HIV infection among married couples has been slowly increasing in India, since more than 90 per cent of HIV infections are associated with heterosexual transmission. Largest epidemics in Africa and Asia have been based on the pattern II mode. Most of the housewives were infected through their life partners. This may be due to unprotected sex with the already infected husbands .The complex association of any physical or physiological facilitator may be expected to increase this type of transmission.[7]

Commonest risk factors of sexual transmission are high circulating viral load, immunosuppressed person, infected persons with depleted CD4 cells, longer duration of exposure to an infected partner, genetic susceptibility, and unprotected, frequent sex with commercial sex workers and more number of long-term partners. Heterosexual transmission has been the principal mode of HIV infection in many developing countries resulting in greater burdens of decrease among women and children. HIV occurs disproportionately among poor people in rural areas. Low level of education, first sexual contact at young age, with commercial sex workers, past history of STDs, frequency of sex with commercial sex workers, number of lifetime sex partners, alcohol, unprotected sex and multiple sex partners may be the factors for acquiring HIV infection in males.[8] Regarding sexual contacts, premarital and extramarital contacts were significantly more common in males. In our study, most of the females marital contact only. These demonstrate that passive transmission of HIV is more common in females from their husbands.

Precise diagnosis and exclusion of other causes can be complicated in acute stage by interpretation of bacteriological and virological results (e.g. serological diagnosis of syphilis). Genital diseases in HIV hold importance as they share analogous mode of transmission of HIV. Compared to prior studies in genital ulcer diseases, HIV co infection is commoner with genital herpes accounting for 8% of cases, chancre and chancroid being recorded in similar frequency, while genital growths included warts, molluscum contagiosum, condylomata acuminata. Treponemal tests like TPHA become necessary for confirmation in co-infection of HIV and syphilis.[9]

Recognition of the protean mucocutaneous diseases in HIV/AIDS helps earlier diagnosis of HIV as well as a measure of the immune status of the individuals. Simple indicators like straight hairs, discolored hairs or generalized hyper pigmentation in suspected HIV infection cannot be overemphasized, as is the need for thorough oral, cutaneous and genital examinations in HIV. Early recognition of mucocutaneous manifestations and associated STIs help in better management of HIV/AIDS was reinforced by a study, in the Carmichael Hospital for Tropical Diseases at the School of Tropical Medicine, Kolkata which is a National Reference Laboratory (Department of Virology) for HIV diagnosis. In May 2000 to April 2002, out of 410 HIV positives, 40% had mucocutaneous involvement at presentation.

The mean age of the study population was 29 years and male to female ratio was 2.5:1. The common mucocutaneous morbidities included oral candidiasis (36%), dermatophytosis and gingivitis (13% each), herpes zoster (6%), herpes simplex and scabies (5% each). A striking feature noted in 36% males, was straightening of hairs. Genital herpes was the commonest genital ulcer disease. Lesions associated with declining immunity included oral candidiasis, oral hairy leukoplakia and herpes zoster with median CD4 counts of 98, 62 and 198/ L respectively.[10] Our study also had similar clinical pattern but more had (96.5%) mucocutaneous lesions.

An observational institutional study of 75 patients with mucocutaneous disorders and HIV infection recruited from September 1996 to June 1998, Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Pondicherry, in decreasing order of frequency observed candidiasis, dermatophytosis, herpes simplex, oral aphthae, xerosis / ichthyosis, scabies, HPV infection, molluscum contagiosum and psoriasis. Xerosis / acquired ichthyosis and giant molluscum contagiosum were characteristically seen in group IV of HIV disease (Centers for Disease Control classification-1986), whereas oral candidiasis, oral aphthae, papular dermatitis of HIV and psoriasis were early warning signs.[11] Our study was also emphasized the importance of early analysis of mucocutaneous disorders in HIV at par with different studies results from different parts of India.

A Cross-sectional study conducted at K.R.Hospital, Mysore Medical College and Research Institute, between August 2007 and October 2008.[12] Analysis of 350 HIV positive patients, aged between 16-60yrs, 175 were on HAART and 175 were not on HAART: when opportunistic manifestations among non-HAART were considered, oral candidiasis was the leading manifestation seen among 28% of the study group with mean CD4 count of 150 cells / cu.mm, followed by molluscum contagiosum- 24%, condyloma accuminatum-20% and herpes zoster-16%. Majority of the lesions were seen at the cell counts less than 200 cells/cu.mm. When dermatological lesions of patient on HAART were compared with that of non-HAART, there was significant reduction in the prevalence of dermatological viral infection. But prevalence of bacterial and fungal infections showed no change .This may be due to poor socioeconomic status and poor hygiene. The study results were comparable to ours; poor socioeconomic status of the clients was main concern, even after the launch of free HAART from government hospitals.

