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The Mucocutaneous Manifestations in Patients Infected with the Human Immunodeficiency Virus

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ABSTRACT

Background: A clinical spectrum of mucocutaneous manifestations may be seen in patients infected with human immunodeficiency virus (HIV); these manifestations are of clinical importance. The aim of this study is to determine the prevalence of the mucocutaneous manifestations in our patient population, as well as to signify the role of dermatologists in diagnosing the disease in the light of common mucocutaneous manifestations.

Materials and Methods: This is a retrospective study that included HIV infected patients who have visited the outpatient clinic of Istanbul University-Cerrahpasa, Cerrahpasa Faculty of Medicine, Department of Dermatology and Venereology.

Results: A total of 57 patients were included in this study. Seborrheic dermatitis and pruritus were the most common cutaneous manifestations that were observed in our patient population. Herpetic ulcers, viral warts, hair loss and folliculitis were also common. The common mucosal manifestations were periodontitis, candidiasis, xerostomia and aphthous ulcers.

Conclusion: Dermatologists have a pivotal role in the diagnosis and follow-up of the HIV infected patients since the mucocutaneous manifestations can not only guide through the diagnosis but also may give information about the immune status of the patient.

Keywords: Cutaneous, HIV, Mucosal, STD

Introduction

The human immunodeficiency virus (HIV) is a virus that infects the CD4 T-lymphocytes. A clinical spectrum of mucocutaneous manifestations may be seen in patients infected with HIV; these manifestations are of clinical importance since some of these manifestations may be specific to the disease, whereas, some of these manifestations may be non-specific but still point towards infection with a more aggressive disease course. Treatment resistant viral, fungal and bacterial infections; chronic inflammatory skin diseases

such as seborrheic dermatitis, psoriasis, ichthyosis, eosinophilic folliculitis; acquired immunodeficiency syndrome (AIDS) papular eruption; drug eruptions; Kaposi sarcoma; and human papilloma virus (HPV)-related neoplasia may be seen in patients infected with HIV [1]. Aphthous ulcers and oropharyngeal candidiasis may point towards acute seroconversion; oral hairy leukoplakia, Kaposi sarcoma, necrotising gingivitis and candidiasis may help diagnose undiagnosed patients. Candidiasis and hairy leukoplakia are seen in AIDS; periodontitis, Kaposi sarcoma, long-lasting herpetic infections, major aphthous ulcers, candidiasis and hairy leukoplakia are seen



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with increased immunosuppression [2]. Furthermore, HIV infected patients may have coexisting sexually transmitted diseases (STD) [3]. The mucocutaneous manifestations seen in patients infected with HIV may not only help diagnose the undiagnosed patients, but also help physicians guide through the stage of immunosuppression. The aim of this study is to determine the prevalence of the mucocutaneous manifestations in our patient population, as well as to signify the role of dermatologists in diagnosing the disease in the light of common mucocutaneous manifestations. A secondary aim of this study is to determine the prevalence of coexisting STDs in patients infected with HIV.

Materials and Methods

This is a retrospective study which has included HIV infected patients who have visited the outpatient clinic of Istanbul University-Cerrahpasa, Cerrahpasa Faculty Medicine, Department of Dermatology and Venerology between January 2019 and January 2021. The age, gender, HIV infection duration, cutaneous manifestations, oropharyngeal mucosal manifestations, genital mucosal manifestations and coexisting STDs of each patient were noted from the patient files.

The approval of Istanbul Kent University Medical Sciences Faculty Ethics Committee has been taken before the initiation of this study (approval number: E-21837838-050-17761, date: 31.10.2022)

Results

A total of 57 patients were included in this study. Seven (12%) of the patients were female, 50 (88%) were male. The mean age of the patients was 34 years and the mean duration of HIV-infectedness was 22.3 months.

The most commonly seen cutaneous manifestations were seborrheic dermatitis (29.8%) and pruritus (29.8%). Other common cutaneous manifestations were chronic herpetic ulcers (19.3%), diffuse hair loss (15.8%), xerosis (15.8%), viral warts (15.8%), bacterial or fungal folliculitis (15.8%) herpes zoster infection (14%), sarcoptes scabiei infection (14%), drug eruption (10%), nail pigmentation (9%), atopic dermatitis (5%), Kaposi sarcoma (5%), molluscum contagiosum infection (3%), psoriasis (2%) and telangiectasias (located on trunk or neck) (2%). None of the patients had varicella zoster infection, eosinophilic folliculitis, bacillary angiomatosis, cutaneous tuberculosis, deep fungal infections, lymphadenopathy, vasculitis or cutaneous lymphoma.

