

Contemporary Management of Human Immunodeficiency Virus in Pregnancy



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KEYWORDS

- HIV • Pregnancy • Perinatal transmission • Vertical transmission
- Mother to child transmission • Perinatal infection

KEY POINTS

- Although new infections in women seem to be decreasing in the United States, a significant number of infected individuals are estimated to be unaware of their status. Universal opt-out HIV testing in pregnancy, including rapid testing intrapartum, identifies the most number of gravidas with HIV infection. HIV testing of high-risk women should be repeated in the third trimester.
- Preconception counseling for HIV-infected women is critical, and reproductive-aged men and women living with HIV should have conversations about their reproductive desires at every visit, with appropriate methods of contraception advised until conditions for pregnancy are optimized.
- All pregnant women should be offered combined antiretroviral therapy (cART) during pregnancy regardless of HIV disease status to maximize maternal health and decrease perinatal transmission.
- Women with viral loads greater than or equal to 1000 copies/mL should be offered cesarean delivery at 38 weeks to decrease the risk of perinatal transmission associated with vaginal delivery. Invasive monitoring techniques, such as intrauterine pressure catheter or fetal scalp electrode use, and operative vaginal delivery should be avoided because they can increase risk of perinatal transmission.

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- Providers should have a frank, culturally sensitive discussion with their patients regarding breastfeeding. Although breastfeeding is universally discouraged in settings where formula feeding is safe, women experience significant guilt about not breastfeeding. Thus, psychosocial support may help to prevent unintended perinatal transmission through breastfeeding.
- All methods of contraception are available to human immunodeficiency virus (HIV)-infected women. Some ARV regimens may influence the metabolism of hormonal contraception and dosing modification may be suggested. For prevention of transmission to sexual partners, regular and consistent condom use should be advised.

INTRODUCTION

Human immunodeficiency infection was first described in 1981, and in 1983 a novel retrovirus, named *human immunodeficiency virus*, was identified as the infectious agent. This disease was initially documented in risk groups, including men who have sex with men, intravenous (IV) drug users, and hemophiliacs, but then was also reported in women and infants.¹ Now, more than 3 decades later, perinatal transmission in resource-rich settings has become uncommon and the goal of elimination of perinatal HIV transmission may be possible in the foreseeable future.²⁻⁴

This review covers key concepts in the pathophysiology of HIV, with emphasis on perinatal transmission, and reviews appropriate screening and diagnostic testing for HIV during pregnancy. Current recommendations for medical, pharmacologic, and obstetric management of women newly diagnosed with HIV during pregnancy and women with preexisting infection, with an emphasis on the resource-rich setting, are also discussed. Preconception counseling for HIV-positive women and postpartum issues are addressed.

Compared with an early incidence of perinatal transmission of HIV as high as 42%, the introduction of antepartum and intrapartum ARV therapy and postnatal prophylaxis of infants has led to near eradication of perinatal transmission, recognized as one of the greatest medical achievements thus far in the twenty-first century.⁵

DISEASE DESCRIPTION (HUMAN IMMUNODEFICIENCY VIRUS AND AIDS)

From the family of retroviruses, HIV-1 and less commonly HIV-2 cause acquired immunodeficiency. Replication of the virus and integration into the host genome cause progressive depletion of CD4 cells, leading clinically to increased risk for opportunistic infections and AIDS. A detailed description of this disease is outside the scope of this article.

HIV has been isolated from many human bodily fluids, including blood, seminal fluid, pre-ejaculate, cerebrospinal fluid, saliva, tears, and breast milk. Additionally, HIV is found in both cell-free and cell-associated fractions.^{1,6}

The Centers for Disease Control and Prevention (CDC) recently revised the case definition of HIV and stage of disease classification, such that the disease is classified into 5 infection stages, graded 0 to 3 plus unknown. The higher the number, the more advanced the disease based on CD4⁺ count. Opportunistic infections occur during stage 3. This classification is primarily used for public health surveillance and is less relevant to clinical care.⁷

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