

Managing HIV Infection in Pregnancy

Antiretroviral therapy may be given during pregnancy for two separate, though related, purposes:

- ◆ To treat a woman infected with HIV-1.
- ◆ To reduce the risk of perinatal transmission of the virus to the fetus or neonate.

The standard approach to treating HIV-1 infection in an adult who is not pregnant is triple-drug therapy, usually with two nucleoside analogue reverse transcriptase inhibitors (NRTIs) and a protease inhibitor.¹ In 1994, a three-part regimen of zidovudine (given to a woman during pregnancy and labor and to the neonate during the first 6 weeks of life) was shown to reduce the risk of perinatal HIV-1 transmission by almost 70%.² To date, the NRTI zidovudine remains the only antiretroviral agent proved to reduce perinatal transmission and to be safe for both mother and newborn, at least in the short term.

Therefore, the decision regarding when and how to institute antiretroviral therapy during pregnancy is a complex one. The benefits to the woman must be weighed against the risks to her, the fetus, and the neonate. To address these concerns, the Public Health Service Task Force recently issued recommendations for administering antiretroviral agents for maternal health and the prevention of perinatal HIV-1 transmission.³

GENERAL PRINCIPLES

Standard therapy for HIV-1 infection should not be deferred because the patient is pregnant. Begin with a clinical, immunologic, and virologic evaluation:

- ◆ Determine the CD4+ cell count to assess the degree of immunodeficiency.
- ◆ Measure the plasma level of HIV-1 RNA to assess the risk of disease progression.
- ◆ Ask the patient whether she is currently receiving—or has previously received—antiretroviral therapy.
- ◆ Also, estimate gestational age, assess the patient's supportive care needs, and de-

termine whether added risk factors for perinatal HIV-1 transmission (cigarette smoking, illicit drug use, and unprotected sexual intercourse with multiple partners) are present.

The decision whether to use antiretroviral therapy during pregnancy rests with the woman. She should be informed of the standard treatment options, the effectiveness of zidovudine for the prevention of perinatal HIV-1 transmission, and the known—and unknown—risks and benefits to herself and her fetus. All such discussions should be noncoercive; no HIV-1-infected pregnant woman should be denied care because she refuses treatment with any or all recommended antiretroviral drugs. Otherwise, decisions regarding the initiation and choice of antiretroviral therapy for pregnant women should be based on the same parameters (such as a low CD4+ cell count and a high plasma HIV-1 RNA concentration) that are used for adults who are not pregnant.

RECOMMENDED STRATEGIES

The approaches to preventing perinatal HIV-1 transmission recommended by the Public Health Service Task Force are based on common clinical scenarios. However, clinicians should tailor these strategies to the individual needs of their patients.

Antepartum: If an HIV-1-infected woman has not

Table 1. When and how to administer zidovudine prophylaxis

Timing	Regimen
Antepartum	200 mg PO three times daily or 300 mg PO twice daily*
Intrapartum	Initial dose 2 mg/kg IV over 1 hour, followed by 1 mg/kg/h by continuous infusion until delivery
Postpartum	2 mg/kg PO every 6 hours or 1.5 mg/kg IV every 6 hours,† to the neonate, for the first 6 weeks of life

* This regimen may not be equivalent in efficacy to that previously recommended (100 mg PO five times daily), but it is expected to enhance maternal adherence.

† This is the recommended regimen for full-term infants; premature infants may require a different dosing schedule.

previously received antiretroviral therapy, a three-part zidovudine regimen (Table 1) should be recommended to reduce the risk of perinatal virus transmission. Antiretroviral agents can be added for women whose HIV-1 disease status indicates the need for such treatment. (This option also may be offered to infected women whose disease status does not indicate treatment, but the risks and benefits to the fetus in this setting are not known.)

If the woman is in the first trimester of her pregnancy (when the fetus is most susceptible to teratogenic drug effects), treatment may be delayed until after 10 to 12 weeks' gestation. However, her health status and the risks of delaying antiretroviral treatment should be considered.


If an HIV-1-infected woman is receiving antiretroviral therapy and her pregnancy is detected after the first trimester, she should continue therapy. Stopping treatment could lead to rebound viral load and perhaps disease progression.

If a woman's pregnancy is recognized during the first trimester while she is receiving therapy, she should be advised of the risks and benefits of taking antiretroviral agents during this stage of pregnancy and should consider continuing therapy. If she chooses to stop therapy during the first trimester, all the drugs should be withdrawn and then restarted simultaneously during the second trimester to minimize the risk of drug resistance.

Regardless of the stage at which a woman's pregnancy is detected during antiretroviral therapy, if zidovudine is not included in her regimen, it should be added or substituted for another NRTI after 14 weeks' gestation.

Intrapartum: Most perinatal mother-to-child trans-

mission of HIV-1 is now thought to occur during childbirth or close to that time.⁴ Zidovudine should be given intravenously to an HIV-infected woman during the intrapartum period regardless of the antepartum regimen she received; it also should be given during labor if she received no antiretroviral therapy. Since the drug crosses the placenta, the newborn also will be exposed to it.

Postpartum: A 6-week regimen of zidovudine, preferably beginning within 12 to 24 hours of birth, is recommended for all neonates born of HIV-1-infected women. Zidovudine has been used in combination with other antiretrovirals in this setting when zidovudine resistance is suspected, but the effectiveness of this approach is unknown, as are the optimal dosing levels. During the immediate postpartum period, the disease status of women who received no antiretroviral therapy during pregnancy or labor should be reassessed to determine whether treatment of their HIV-1 infection is warranted. 

REFERENCES

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