

HIV: Ufff...I Got a Needle Prick

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Dear Editor,

In the context of HIV, postexposure prophylaxis refers to the set of services that are provided to manage the specific aspects of exposure to HIV and to help prevent HIV infection in a person exposed to the risk of getting infected by HIV.^[1] It includes first aid, counseling, risk assessment, laboratory investigations based on the informed consent of the exposed person, and source and depending on the risk assessment, the provision of short-term antiretroviral drugs with followup evaluation.^[2] Needle prick and injury by sharp objects are common problems faced by many surgeons/health care workers. But in many situations, the exposed person may not be aware of the measures taken to prevent the disease. The importance of knowledge about postexposure prophylaxis increases in view of a study done by Wig, which showed that 62.8% of the participants were not aware of postexposure prophylactic measures to be taken if there is an occupational exposure to the blood of a HIV-positive patient.^[3]

The average risk of acquiring HIV infection after all types of percutaneous exposure to HIV-

infected blood is 0.3%^[4] Approximately 1 in 300–330 exposures will result in established HIV infection in health care workers.^[4] As per an article published in 2007, globally there were 98 confirmed and 194 possible cases of health care personnel being infected occupationally.^[5] The risk of HIV infection increases following the exposure if the source patient has advanced HIV disease, the device was previously placed in source patient's blood vessel, there is visible blood on source device causing injury, amount of blood transferred, or if the injury is deep in nature.^[4,6] Injuries with solid needle, such as suturing needle, carry lower risk than hollow bored needle.^[4]

The source person is tested for HIV with pre- and post-test counseling.^[7] Two positive ELISA are considered to be highly suggestive of HIV.^[7] If the source patient cannot be tested or refuses to be tested, risk is assessed epidemiologically by the prevalence of HIV in the population, type of exposure, and risk assessment of the source person and his spouse.^[7] If the source person is HIV negative and has no clinical evidence of HIV

infection, no testing of the source is required as the chances of source being in the window period of HIV infection, with no symptoms of acute retroviral syndrome is very less.^[7] All patients seeking care after HIV exposure should be tested for HIV at baseline and at 4–6 weeks, 3 and 6 months after exposure with pre- and post-test counseling.^[7]

The trauma site is washed immediately with soap and running water or mild disinfectant solution, such as chlorhexidine gluconate, that would not irritate the skin.^[1] Squeezing, rubbing, or using strong solution, such as iodine or bleach is discouraged.^[1] Postexposure prophylaxis is started ideally within 2 h and not later than 72 h after exposure.^[7] It should not be delayed while waiting for test results and should be administered for 4 weeks if tolerated.^[7] WHO recommended eligibility criteria for postexposure prophylaxis in occupational settings states that less than 72 h should have been elapsed, the exposed person should not be a known HIV infected, the source person should be living with HIV or his status should be unknown, exposure should have been with blood, visibly blood stained fluids, concentrated viruses, cerebrospinal/peritoneal/pericardial/pleural/synovial, or amniotic fluid, exposure penetrated the skin with spontaneous bleeding, deep puncture, splash or prolonged contact of an at-risk substance with nonintact skin, or in case of penetrated skin, the exposure should have been from a recently used hollow bore needle or sharp object, visibly contaminated with blood.^[1]

Antiretroviral drugs can be started as basic or expanded regimen. Basic regimen consists of zidovudine 300 mg twice a day plus lamivudine 150 mg twice a day or stavudine 30–40 mg twice a day plus lamivudine 150 mg twice a day. Expanded regime consists of basic regime plus indinavir 800 mg 3 times a day/nelfinavir 750 mg, 3 times a day/ efavirenz 600 mg once a day.^[8] Both the regimen are for 28 days.^[8]

Pregnancy, breastfeeding, blood/tissue/sperm donation is avoided.^[7] Combined oral contraceptive pills may have interaction with antiretroviral drugs. Use of condoms should be preferred over

O.C.P. Barrier contraception should be used for sexual intercourse up to the sixth month test and the need for clinical and serologic followup should be provided.

Authors have seen many of the health care workers getting panicked after needle prick, which may occur even after taking great precautions. This article has been written to provide the basic knowledge to health care workers to know what to do and what not to do after such an injury.

REFERENCES

1. WHO. Post-Exposure Prophylaxis To Prevent HIV Infection: Joint WHO/ILO guidelines on post-exposure prophylaxis (PEP) to prevent HIV infection. Switzerland: WHO press; 2007.
2. Shevkani M, Kavina B, Kumar P, Purohit H, Nihalani U, Shah A. An overview of post exposure prophylaxis for HIV in health care personals: Gujarat scenario. *Indian J Sex Transm Dis* 2011;32:9-13.
3. Wig N. HIV: Awareness of management of occupational exposure in health care workers. *Indian J Med Sci* 2003;57:192-8.
4. HIV/AIDS and STD directorate Department of health South Africa. Management of occupational exposure to HIV. In: HIV/AIDS policy guideline. Cape: Formaset printer; 2000.
5. Avachat S, Phalke DB, Dhumale GB. Awareness regarding pre- and postexposure prophylaxis for human immunodeficiency virus/acquired immunodeficiency syndrome among nursing students. *Indian J Community Med* 2007;32:159.
6. Cardo DM, Culver DH, Ciesielski CA, Srivastava PU, Marcus R, Abiteboul D, *et al.* A case-control study of HIV seroconversion in health care workers after percutaneous exposure. *N Engl J Med* 1997;337:1485-90.
7. Sharma A, Marfatia YS, Ghiya R. Post-exposure prophylaxis for HIV. *Indian J Sex Transm Dis* 2007; 28:61-8.
8. Varghese GM, Abraham OC, Mathai D. Post-exposure prophylaxis for blood borne viral infections in health care workers. *Postgrad Med J* 2003;79:324-8.

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