

Original Research Article

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A study of oral lesions among HIV infected ENT patients

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ABSTRACT

Background: Oral lesions are the earliest and most important indicators of HIV infection. These lesions may be present in up to 50% of people with HIV infection. The lesions parallel the decline in number of CD4+ cells and an increase in viral load, and are also independent indicators of disease progression. Pseudomembranous candidiasis and hairy leukoplakia are considered as the most common lesion associated with HIV infection.

Methods: This cross sectional descriptive study was done in our ENT op during the period of 3 years. All HIV reactive patients who came to our OPD were included in the study. Oral examination was carried out using Bull's eye lamp.

Results: Totally 123 patients of HIV came to ENT OPD during the period of 3 years. Among them 52 patients (42.5%) showed one or many oral lesions. The presence of oral lesions has a significant impact on health related quality of life. The commonest oral lesion noted in our study is oral candidiasis (50%).

Conclusions: Early detection of oral lesions must be emphasized in the diagnosis and early management of HIV patients.

Keywords: Pseudomembranous candidiasis, Oral hairy leukoplakia, CD4 count

INTRODUCTION

Oral lesions are the earliest and most important indicators of HIV infection. Oral manifestations not only indicate infection with human immunodeficiency virus (HIV), but also are among the early clinical features of it and can predict progression of HIV disease to acquired immunodeficiency syndrome (AIDS). These lesions may be present in up to 50% of people with HIV infection and in up to 80% of those with the diagnosis of AIDS.¹ In cases where a person's HIV status is unknown, the lesions provide a strong indication of the presence of HIV infection.² The lesions parallel the decline in number of CD4+ cells and an increase in viral load, and are also independent indicators of disease progression.³ For this reason the presence and development of oral lesions are used as entry criteria and end-points for prophylaxis and therapy.³ This explains the importance of these lesions in HIV prevention and intervention programmes. Pseudo-

membranous candidiasis and hairy leukoplakia are considered as the most common lesion associated with HIV infection.⁴ Kaposi's sarcoma is described as the classical disease of AIDS, occurring in nearly 20% of patients affected by the disease. Other lesions associated with AIDS are herpetic stomatitis, melanin hyperpigmentation, nonspecific ulcerative stomatitis, necrotizing ulcerative gingivitis and periodontitis.^{5,6} To know the prevalence of the various oral manifestations of HIV and the demographic profile of those patients, we conducted a study in our department.

METHODS

This cross sectional descriptive study was done in our ENT op, Chengalpattu Medical College, Chengalpattu during the period of 3 years from 2012 to 2015. All HIV reactive patients who came to our op were included in the study except those who had comorbidities. Complete

history including history of dysphagia, dryness of mouth, oral ulcer and any swelling, drug history and sexual history were elicited and recorded. Oral cavity examination was done for every patient irrespective of their complaints. Oral examination was carried out using Bull's eye lamp and disposable wooden spatula, gloves, masks and sterile pieces of cotton and gauze. Statistical analysis was performed with the help of Microsoft excel.

RESULTS

Totally 123 patients of HIV came to ENT OPD during the period of 3 years. Among them 52 patients (42.5%) showed one or many oral lesions. Of these 33 were males, 18 were females including 2 female children and 1 transgender (Table 1).

Table1: Age and sex distribution.

Age group (years)	Male	Female	Transgender
1 - 10	0	2	0
11 - 20	0	0	0
21 - 30	11	2	1
31 - 40	18	8	0
41 - 50	3	6	0
Above 50	1	0	0

Heterosexual route was the commonest mode of acquiring infection in our study (Table 2).

Table 2: Mode of infection (n=52).

Route	No. of patients	Percentage %
Heterosexual	37	71.15
Homosexual	11	21.15
Blood transfusion	0	0
Needle prick/ IV drug abuse	0	0
Transplacental	2	3.84
Unknown	2	3.84

The oral manifestations of HIV noted in our study are depicted (Figure 1).

