HIV postexposure prophylaxis: new recommendations

Although the average risk of acquiring HIV infection after percutaneous exposure to HIV-infected blood is only 0.3%,[1] health care workers welcomed the news that postexposure prophylaxis with zidovudine (AZT) can reduce this risk by as much as 79.0%.[2] Recommendations from the US Centers for Disease Control and Prevention (CDC)[3] have been revised to take into account the potential for greater benefit from combination drug treatment, especially after massive exposure or when drug resistance is a possibility (Table 1).

Table 1: Summary of CDC recommendations for HIV postexposure prophylaxis[3]

Type of exposure	Action*
Massive percutaneous exposure (e.g., deep injury with large-bore needle previously in source patient's vein or artery) **or** exposure to lesser amount of blood with high HIV titre	Recommend: AZT (200 mg 3 times daily) and 3TC (150 mg twice daily) with or without IDV†
Massive percutaneous exposure (as above) to blood with high HIV titre	Recommend: AZT (200 mg 3 times daily) and 3TC (150 mg twice daily) and IDV (800 mg 3 times daily)‡
Percutaneous exposure to lesser amount of blood with low titre, to fluid containing visible blood or to other potentially infectious fluid (semen; vaginal, cerebrospinal, synovial, pleural, peritoneal, pericardial or amniotic fluid) or tissue	Offer: AZT (200 mg 3 times daily) and 3TC (150 mg twice daily)
Mucous membrane or high-risk skin exposure§ to blood	Offer: AZT (200 mg 3 times daily) and 3TC (150 mg twice daily) with or without IDV†
Mucous membrane or high-risk skin exposure to fluid containing visible blood or other potentially infectious fluid or tissue	Offer: AZT (200 mg 3 times daily) with or without 3TC
Percutaneous, mucous membrane or skin exposure to other body fluid (e.g., urine)	Do not offer prophylaxis

*AZT = zidovudine, 3TC = lamivudine, IDV = indinavir.
†Possible toxicity of the other drug may outweigh benefit.
‡If IDV is not available saquinavir (600 mg 3 times daily) may be substituted.
§High-risk skin exposure = high HIV titre in source patient; prolonged contact; extensive area involved; skin integrity compromised.

Postexposure assessment should take into account the nature of the exposure, the likelihood of HIV infection in the source patient and, in cases of known infection, the HIV titre and likelihood of drug resistance. Appropriate counselling for the exposed worker is crucial, and the risk of infection should be weighed against the potential toxicity of antiretroviral agents. When given, prophylaxis should be started within 1 or 2 hours after the exposure and continue for 4 weeks.

The advice of an expert in antiretroviral therapy should be sought when drug resistance is possible. Prophylactic AZT in the recommended dose is well tolerated, but higher doses may cause gastrointestinal symptoms, fatigue and headache. Given in the second or third trimester of pregnancy, it has been associated with mild reversible anemia in the infant but not with adverse effects in the mother. Its use in the first trimester has received only limited study.[3] The toxicity of prophylactic 3TC and IDV is uncertain, and the safety of these drugs for use during pregnancy has not been established.

The extrapolation of guidelines for postexposure prophylaxis to other situations such as sexual assault is being considered at some centres. Like the use of combination therapy advocated by the CDC, such extensions are based on sound science but are difficult to test objectively. It is likely that well-crafted guidelines will reduce the risk of HIV infection among health care workers and others. Such guidelines must be applied intelligently to avoid waste, needless side effects and the diversion of the drug supply away from more clearly beneficial applications. Physicians should remain alert to recommendations as they evolve and ensure that the necessary drugs are at hand.

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References

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