The most common oropharyngeal mucosal manifestation was periodontitis (46%); candidiasis (30%), xerostomia (28%) and aphthous ulcers (25%) were also common. Oral hairy leukoplakia was seen in only two patients (2%) and black hairy tongue was seen only in 1 patient (1.8%). None of the patients had mucosal pigmentation or orificial tuberculosis infection.

The most commonly seen genital mucosal manifestations were condyloma accuminata (18%) and anal condyloma (12%); both due to HPV infection. Syphilitic chancre or scar of a chancre were present in 14% of the patients, while none of the patients had condyloma lata (secondary syphilis). A history of gonorrhea infection has been reported by 10% of the patients. Five percent of the patients had active genital herpes simplex virus infection and 2% had the implicated papules of molluscum contagiosum. Five percent of the patients had perianal abscess. None of the patients had chancroid or lymphadenopathies.

The most common coexisting STD was HPV, the other common STDs were syphilis, gonorrhea, herpes simplex virus infection and molluscum contagiosum, in decreasing order.

Figure 1 summarizes the mucocutaneous manifestations observed in the HIV infected patients.

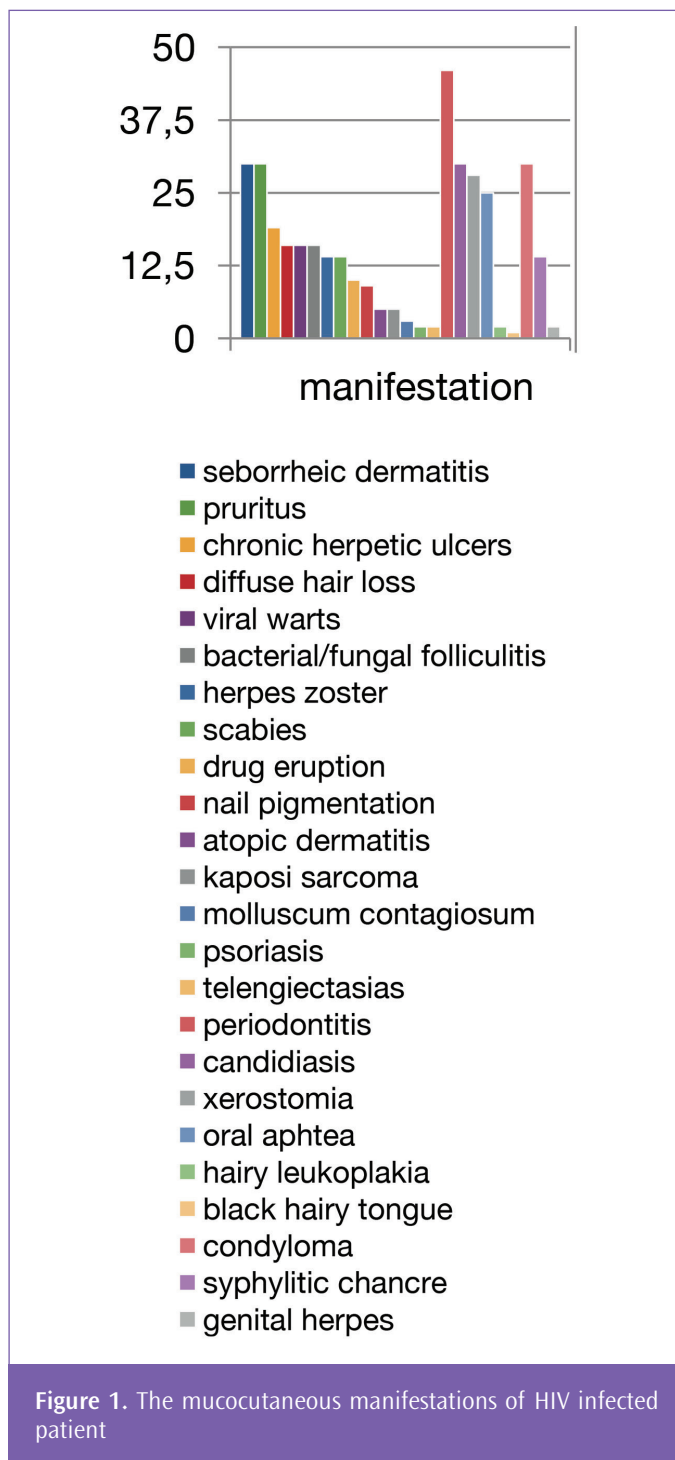
Discussion

Seborrheic dermatitis and pruritus were the most common cutaneous manifestations that were observed in our patient population. Herpetic ulcers, viral warts, hair loss and folliculitis were also common. The common mucosal manifestations were periodontitis, candidiasis, xerostomia and aphthous ulcers.

