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HIV IN DENTAL PRACTICE- A STRUCTURED APPROACH

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ABSTRACT

The oral health care of persons with HIV/AIDS needs special care and attention in India. It is an established fact that oral manifestations of HIV could very well be the first signs and symptoms of HIV positive cases. A well trained unbiased mind with strategic dental practice is the need of the hour in screening these patients and establishing a safe dental treatment for the patients. This article aims at highlighting the role of a dentist and norms of infection control to be followed along with a brief mention of post exposure prophylaxis to proficiently manage the patients as well as protecting the safety and health of the dentist and his team of personnel.

Key words:- Oral health in AIDS, Infection control, Post exposure prophylaxis.

INTRODUCTION

Globally HIV/AIDS epidemic poses enormous threat to all health care workers including those in dental practice. It is recognized world over that people of low socio-economic strata including women and children are becoming increasingly infected by the virus. Although no cure has yet been found, great progress has been made in recent years in the management of the disease. Highly Active Antiretroviral Therapy (HAART) has made HIV / AIDS a chronic and manageable disease.

In India, oral health care needs of persons living with HIV/AIDS (PLWHA) are not met adequately (Anil S and Challacombe, 1997). Discrimination in treating PLWHA exists at an alarming scale. This situation affects the comprehensive patient management strategy and thus adversely affects the well-being of HIV infected persons. Much remains to be done in oral health professional education to ensure that PLWHA receive competent dental treatment without any prejudice and discrimination.

Oral Health and Disease in HIV

HIV patients seeking dental consultation generally fall under two major groups: those requiring routine dental checkups and/or treatment of dental problems and those seeking specific treatment for the oral lesions that are associated with HIV infection. HIV patients may either walk in seeking dental treatment or are referred by medical practitioners. However, when patients walk in for dental treatment there are three possibilities regard to their HIV status:

1. Patients may not know that they are HIV positive
2. They know that they are HIV positive but do not wish to disclose their HIV status to dental practitioner
3. They know their HIV status and disclose it voluntarily to the dental practitioner

Oral lesions serve as clinical markers of underlying HIV infection (Nittayananta W and Chungpanich, 1997).

I. It is well known that oral lesions seen in PLWHA can be an early manifestation of HIV associated immune deficiency.

II. Often these serve as the first sign of underlying HIV infection in patients whose HIV status may not be known at the time of oral examination.

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III. Oral lesions seen in HIV / AIDS patients can also become clinical markers of disease progression. Reduced CD4 lymphocyte counts and high viral loads have been related to a host of oral lesions seen in PLWHA.

IV. Those known HIV / AIDS persons who are on antiretroviral therapy may often show oral signs suggesting adverse drug interactions or point to failure or non-compliance of therapy.

Dental Practitioners' primary role

As important members of the health care providers' team; dental practitioners have significant role to play in the overall fight against HIV infection.

Their roles include:

1. Management of common dental problems
2. Diagnosing oral lesions associated with HIV infection and where appropriate treating them.
3. Communicating to the patient's medical health care provider any clinical findings that may signify a change in the patient's systemic health or any planned extensive surgical procedures that may impact the patient's health.

Specific protocol that involves comprehensive evaluation and management of the patient including the following:

1. Taking a comprehensive medical and social history
2. Carrying out a medical systems review at recall/each visit
3. Documentation of chief complaint
4. A thorough intraoral examination including dental and periodontal tissues and extra oral examination including the neck region
5. Formulating diagnosis based on clinical features or by using appropriate diagnostic, and/or laboratory investigations
6. Formulating a treatment plan that also includes preventive oral care vii. Discussion with the patient concerning the treatment options
7. Discussion with patient's health care provider on patient's medical status, medications being used and possible drug interactions
8. Treating patients using universal/standard infection control procedures. This applies to management of common dental conditions in HIV infected patients. Generally treatment modifications are not required in asymptomatic HIV patients
9. When oral lesions are being treated, dental practitioners should be aware of treatment protocol of medications used, including their dosage, duration of use, and their adverse effects.
10. Dental practitioners should also be aware of significance of various laboratory test results (such as CD4 counts, hematological values, microbiological and

histopathological reports) and indications of antibiotic prophylaxis.

11. Referrals if required, dental practitioners should know the referral sources. Often a multi-disciplinary approach is required in the management of oral condition in HIV patients

12. Dental practitioners should know confidentiality requirements and ethical issues in practice.

13. They should also have an infection control policy for all staff involved. Staff needs to be trained in principles and practices of infection control

It is advisable that the dentist confer with the AIDS patient's physician before undertaking dental treatment in order to assess the medical condition relative to the dental needs. Acutely ill or severely weakened patients should be given only emergency care.

