REVIEW ARTICLE

Oral Manifestations of HIV: A Didactic Review

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ABSTRACT

The lesions of HIV infection in the oral cavity are typical and usually consist of oral expositions of formerly referred opportunistic diseases. Such lesions in the mouth are indicative of the deficiency in the immune system of the body and hence make it highly imperative to perform cautious history collection of the patient and comprehensive scrutiny of the patient's oral cavity. The presence of associated oral lesions can have a mammoth effect on the class of life of the affected subject. The quality of life can be enhanced by an appropriate diagnosis at a very early stage and subsequent treatment. The purpose of the article is to highlight the common lesions observed in the oral cavity following an immunodeficiency condition.

KEYWORDS: Oral Manifestations; HIV; AIDS

INTRODUCTION

The newly emerging and re-occurring diseases are formulating an intense universal influence on human civilization. It has emerged as a menace observed in the low-resource area of the world which has created a social isolation for the people suffering from it. HIV is transmitted by both sexual route as well as the blood route and data has suggested that over 35 million people across the world are in distress. Oral lesions are observed in about 30-70% of the patients suffering from HIV.[1] It serves as one of the earliest signs that a person is anguishing from the disease and potentially be of an important diagnostic value.[2] The lesions in the oral cavity associated with the HIV may range from just fungal and viral infections to extreme neoplasms or salivary gland disorders. These lesions are not only indicative of HIV, but very severe lesions can point to the progression of HIV to AIDS. Few lesions which are considered as the fundamental oral pathologies associated with HIV patients are as follows:

- Hairy Leukoplakia
- Oral Candidiasis
- Necrotizing Ulcerative Gingivitis
- Necrotizing Ulcerative Periodontitis
- Kaposi Sarcoma
- Linear Gingival Erythema
- Non-Hodgkin Lymphoma
- Xerostomia

These pathologies can be observed in up to 40% of the subjects suffering from HIV to up to 80% of the subjects suffering from AIDS.[3] The importance of the oral lesions is not only restricted to diagnose HIV and AIDS but helps in denoting the progression of the disease from HIV to AIDS and can also be used as entry points for the trials of the vaccine. The lesions can be easily detected on clinical examination and the presence of oral candidiasis and hairy leukoplakia suggests the progression from HIV to AIDS.[4]

a) Hairy Leukoplakia: Hairy leukoplakia is ordinarily witnessed in an immune compromised individual and is a common lesion in patients suffering from AIDS. It is caused by an Epstein- Barr virus and usually, patients do not suffer from any major symptoms. It is considered to be one of the foremost consistent indicators of the declined count of CD4 cells.[5] The lesion is characterized by a hyperplastic growth of benign nature usually observed on the lateral borders of the tongue. One of the pathognomonic features of the pathology is that it cannot be wiped away with the aid of a gauze.[6] It is either unilateral or could be present on both the lateral borders depending upon the severity of the disease. Since there are no major discomforts associated with the diseases, the treatment is only considered if the patient demands it for the aesthetic concerns.

b) Oral Candidiasis: Currently, it is the most common oral lesion associated with the HIV.[7] Associated with a strong decline in the count of CD4 cells; it presents itself in multiple forms which include the erythematous as well as the pseudomembranous type. Usually asymptomatic, it might get symptomatic which includes symptoms like discomfort and burning sensation. The erythematous form presents itself as a red lesion which is flat and observed either on the dorsal surface of tongue or on the hard palate. The pseudomembranous variety

How to cite this article:
Makadia N, Vanker D, Mehta A, Kachhadia R, Pala A, Siddiqui HF. Oral Manifestations of HIV: A Didactic Review. Int J Oral Health Med Res 2016;3(2):102-104.

presents as the white lesion which is raised and is seen in multiple locations in the oral cavity including buccal mucosa.

c) Necrotizing Ulcerative Gingivitis: Necrotizing Ulcerative Gingivitis is an opportunistic pathology associated with patients suffering from immune deficiency diseases like HIV and AIDS. The acute infection is generally characterized by severe gingival inflammation and subsequently followed by ulcer and necrosis. It may be localized or widespread throughout the gingiva. Gingival bleeding is often marked and patient complains of massive discomfort on mastication. Halitosis and metallic taste are also observed in fair number of subjects.

d) Necrotizing Ulcerative Periodontitis: Necrotizing Ulcerative Periodontitis is similar to the necrotizing ulcerative gingivitis except the fact that there is a much hasty destruction of the hard tissues. The condition is associated with unadorned pain followed by the loosening of the teeth. Some characteristics of the ulcerative gingivitis are seen in ulcerative periodontitis like considerable gingival bleeding and fetid odor. A huge amount of rapid bone loss is also observed in the necrotizing ulcerative periodontitis.

e) Kaposi Sarcoma: Amongst the malignant conditions observed in the HIV subjects, Kaposi Sarcoma is the most frequently observed malignancy. It is caused by the human herpes virus -8 which leads to hyper proliferation of the neoplastic cells.[8] The lesions are customarily present in the palate and gingiva and may vary in size and colour. The lesion may or may not be ulcerated and may show signs of secondary infections in the bone and rest of the periodontium.

f) Linear Gingival Erythema: Although it may be seen as an independent pathology, but a majority of the cases of Linear Gingival Erythema are associated with the subjects suffering from HIV. It is a periodontal pathology limited to the soft tissue area, customarily to the free gingival margin. It is a discrete scorching red band observed along the margin of the gingiva and the extent of erythema is unduly concentrated compared to the quantity of plaque perceived.[9]

g) Non-Hodgkin Lymphoma: Non-Hodgkin's lymphomas are the second most common tumour observed in a patient suffering from HIV. In comparison to the normal population, it is about 60 times more common in patients infected with HIV.[10] Even though the frequency of occurrence of the Non-Hodgkin Lymphoma has declined significantly with the availability of the anti-retroviral therapy, it is still widely observed in the third world countries. It is characterised by a fixed swelling which is reddish-purple in colour commonly observed in the gingiva or oral mucosa.

h) Xerostomia: Since most of the HIV patients are on strong regimen for anti-viral medications as well as other medicines like antibiotics and anti-depressants, it leads to xerostomia. The biggest problem associated with xerostomia is the increased susceptibility to caries and other oral conditions like fungal infections and dysphagia. It is important to treat the disease with the aid of instructions of maintaining oral hygiene, regular prophylaxis by dental hygienists, and use of dentifrices and other hygiene products.[11]

SUPPLEMENTARY ORAL PROBLEMS

Most patients suffering from the HIV infection complains of pain in the oral cavity due to the effect of the Human-ImmunoVirus on the central nervous system as well as the peripheral nervous system. About 46% of the patients suffer from pain in the head and neck region.[12] The gland disorders are also observed in HIV patients ranging from gland enlargement to declined salivary flow. In HIV patients, opportunistic bacterial and fungal infections are seen in abundance. Mycobacterium may cause oral lesions in addition to causing the pulmonary and extra-pulmonary tuberculosis in HIV subjects. HIV infection may lead to a noticeable thrombocytopenia, chiefly in the preliminary stage. The effect of that is usually presented in the form of haemorrhages in the mucosal surfaces.

CONCLUSION

One cannot neglect the fact that the oral indicators are midst the initial and furthermost the chief manifestations of HIV infection and hence an enhanced understanding of the disease and its oral implications is imperative for all the dental and oral health care workers. Timely analysis and handling of the immune deficiency related oral pathologies may diminish indisposition to more oral problems. The role of the oral health care experts is crucial in recognizing the significance of oral pathologies linked to HIV.

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Source of Support: Nil
Conflict of Interest: Nil