

Editorial

HIV antiretroviral preexposure prophylaxis

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According to 3 field trials conducted in Africa, one among African women and two among heterosexual couples, antiretroviral preexposure prophylaxis for prevention of HIV-1 has been shown to be effective.⁽¹⁻³⁾ In preexposure prophylaxis, persons without HIV infection are given an oral drug before they have sexual contact with HIV-infected partners.⁽⁴⁾ The drug in question is tenofovir disoproxil fumarate (TDF), a prodrug of tenofovir.⁽¹⁾ On the basis of the 3 field trials, the Antiviral Drugs Advisory Committee of the Food and Drug Administration has recommended a combination of antiretroviral drugs (tenofovir/emtricitabine) for preexposure prophylaxis of HIV.⁽⁵⁾

TDF is currently indicated for the treatment of HIV in adults over 18 years of age or hepatitis B virus (HBV) infection in adults, or both. The drug is called a nucleotide reverse transcriptase inhibitor (NRTI), preventing the synthesis of viral copies by HIV reverse transcriptase or HBV DNA polymerase.⁽⁶⁾ To retard the emergence of TDF resistance, the drug is usually given in combination with another antiviral, such as emtricitabine (FTC). Nucleic acid testing for HIV virus when starting preexposure prophylaxis, may reduce the risk of resistance, but it is at present not an option in developing countries because of its high costs. Rare but potentially serious adverse reactions to TDF are lactic acidosis and toxic effects on the liver and kidneys.⁽⁶⁾ Because administration of TDF to healthy noninfected persons implies using the drug for a prolonged period of many years, the long-term safety of TDF and the TDF-FTC combination has to be clearly established.⁽⁴⁾

There is also a real possibility that preexposure prophylaxis may lead to relaxation of the customary precautions on the part of the sexual partners, such as engaging in increased risky sexual behavior or abandoning the use of conventional prophylactic measures (e.g. condoms).⁽⁴⁾ This matter should be a problem for health educators.

From a practical point of view, because of the potential of serious liver and kidney disease caused by TDF, the medical practitioner should prescribe preexposure prophylaxis only in high risk cases, and not for prevention of HIV in otherwise healthy individuals, e.g. blood bank personnel or dental practitioners with a low risk of exposure to HIV, which are currently not indicated. Prescription should be done on an individual basis.

Indeed, the old Hippocratic advice of not too readily prescribing any new modes of treatment, or in plain words - Wait and watch- still holds true. This is presumably one of the reasons for not blindly or overenthusiastically accepting HIV preexposure prophylaxis.

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