



Original Research Article

Oral manifestations of HIV infection in Lucknow population: An in-vitro study of 36 subjects

Mohammad Shafi Dar^{1*} and Mohammad Ahsan Dar²

¹Oral and maxillofacial Pathology, Govt. Dental College, Srinagar, J&K, India

²Department of Ophthalmology, Govt. Medical College, Srinagar, J&K, India

*Corresponding author

A B S T R A C T

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Thirty six HIV-infected patients in Dr Ram Manohar Lal Hospital Lucknow were examined for oral manifestations of HIV infection and AIDS. The median age was 32 years. Twenty of the patients were men, 16 were women. 94.4% had a history of heterosexual transmission. Twenty eight(28) patients were CDC-category A,(6) were category B and (2) were category C (AIDS). Fifty six percent of the patients revealed oral lesions; 37% had one oral lesion and 19% had two oral lesions. Common lesions were oral candidiasis (61.5% pseudomembranous candidiasis, 9% erythematous candidiasis and 4% both forms), oral hairy leukoplakia (11.5%) and exfoliative cheilitis (6%). Gingival linear erythema was seen in 8% of the patients; other lesions like periodontal lesions and necrotising ulcerative gingivitis were not observed. Men were more commonly affected by oral manifestations than women ($P, 0.004$). The spectrum of oral lesions is comparable to other studies from other region, although most of these reported more men than women. Also, the degree of immunosuppression was more marked in AIDS.

Introduction

“The mouth is a window for HIV infection”.

Human Immunodeficiency virus infection is a serious disorder of the immune system in which the body's normal defenses against infection breakdown, leaving it vulnerable to a host life threatening infections. The presence of certain oral diseases can be an important tool for identifying person living with Human Immunodeficiency Virus and assessing the relative progression of their disease.¹

Human Immunodeficiency Virus, the etiological agent of Acquired Immuno Deficiency Syndrome, is a spherical enveloped virus, about 90 – 120 nm in size, belongs to the lentivirus subgroup of the family Retroviridae.²

AIDS came in to lime light in 1981.³ The detection of HIV infection for the first time in India was in April, 1986, in the state of Tamilnadu since then HIV infection spreading at an alarming rate.⁴ The AIDS epidemic has emerged as an

immense and complex challenge to public health, and has left millions of children orphaned, disrupted community life. In HIV infected individuals, the virus can be found in many body fluids including serum, blood, saliva, semen, tears, urine, breast milk, ear and vaginal secretions.³

Human Immunodeficiency Virus related oral abnormalities are present in 30% to 80% of HIV infected individuals. Individuals with unknown HIV status, oral manifestations may suggest possible HIV infection, although they are not diagnostic of infection.⁵

Reports on oral manifestations, however, are still warranted⁸, because of probable geographic and ethnic differences, as well as the fact that in most countries of Southeast Asia the vast majority of HIV-infected patients have not received any anti retroviral therapy (ART) or highly active anti-retroviral therapy (HAART) until now.

The purpose of the present paper was to present a cohort of HIV-infected patients in Lucknow, the majority of whom were men.

Subjects and Methods

Thirty Six HIV-infected patients in in Dr Ram Manohar Lal Hospital Lucknow were examined during November – December 2012. These patients were informed by phonecall and invited for oral examination during a routine meeting of this group in the hospital. A total of 36 HIV-infected outpatients agreed to an oral examination,. All patients were diagnosed as HIV-antibody positive by positive TRIDOT test¹ cell counts were available for all thirty six patients.

AIDS-defining diseases were recorded. In addition, the stage of HIV infection was categorized as asymptomatic or symptomatic according to the World Health Organization (WHO) clinical staging criteria¹⁰. The study was based on a guide for epidemiological studies of oral manifestations of HIV infection¹¹. Patients had a detailed oral examination, and oral lesions were diagnosed according to the criteria of the EC-Clearinghouse on oral problems related to HIV-infection¹². Differences between CDC categories (A, B, C) and oral lesions were tested for significance at a level of $P,0.05$ by a chisquared test for trends. Prevalence differences of oral lesions between women and men were tested for significance at $P<0.05$ using Fisher's exact test.

