SECTION 5: POST-EXPOSURE PROPHYLAXIS (PEP)

Prophylaxis after occupational exposure to HIV

Introduction

Health care workers have a low but measurable risk of HIV infection after accidental exposure to infected blood or body fluid.

Compliance with infection control recommendations in handling sharps is the mainstay in the prevention of occupational HIV infection. Additional prevention strategies now include post-exposure prophylaxis with ART.

Risk of infection

Factors that increase the risk of sero-conversion include:

- Exposure to large inoculum of infected blood indicated by:
  - a deep injury
  - visible blood on device
  - procedures involving needles
- Source patient with terminal HIV infection

When to commence treatment

Treatment has to commence as soon as possible within 1 to 2 hours of exposure – **the sooner the better.**

The HIV status of the injured person needs to be known as initiating HIV prophylaxis in an infected person could endanger their future treatment options. This is because dual therapy could lead to resistance.

In situations where there is a high suspicion that the patient may be in the window period, consider HIV PCR testing. Starter pack prophylaxis should also be provided.

For further information, consult the national guidelines on "Management of Occupational Exposure to HIV".

Table 24: Recommendations for post-exposure prophylaxis (PEP) after occupational exposure

This includes blood, CSF, semen, vaginal secretions and synovial/pleural/pericardialperitoneal/amniotic fluid from HIV sero-positive patients.

Exposure	HIV status of source patient		
	Unknown	Positive	High risk*
Intact skin	No PEP	No PEP	No PEP
Mucosal splash/ non-intact skin	Consider 2-drug regimen	Recommend 2-drug regimen	Recommend 2-drug regimen
Percutaneous (sharps)	Recommend 2-drug regimen	Recommend 2-drug regimen	Recommend 3-drug regimen
Percutaneous (needle in vessel or deep injury)	Recommend 2-drug regimen	Recommend 3-drug regimen	Recommend 3-drug regimen

* See text for definition of high risk exposures

Table 25: Recommended PEP drug regimen

Drug	Dose	Frequency	Duration
Zidovudine (AZT) Lamivudine (3TC)	300 mg 150 mg	12 hourly	28 days
Lopinavir/ritonavir in cases of high exposure	400 mg/100 mg	12 hourly	28 days

Monitoring after occupational exposure

- Prophylaxis must be given for 28 days.
- Following HIV exposure, there is a need for psycho-social support.
- Laboratory monitoring is done to exclude acquisition of HIV infection and, for those given PEP, to monitor toxicity.
- Health care workers should be tested for HIV infection at the time of the exposure, and again at 6 weeks, 3 months and 6 months.

Prophylaxis after sexual assault

Prevention of the transmission of the Human Immunodeficiency Virus (HIV) in men and women who have been raped/sexually assaulted

- All women and men, aged 14 years and older, presenting to a health facility after being raped, should be counselled by the examining health care worker about the potential risks of HIV transmission post-rape.
- Younger children need to be managed at specialised sites where there is the expertise in dealing with traumatised children and the prescription of ART.
- The following points should be covered in the counselling:
  - The risk of transmission is not known, but it exists.
  - It is important to know the victim's HIV status prior to using any ART. This is becuase using AZT and 3TC in an HIV-positive patient is not adequate therapy. It may also lead to viral resistance.
  - It is the patient's choice to have immediate HIV testing or, if she/he prefers, this could be delayed until 72 hours post-examination visit. Management guidelines on sexual assault provides for a 3-day starter pack for those who prefer not to test immediately, or those that are not ready to receive results immediately. Getting patients back after three days might present with logistical problems, especially if they have to return at Week 1 for other results or to revisit VCT.
  - Patients presenting after 72 hours should be counselled about the possible risk of infection and the possibility of them transmitting infection during sero-conversion. They should be advised to return at 6 weeks and 3 months post-rape for voluntary confidential counselling and HIV testing. Patients who request prophylaxis at this stage, should be advised that there is not enough scientific evidence that the use of AZT (and 3TC) delayed this long after the rape, will have any impact on preventing HIV transmission.
  - The patient should be made aware that the efficacy of AZT prophylaxis is still under study. The drug itself is not yet licensed for use in post-rape prophylaxis.
- All women and men, aged 14 years and older, presenting to a health facility within 72 hours of being raped, should be offered AZT and 3TC to prevent HIV transmission.
- A third drug, lopinavir/ritonavir 400/100 mg 12 hourly, added to the above, is recommended in severe cases as follows:
  - where there have been multiple perpetrators
  - anal penetration
  - obvious trauma to the genital areas
  - known HIV positivity of one of the perpetrators (not enough scientific evidence exists to support the three-drug regimen, but it is considered best practice in these circumstances).
- The treatment is AZT 300 mg bd for a period of 28 days, plus 150 mg 3TC bd for the same time period.
  - Patients should be given a week supply of AZT and 3TC. They should also be given a date to return within a week for reassessment, for ongoing counselling, and to review the test results (except the rapid HIV or to obtain the confirmatory ELISA, where positive).

- For those patients who cannot return for their one-week assessment due to logistical or economic reasons, then a month's treatment supply, with an appointment date, should be given. This may be particularly relevant outside of the metropolitan areas.
- Ideally all patients should be seen one week post-rape to obtain results of all blood tests and to evaluate her/his condition. The remainder of the drugs should be given at this visit (i.e. a 3-week supply).
- The next visit should be at 6 weeks, and then 3 months and 6 months after the rape. HIV testing should be performed at each visit.

- Patients who are either known to be HIV positive, or found to be HIV positive, should not be offered prophylaxis. They should be referred to an appropriate health care clinic for long-term management of their HIV infection.
- The prophylaxis regimen against HIV transmission recommended by the National Department of Health will be reviewed periodically in light of any new information on HIV transmission and appropriate prophylaxis.
- Routine testing with a full blood count and liver enzymes for patients on AZT and 3TC is not recommended for such a short duration of therapy. Any blood tests should be performed according to patient's condition.
- Relative contra-indications to the use of AZT include significant renal or liver impairment and severe anaemia (Hb <6 g). Where in doubt about the use of AZT in individual patients, contact your local physician or hospital for advice.
- It is strongly suggested that AZT and 3TC be administered only in the context of using the comprehensive rape protocol.
- It is also strongly suggested that the implementation of AZT and 3TC for post-rape prophylaxis should be carefully monitored and evaluated.

Figure 8: PEP after sexual assault