Several studies have investigated the mucocutaneous manifestations of HIV infections previously, including studies from Turkey. Altuntaş Aydın et al. [4] reported that at least one dermatological pathology was observed in 36.2% of the HIV infected patients; and the most common pathologies were oropharyngeal candidiasis, herpes zoster, dermatophyte infections, hyperpigmentation and folliculitis. Similar to Altuntaş Aydın et al. [4] we have also observed oropharyngeal candidiasis in almost one third of our patients. Herpes zoster, hyperpigmentation and folliculitis were also common.

Sivaz et al. [5] reported that the most common mucocutaneous manifestation in the HIV infected patients was seborrheic dermatitis. Although it was the most common cutaneous manifestation in our patient population, periodontitis and candidiasis were more commonly seen than seborrheic dermatitis in our patient population.

Oral mucosal manifestations have been reported in up to 50% of the HIV-infected patients and in up to 80% of the patients with AIDS. Periodontitis has a prevalence ranging from 27% to 76% in patients infected with HIV; oral candidiasis has a prevalence ranging from 17% to 75%. Similar to the literature, periodontitis and candidiasis were the most commonly observed oropharyngeal mucosal pathologies in our patient population. Xerostomia was also common in our patient population, which has been reported to have a prevalence of 39% in the literature. Aphthous ulcers were seen in the quarter of our patients although its frequency ranges



from 5% to 10 % in the literature. Oral Kaposi sarcoma is seen in the 6% of HIV infected patients and its distinctive for guiding the undiagnosed patients towards diagnosis; yet none of our patients had oral Kaposi sarcoma [6].

A study from Morocco reported that fungal infections, HPV infections, herpes zoster infection, xerosis and oral candidiasis were common in HIV-infected patients. These were also common in our patient population. Furthermore, the authors concluded that Seborrheic

dermatitis was significantly associated with the AIDS stage [7]. Another study reported that more than half of the newly-diagnosed patients had a skin manifestation and the common manifestations were pruritic papular eruption, seborrheic dermatitis, Kaposi sarcoma, xerosis, drug reactions, candidiasis, herpes zoster and scabies. Furthermore, they also reported that decreased CD4 lymphocyte counts were associated with dermatophyte infections, oral candidiasis, Kaposi sarcoma, seborrheic dermatitis and xerosis [8].

STDs may co-exist with each other or enhance the transmission of one another due to the disruption of the cutaneous barrier in the genital area [9]. Lee et al. [10] investigated the prevalence of other STDs in HIV infected patients: 41.3% had a history of STD before the diagnosis of HIV, 36.1% had been diagnosed with another STD at the time of diagnosis with HIV and 8.9% have been diagnosed with another STD after being diagnosed with HIV. The most common STD to co-exist with HIV was syphilis [10]. On the contrary, Flagg et al. [11] showed that the rate of transmission of bacterial STD was lower in HIV infected patients. In our patient population, HPV infections were the most common co-existing STD; syphilis was the second most common. Chancroid and chlamydia infections were not observed in our patient population; gonorrhoea was seen in only 10%. HPV infection has been reported to be common and treatment resistant in HIV infected patients [12]. Multiple genotypes of HPV can be detected in patients infected with HIV [13].

Conclusion

Mucocutaneous manifestations are common in HIV-infected patients. Although their prevalences vary in different studies; seborrheic dermatitis, xerosis, candidiasis, periodontitis, dermatophyte infections and herpes zoster are commonly seen in HIV infected individuals. Furthermore, seborrheic dermatitis has been found to be correlated with increasing immunosuppression. Furthermore, the presence of one STD increases the risk of having a second STD. Thus, dermatologists have a pivotal role in the diagnosis and follow-up of the HIV infected patients since the mucocutaneous manifestations can not only guide through the diagnosis but also may give information about the immune status of the patient.

