

7. POST-EXPOSURE PROPHYLAXIS

In persons who have been accidentally exposed to HIV through needle-stick inoculation or through contamination of mucous membranes by secretions it has been shown in a limited number of studies that immediate administration of antiretrovirals may prevent infection from occurring. In this situation ART needs to be continued for one month. The following guidelines should be followed in the event of accidental occupational exposure to material, i.e., blood, secretions, excretions, that may contain HIV. Occupational exposure to potentially infectious material may occur through an injury with a sharp object that has been used on a patient or through the contamination of mucous surfaces with patients' blood or secretions.

The following types of exposures should be considered for post-exposure prophylaxis:

- Needle-stick injury or injury with a sharp object used on a patient
- Mucosal exposure of the mouth or eyes by splashing fluids
- Broken skin exposed to a small volume of blood or secretions

7.1 Prevention of occupational exposure in health facilities

All health facilities in the private and public sector should adopt a policy for the prevention of occupational accidental exposure to blood borne pathogens. Health facilities should implement universal precautions for the prevention of exposure to potentially infectious material. The programme should include training of all employees in handling and disposal of infectious material. All personnel should be made aware of the risks involved in improper handling of such material and the steps necessary for preventing exposure should be clearly displayed in posters.

The greatest risk for accidental exposure is with the handling of sharp objects that have been used on patients. All personnel should be taught how to safely handle sharp objects and how to safely dispose of them. Messages should promote the avoidance of re-capping of needles, using "sharps bins" for disposing of sharps, using gloves, goggles and gowns, and taking care in performing procedures.

Health personnel should also be conscious that blood and secretions from patients may be infectious and that simple contamination of unbroken skin does not comprise a significant risk but contamination of intact mucous surfaces of the mouth and eyes does. The health facility should ensure the continuous supply of education materials, gloves, disposable syringes and needles and sharps bins.

7.2 Procedure to be followed in the event of injury with a sharp object

In the event of an injury with a sharp object such as a needle or scalpel that has been used on a patient or in the event of a mucous surface being contaminated with blood or secretions from a patient, the following steps should be followed:

1. Wash exposed area thoroughly with soap and water.
2. Rinse eye or mouth with plenty of water if contaminated.
3. Report the injury to a senior member or staff or the supervisor.
4. Take antiretroviral drugs recommended for post-exposure prophylaxis immediately – these should be started within 1 hour if possible and at the latest within 72 hours of the exposure (persons presenting after 72 hours of exposure should also be considered for post exposure prophylaxis).
5. Ascertain the HIV status of the patient and the injured health worker after providing appropriate counseling – the standard rapid HIV antibody tests that are currently used in the Voluntary Counseling and Testing programme should be used and the results of tests should be obtained as quickly as possible.
6. Depending on the results of the HIV tests the following actions should be taken:
 - If the source patient is HIV negative no further post-exposure prophylaxis is necessary for the exposed health worker.
 - If the exposed health worker is HIV positive, no further post-exposure prophylaxis is necessary for the health worker, but the health worker should be referred for further counseling and management on a long-term basis of his/her HIV infection which has not occurred as a result of the exposure.

- If the health worker is HIV negative and the source patient is HIV positive then continue antiretrovirals for a period of one month; repeat the health worker's HIV tests at 3 months and at 6 months after the initial test. If the health worker should seroconvert during this time then provide appropriate care and counseling and refer for expert opinion and long term treatment.
 - Counsel health worker regarding condom use, and side effects and toxicity of drugs.
 - Also do baseline investigations before initiating ARVs for post exposure prophylaxis.
7. If it is not possible to determine the HIV status of the source patient then assume that the source is positive and proceed according to guidelines in the previous bullet.
 8. Determine the health workers hepatitis B virus immune status and if non-immune, passive immunization with hepatitis B globulin followed by active immunization with hepatitis B vaccination should be carried out.

7.3 Antiretroviral Drugs to be used in Post-Exposure Prophylaxis

Immediately after exposure all exposed health workers should take:

- **Zidovudine 300 mg orally twice daily, Plus**
- **Lamivudine 150 mg orally twice daily, Plus**
- **A Protease Inhibitor e.g. Indinavir 800mg PO TID OR Lopinavir/ritonavir 400mg/100mg PO BID**

This regimen is continued until the results of HIV tests for patient and injured health worker are known:

- **If the source is HIV negative or the health worker is HIV positive then drug administration should be discontinued.**
- **If the health worker is HIV negative and the source is HIV positive or the source's HIV status is not determined then continue this regimen for 4 weeks.**

Alternate antiretroviral regimens for post-exposure prophylaxis may be used such as:

- Stavudine 40 mg orally twice daily if body weight is more than 60 kg, or 30 mg orally twice daily if body weight is less than 60 kg for 4 weeks, Plus
- Didanosine 400 mg orally once daily if body weight is more than 60 kg, or 250 mg orally once daily if body weight is less than 60 kg for 4 weeks, Plus
- Nevirapine 200mg orally daily for 2 weeks then 200mg orally twice daily for 2 weeks

7.4 Post-sexual exposure prophylaxis

There is not enough evidence to recommend prophylaxis against infection following casual sexual exposure. However in the event that there has been sexual abuse or rape then it is recommended that the victim be counselled and provided with the drugs recommended for post-occupational exposure prophylaxis. It is important to try and determine the HIV status of the perpetrator. If this is not possible then it may be assumed that the perpetrator is HIV positive and the victim is provided with the treatment as listed in the preceding paragraph.