A study of 200 two hundred PLHIV attending Skin-STD clinic, Government Medical College, Vadodara, revels One hundred twenty patients out of the total 200 cases had noninfectious cutaneous manifestations like pruritic papular eruption in 43 cases (35.8%), pigmentary changes in 10 cases (8.3%), seborrheic dermatitis in 5 cases (4.2%) and psoriasis in 4 cases (3.3%).[13] In our study also echoed the importance of pruritic papular eruption, as one of the common presentation.

The clinical profile of HIV disease in India includes a wide range of conditions like tuberculosis, cryptococcal meningitis, papular pruritic eruptions, and cytomegalovirus retinitis, among others. Tuberculosis is the most common opportunistic infection in Indian patients with HIV. Oral candidiasis occurs frequently in individuals with HIV infection; it has been reported as the most common HIV-associated condition, occurring in up to 70 per cent of case. The presence of oral candidiasis indicates the need to start PCP prophylaxis.[14] These observations give value added importance for the clinical examination for mucocutaneous lesions in all HIV infected clients in all resource constrained settings.

There should be universal access to the management of opportunistic infections, sexually transmitted infections, availability of HAART, counselling ,psycho social support, surgical care preferably all under one roof services , which help in not just decreasing the burden of HIV but furthermore in improving the worth of living in already infected.

CONCLUSION

HIV infection has a variety of mucocutaneous manifestations. Skin diseases may be the first presenting feature of the diseases. It may be a marker for the end stage diseases. An analysis 116 PLHA attending Skin/STDs outpatient well health clinic in IRTPMCH was done. Majority of them had mucocutaneous diseases. Commonest diseases found was oral candidiasis followed by dermatophytosis. Commonest opportunistic illness found in HIV infection in our study were respiratory diseases like pulmonary tuberculosis, pneumocystis jeroveci pneumonia etc. We observe that astute clinical examination will elicit mucocutaneous diseases (with or without symptoms) in majority of the affected HIV population.

ACKNOWLEDGEMENTS

Authors would like to thank the Dean, of IRT PMCH for allowing them to conduct the study, helping them in getting ethical committee approval and to utilise the hospital records. Authors would also like to thank ancillary departments for their opinions and guiding them in expert management. The study could not be completed without the wholehearted support from the patient population; hence authors are overwhelmed and thankful to them.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Indian Scenario, NACO (National AIDS Control Programme), fact sheet, November 2002.
2. Jensen BL, Weisman K, Sindrup JH, Schmidt K. Incidence and prognostic significance of skin disease in patients with HIV/ AIDS: a 5-year observational study. Acta derm venereal (Stockh). 2000;80:140-3.
3. Saple DG. IADVL, Textbook and Atlas of Dermatology, 2nd Ed. 2008;2:1512-20.
4. Simonitsh I, Geusau A, Choot A, Jurecka W. Cutaneous dendritic cells are main targets in acute HIV-1 infection. Mod pathol. 2000;13:1232-7.
5. Duvic M. Papulo squamous disorders associated with HIV infection, Dermatol Clin. 1991;9;523-30.
6. Rosen T. Prurutic popular eruption of AIDS. J Am Acad dermatol. 1991;25:866-7
7. Jeyakumar W, Neveen P, Thiruvallvar M, Suganya S, Indian Journal of Sex Transm Dis. 2004;25(1):22.
8. Hollinger PC, Trepathy SP, Quinn TC, HIV epidemic in India,Medicine. 1995;74:97.
9. Gbery IP, Djeha D, Kacou DE, Aka BR, Yoboue P, Vagamon B, et al. Chronic genital ulcerations and HIV infection: 29 cases. Med Trop. 1999;59:279-82
10. Shobana, Guha SK, Neogi DK. Indian Journal of Dermatol Venereol Leprol. 2004;70(2):82.
11. Singh A, Thappa DM, Hamide A, The spectrum of mucocutaneous manifestations during the evolutionary phases of HIV disease: an emerging Indian scenario. J Dermatol. 1999;26(5):294-304.
12. Srikanth KP, Vijayakumar S, Mallikarjun A. A hospital based cross sectional study of mucocutaneous manifestations in the HIV infected, International Journal of Collaborative Research on Internal Medicine and Public Health. 2010;2(3)50-78.
13. Sharma A, Chaudhary D, Modi M, Mistry D, Marfatia YS. Noninfectious cutaneous manifestations of HIV/AIDS. Indian J Sex Transm Dis. 2007;28:19-22.
14. Kumarasamy N, Vallabhaneni S, Flanigan TP, Mayer KH, Solomon S Clinical profile of HIV in India, Indian J Med Res. 2005;121(4):377-94.

Cite this article as: Mohankumar V, Rajesh R. Prevalence of mucocutaneous manifestations in human immunodeficiency infection - learning from a rural centre in Tamilnadu, India. Int J Res Med Sci 2016;4:1959-65.