Ethics

Ethics Committee Approval: The approval of Istanbul Kent University Medical Sciences Faculty Ethics Committee has been taken before the initiation of this study (approval number: E-21837838-050-17761, date: 31.10.2022)

Informed Consent: Retrospective study.

Peer-review: Internally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: D.Ö., Concept: D.Ö., A.N.A., Z.K., Design: D.Ö., A.N.A., T.K.U., Z.K., Data Collection or Processing: D.Ö., N.C., T.K.U., Analysis or Interpretation: D.Ö., N.C., T.K.U., Literature Search: D.Ö., N.C., T.K.U., Writing: D.Ö., N.C.

Conflict of Interest: No conflict of interest was declared by the authors.

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References

1. Aşkın Ö, Özkoca D, Serdaroğlu S. HIV and Its Importance for Dermatology. Aydoğan K, editors. *Venereolojide Güncel Yaklaşımlar*. 1st ed. Ankara: Türkiye Klinikleri; 2021. p. 56-60.
2. Patton LL, van der Horst C. Oral infections and other manifestations of HIV disease. *Infect Dis Clin North Am* 1999;13:879-900.
3. Mendes-Bastos P, Brasileiro A, Matos-Pires E, Rodrigues I, Marques C, Coelho-Macias V, Fernandes C. De novo HIV infection diagnoses in a Department of Dermatology and Venereology in Lisbon, Portugal. *Int J STD AIDS*. 2017;28:887-892.
4. Altuntaş Aydın Ö, Kumbasar Karaosmanoğlu H, Korkusuz R, Özeren M, Özcan N. Mucocutaneous manifestations and the relationship to CD4 lymphocyte counts among Turkish HIV/AIDS patients in Istanbul, Turkey. *Turk J Med Sci* 2015;45:89-92.
5. Sivaz O, Ozkur E, Altunay IK, Oncul A, Sevgi DY. Mucocutaneous Manifestations of People Living with HIV in Current Antiretroviral Therapy Era. *Curr HIV Res* 2022;20:120-128.
6. Lomeli-Martínez SM, González-Hernández LA, Ruiz-Anaya AJ, Lomeli-Martínez MA, Martínez-Salazar SY, Mercado González AE, Andrade-Villanueva JF, Varela-Hernández JJ. Oral Manifestations Associated with HIV/AIDS Patients. *Medicina (Kaunas)*. 2022;58:1214.
7. Titou H, Ebongo C, Hjira N. Dermatologic manifestations among human immunodeficiency virus patients in Morocco and association with immune status. *Int J Dermatol* 2018;57:156-161.
8. Boushab BM, Malick Fall FZ, Ould Cheikh Mohamed Vadel TK, Ould Cheikh Melainine ML, Maazouz MV, Savadogo M, Basco LK. Mucocutaneous manifestations in human immunodeficiency virus (HIV)-infected patients in Nouakchott, Mauritania. *Int J Dermatol* 2017;56:1421-1424.
9. Czelusta A, Yen-Moore A, Van der Straten M, Carrasco D, Tyring SK. An overview of sexually transmitted diseases. Part III. Sexually transmitted diseases in HIV-infected patients. *J Am Acad Dermatol* 2000;43:409-432; quiz 433-436.
10. Lee HC, Ko NY, Lee NY, Chang CM, Liu SY, Ko WC. Trends in sexually transmitted diseases and risky behaviors among HIV-infected patients at an outpatient clinic in southern Taiwan. *Sex Transm Dis* 2010;37:86-93.
11. Flagg EW, Weinstock HS, Frazier EL, Valverde EE, Heffelfinger JD, Skarbinski J. Bacterial sexually transmitted infections among HIV-infected patients in the United States: estimates from the Medical Monitoring Project. *Sex Transm Dis* 2015;42:171-179. Erratum in: *Sex Transm Dis* 2015;42:351-352.
12. Werner RN, Westfechtel L, Dressler C, Nast A. Anogenital warts and other HPV-associated anogenital lesions in the HIV-positive patient: a systematic review and meta-analysis of the efficacy and safety of interventions assessed in controlled clinical trials. *Sex Transm Infect* 2017;93:543-550.
13. Beliakov I, Senina M, Tyulenev Y, Novoselova E, Surovtsev V, Guschin A. The Prevalence of High Carcinogenic Risk of HPV Genotypes among HIV-Positive and HIV-Negative MSM from Russia. *Can J Infect Dis Med Microbiol* 2021;2021:6641888.