

- Use of chin length plastic face shields or surgical masks, protective eye wear is a must when splashing / spattering of blood or other body fluids is likely.
- Protective clothing such as disposable gowns or laboratory coats and head cap should be worn when clothes are likely to get soiled.
- Aluminium foil / plastic cover should be used to protect surfaces such as light handles or x-ray unit heads which may become contaminated with blood / saliva during use and that are difficult to clean and disinfect. They should be cleaned by disposable toweling and disinfectant atleast at the end of the day.
- Use rubberdam and high velocity evacuation systems to minimize spattering and aerosols during treatments.
- Sharp items like needles, scalpels, blades or wires contaminated with patient blood and saliva should be considered potentially infective and handled with care.
- All dental instruments which come in contact with patient's saliva or blood should be autoclaved after each patient use.
- If the instruments are intolerant to heat, high level disinfection using suitable chemicals (like 20% sodium hypochlorite) should be done.
- All instruments and dental units should be scrubbed with soap and water before sterilization or disinfection.
- All hand pieces, high speed / low speed should be autoclaved after each patient use. They may become contaminated with patient material during use, which may be expelled intra-orally during subsequent use. Liquid chemical germicides have restricted access to internal surfaces during physical cleaning. Hence, autoclaving is necessary.
- Anti retraction valves should be installed to reduce the risk of backflow of potentially infective material into water lines.
- Run the hand piece for 20-30 seconds after each patient. This helps in flushing the infected material that may have entered the turbines.
- Disposable instruments like syringes, saliva ejectors, high speed evacuators, prophylaxis cups, brushes should be used for one patient only and discarded appropriately. They should not be cleaned, disinfected and sterilized for reuse.
- All blood stained disposable items should be placed in sealed sturdy impervious bags for disposal. Sharp needles should be placed in puncture resistant containers prior to disposal.

#### POST EXPOSURE PROPHYLAXIS (PEP)

Systemic infection will not occur immediately after an exposure. Hence, PEP is recommended as there is a window of opportunity to limit / prevent viral replication<sup>3</sup>. In a retrospective case control study among health care personnel, PEP resulted in 81% decrease in HIV seroconversion after percutaneous exposure to HIV infected blood. Failure of PEP has been reported in 21 instances. Possible contributing factors include exposure to resistant strain, large inoculums, delayed initiation or short duration regimen<sup>2</sup>.

Since most occupational HIV exposures do not result in transmission of HIV virus, the decision to take PEP should balance the risk of HIV infection and possible side effects due to PEP. It should be always be taken after consultation with physician with expertise in antiretroviral therapy. When PEP is indicated, it should be started as soon as possible, within hours after exposure. If the source patient is determined to be HIV negative after initiation of PEP it can be discontinued<sup>3,11</sup>.

#### PROTOCOL FOR OCCUPATIONAL BLOOD EXPOSURES:<sup>3</sup>

- Wash wounds and skin with antimicrobial scrub and water.
- Determine the risk associated with exposure, consider the following
  - Type of fluid – blood, saliva or tissue contaminated with blood, pus etc.
  - Type of exposure – percutaneous exposure, non intact skin exposure, mucous membrane etc.
  - Exposure source – confirm if the source is infected with HIV.
- PEP is not recommended in :
  - If exposure source is not known to be HIV positive.
  - Lightly bleeding wound made by a syringe of unknown previous use.
- Basic regimen consisting of two nucleoside analogs is recommended in case of :
  - Superficial or lightly bleeding wound made by a syringe immediately after its use or contact of abundant blood with mucosa.
  - Patient is HIV positive but asymptomatic.
- Expanded regimen consisting of two nucleoside analogs and a protease inhibitors is recommended in case of :
  - Deep or heavily bleeding wound made by a syringe immediately after its use.
  - Patient is HIV positive and symptomatic.

#### ROUTINE DENTAL TREATMENT FOR HIV POSITIVE PATIENTS:

- Full medical history should be obtained. It should include basic biochemical data, complete hemogram (including differential leucocyte count and platelet count). Percentage of CD4 and CD8 lymphocytes and viral load must also be determined. These data tell the ability of the patients to combat infectious agents which can cause dental infection<sup>14</sup>.
- CD4 lymphocyte count has greater predictive value regarding predicting complications due to dental treatment :
  - > 500 cell/mm<sup>3</sup> and patient is HIV positive but asymptomatic can undergo any dental treatment including oral / implant surgery.
  - < 200 cells/mm<sup>3</sup> – patient should undergo antibiotic prophylaxis. Consultation with physician is mandatory<sup>14</sup>.
- Information regarding antiretroviral therapy taken by the patient should be obtained. Since many antiretrovirals have drug interactions with medications normally