Results and Discussion

Thirty six patients were examined (medium age 32 years; range 20–62 years). Sixteen (44.4%) were women and 20 (55.6%) were men. thirty-four individuals (94.4%) had a history of heterosexual transmission; for three patients (0.08%) the risk was undetermined. Twenty eight(28) patients were CDC-category A,(6) were category B and (2) were category C (AIDS).56% percent of the patients revealed oral lesions; 37% had one oral lesion and 19% had two oral lesions. Common lesions were oral candidiasis (61.5% pseudomembranous candidiasis, 9% erythematous candidiasis and 4% both forms), oral hairy leukoplakia (11.5%) and exfoliativecheilitis (6%). Gingival linear erythema was seen in 8% of the patients; other lesions like periodontal lesions and necrotising ulcerative gingivitis were not observed. Men were more commonly affected by oral manifestations than women ($P,0.004$).

Other diagnoses that classified patients for category B(6) were: fever (n=3), diarrhoea (n=2) and herpes zoster (n=1). In 2 of 36 patients, AIDS defining diseases (category C) were recorded: meningitis/ encephalitis (n=1), tuberculosis (n=1). Of the two AIDS patients of group C one was male and one female.

In this study, the vast majority of patients were young men (55.6%). All of these reported heterosexual transmission. Other studies from Thailand^{7, 13, 14} also included more men than women (78%, 72.5% and 81%, respectively), comparable to studies from Malaysia⁵(96.2% men) and Cambodia¹⁵ (73.2% men). The median age of patients was 32 years, with that of the women being 31.8 years. Almost similar median ages for HIV-infected women were also reported from Bangkok¹⁴ (28 years), Thailand⁷ (28 years) and the Philippines¹⁶ (30.2 years).

Twenty eight (77.7%) of the patients were asymptomatic, 6 (16.6%) patients were symptomatic and only two (5.4%) were category C (AIDS), indicating that a large proportion of patients was still in a status of relative immunocompetence, in contrast to other studies. In one study from Thailand, all patients examined (n=124) were AIDS patients⁷. In this study 82% of the patients revealed oral lesions compared to the present study in which 72.2% of patients were without any oral lesions.

As in most other studies of patients with HIV and AIDS from different geographic areas, oral candidiasis was one of the most common findings. Pseudomembranous candidiasis (PC) was seen in 61.5%, erythematous candidiasis (EC) in 9% and both forms in 4%. These figures are comparatively high compared to one study of 124 AIDS patients⁷ (54% PC). The difference between these studies may be

explained by the fact that in the latter (7) the degree of immunosuppression was not much more marked. Ruxrungtham et al.¹⁴ observed oral thrush in 26% of their patients. These authors did not differentiate between PC and EC. In a study from the Philippines¹⁶, 67% of patients revealed oral candidiasis. Cambodian HIV- and AIDS-patients showed oral candidiasis in 57.5%¹⁵. Oral candidiasis was recorded in 35.9% of Malaysian patients with HIV infection⁵ and in 6.9% (EC) of ethnic Chinese from Hong Kong⁴. Oral hairy leukoplakia was seen in 11.5% of patients compared to 45% of patients from Bangkok¹⁴ and 13% in one Thai study⁷, 32.9% in Philippino HIV-infected individuals¹⁶ and 11% from HIV-infected patients from Hong Kong⁴. While none of the patients revealed angular cheilitis, 6% showed exfoliative cheilitis. Linear gingival erythema was seen in 8% of the patients. Other gingival and periodontal lesions, including necrotising ulcerative gingivitis, were not observed in the present study.

Oral candidiasis was still found as most common lesion 74.5% (61.5% pseudomembranous candidiasis, 9% erythematous candidiasis and 4% both forms). These results were in accordance with the studies of most other authors^{7,4,15}.

Oral manifestations seen in association with HIV infection are clinically prevalent and significant. To detect these most common lesions, examination of the oral cavity is done thoroughly. A good understanding of the prevalence, recognition, significance, and treatment of these lesions by primary health care providers is very essential for the health and well-being of PLHIV (people living with HIV disease).

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