Personal Protective Measures (Centers for Disease Control, 1985)

1. Wash hands thoroughly after each patient or after each procedure that might involve infected material, even if gloves are worn (eg, pouring impressions). It would benefit the practitioner to use a surgical soap that contains lanolin or to use a hand lotion after each wash, to prevent drying and cracking of the skin (especially in cold climates), which could provide a portal of entry for viruses into the bloodstream. It is also recommended that fingernails be kept short and clean.
2. Protective eyeglasses or even a large plastic face shield (as worn by hobbyists or industrial workers) should be worn.
3. A face mask should be worn in addition to eyeglasses; however, the mask is optional when a large elastic face shield is worn. Glass and synthetic fiber mat are the most effective filters. It is recommended that mask be changed after one hour of use to reduce the risk of mask becoming nidus of infection.
4. Disposable gloves should be mandatory. Double gloving must be considered when the patient is known or suspected to harbor an infective organism, or if the practitioner finds it necessary to come in contact with previously non contaminated objects (e.g., radiographic equipment).
5. Dentists or auxiliary personnel with exudative lesions or weeping dermatitis should not perform or assist invasive procedures in high-risk patients, nor should they handle equipment or perform direct patient care activities for such patients.
6. Operating gowns and hair covers should be worn when the patient is known or suspected of infection
7. A large plastic disposable drape is recommended in addition to a bib because the drape will cover most of the

dental chair as well as the patient and limit the extent of clean-up procedures.

8. To minimize self-injury, extreme caution must be used in handling sharp instruments such as scalpel, blades, disposable needles, burs, disks and endodontic instruments. As much as possible forceps, hemostats, pliers should be used to insert or remove instruments.

Post Exposure Prophylaxis

Prophylaxis means disease prevention. Post-exposure prophylaxis means taking antiviral medications as soon as possible after exposure to HIV, so that the exposure will not result in HIV infection.

Rationale for HIV PEP (CDC, 2001)

Considerations that influence the rationale and recommendations for PEP include –

- The pathogenesis of HIV infection, particularly the time course of early infection
- The biological plausibility that infection can be prevented or ameliorated by using antiretroviral drugs
- Direct or indirect evidence of the efficacy of specific agents used for prophylaxis
- The risk and benefit of PEP to exposed health care personnel

Antiretroviral Agents for PEP

Antiretroviral agents from three classes of drugs are available for the treatment of HIV infection. These include.

Nucleoside Reverse Transcriptase inhibitors, which include:

Zidovudine (ZDV) and Lamivudine (3TC) Lamivudine and Stavudine Didanosine (ddI) & Stavudine Protease Inhibitors.

Timing and Duration of PEP

PEP should be initiated as soon as possible. The interval within which PEP should be initiated for optimal efficacy is not known.

If questions exist about which antiretroviral drugs to use or whether to use a basic or expanded regimen, starting the basic regimen immediately rather than delaying PEP administration is probably better.

If appropriate for the exposure, PEP should be started even when the interval since exposure exceeds 36 hours. Initiating therapy after a longer interval (e.g., 1

week) might be considered for exposures that represent an increased risk for transmission

The optimal duration of PEP is unknown. Because 4 weeks of ZDV appeared protective in occupational and animal studies, PEP probably should be administered for 4 weeks, if tolerated.

Recommendations for the Selection of Drugs for HIV PEP

Two regimens for PEP are provided: 1) A "basic" two-drug regimen that should be appropriate for most HIV exposures Zidovudine (ZDV; AZT) + Lamivudine (3TC); ZDV: 600 mg per day, in two or three divided doses, and 3TC: 150 mg twice daily.

ALTERNATE BASIC REGIMENS

Lamivudine (3TC) + Stavudine (d4T) 3TC: 150 mg twice daily, and d4T: 40 mg (if body weight is <60 kg, 30 mg twice daily) twice daily Didanosine (ddI) + Stavudine (d4T) ddI: 400 mg (if body weight is <60 kg, 125 mg twice daily) daily, on an empty stomach. d4T: 40 mg (if body weight is <60 kg, 30 mg twice daily) twice daily.

2) An "expanded" three-drug regimen that should be used for exposures those pose an increased risk for transmission. It includes a basic regimen plus one of the following

- Indinavir (IDV) 800 mg every 8 hours, on an empty stomach.
- Nelfinavir (NFV) 750 mg three times daily, with meals or snack, or 1250 mg twice daily, with meals or snack.
- Efavirenz (EFV) 600 mg daily, at bedtime.
- Abacavir (ABC) 300 mg twice daily.

The clinical and institutional practice demands a heightened and more structured protocol for screening patients and imparting dental care. Complacency would only lead to repentance, contributing to the already existing global pandemic of AIDS. It would be unwise to consider the virus to be prevalent more in low socio economic strata as there has been a sharp rise of the same in urban youth and also in all classes of society. Thus a vigilant dental and auxiliary team with a focus of reducing the global load of this deadly virus is what this article stresses on along with creating space for adopting a new and more sterilized approach for a safe practice.

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