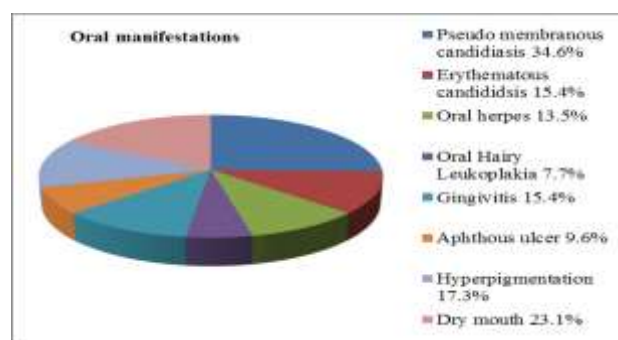


Figure 1: Oral manifestations (n=52).

Table 3: Site of infection (n=52).

Si no.	Site	No. of patients	Percentage (%)
1.	Buccal mucosa	8	15.4
2.	Dorsum of tongue	19	36.5
3.	Edges of tongue	6	11.5
4.	Soft palate	4	7.7
5.	Hard palate	7	13.5
6.	Lip	7	13.5
7.	Gingiva	8	15.4
8.	Palate/buccal mucosa/lip	12	23

Table 4: CD4 count correlation.

Si no	Lesions	CD4 count		
		>500	500 - 200	<200
1.	Pseudo membranous candidiasis	5	7	6
2.	Erythematous candidiasis	0	2	6
3.	Oral herpes	4	3	0
4.	Oral hairy Leukoplakia	0	0	4
5.	Gingivitis	0	3	5
6.	Aphthous ulcer	3	2	0
7.	Hyperpigmentation	1	4	4
8.	Dry mouth	1	8	3
9.	Kaposi's sarcoma	0	0	0

Table 5: ART correlation.

Si no.	Lesions	Not on ART	On ART
1.	Pseudo membranous candidiasis	11	7
2.	Erythematous candidiasis	2	6
3.	Oral herpes	4	3
4.	Oral hairy leukoplakia	2	2
5.	Gingivitis	6	2
6.	Aphthous ulcer	3	2
7.	Hyperpigmentation	3	6
8.	Dry mouth	4	8
9.	Kaposi's sarcoma	0	0

Oral candidiasis including pseudo-membranous and erythematous type was the commonest lesion and oral hairy leukoplakia was the least common lesion seen in only 4 patients. Nine patients had more than one oral finding.

Site of infection were also recorded in order to know the distribution of lesions (Table 3).

Most of our patients had CD4 count of 200 to 500 (Table 4). In personal history we noted 18 patients were smoker and 24 were alcoholics. This also contributes to the manifestation of hyperpigmentation. Among 52 patients 24 were on ART.

DISCUSSION

The presence of oral lesions has a significant impact on health related quality of life, because oral health is associated with physical and mental health.⁷ HIV-associated orofacial lesions (and oral diseases secondary to antiretroviral therapy) alter facial appearance, impair speech and make swallowing difficult, which may lead to significant weight loss but, more significantly, may give rise to pain. This emphasizes the importance of a thorough oral examination at every stage in the diagnosis and management of all HIV positive patients, as well as those thought to be infected or at risk.⁸

In our study 42.5% HIV patients showed one or many oral lesions in contrast to other studies by Anil et al and Ranganathan et al which show 64%.^{9,10} Here productive age group (31 to 41) is the predominant affected group (50%). Even though heterosexual route (71%) is the commonest mode of transmission in our study, most of our patients are males (65%) in contrast to a study by Sen et al.¹¹

The commonest oral lesion noted in our study is oral candidiasis (50%) as in a study by Lamster et al.¹² Erythematous candidiasis is more frequently noted in the immune suppressed group whose CD4 count <200. Thus it has got prognostic value as suggested by Kerdpon et al.^{13,14} In contrast to oral herpes, oral hairy leucoplakia (7.7%) is noted only in immune suppressed status. As expected, this finding is very less as compared to western studies.¹⁵ Aphthous ulcers are found in 9.6% cases in contrast to a Chinese study which reported as high as 26%.¹⁶

There were no cases of Kaposi's sarcoma (KS), possibly due to low number of cases with homosexual behavior in contrast to reports from Europe and the United States.¹⁷ Homosexual behavior has been identified as a risk factor for KS.

Pigmentation of oral mucosa and dryness of mouth are noted in 40% of cases. Among them majority are immunosuppressed and on ART.

CONCLUSION

This study reiterates the significance of regular oral examination in the diagnosis and early management of human immunodeficiency virus positive/acquired immune deficiency syndrome patients.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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