HUMAN IMMUNODEFICIENCY VIRUS (HIV)

HIV: Management during pregnancy and puerperium

SUMMARY: HIV-infected women are at increased risk for perinatal transmission. This risk can be minimized by using established protocols for HIV treatment and mode of delivery.

Rationale: In the absence of treatment, the risk for perinatal transmission may be as high as 25%. With implementation of recommendations for universal prenatal HIV testing, antiretroviral prophylaxis, scheduled cesarean delivery for appropriate patients, and avoidance of breastfeeding, the rate of perinatal transmission is less than 1-2%. Development of new medications and understanding of perinatal transmission continues to rapidly evolve, and current recommendations can be found at http://aidsinfo.nih.gov.

Eligible patients: HIV-infected women in pregnancy.

Contraindications: None

Technique:

**Antepartum**
- Combination antiretroviral therapy (cART) is recommended for all HIV-infected pregnant women to reduce the risk of perinatal transmission of HIV. The choice of regimen should take into account current adult treatment guidelines, what is known about the use of specific drugs in pregnancy, and the risk of teratogenicity. Development of drugs and recommendations continue to evolve and current recommendations for preferred regimens in pregnancy can be found at http://aidsinfo.nih.gov.
- Plasma HIV RNA levels should be monitored at the initial visit; 2-4 weeks after initiating or changing drug regimens; monthly until RNA levels are undetectable; and then at least every 3 months during pregnancy.
- HIV RNA levels should be assessed at 34-36 weeks’ gestation to assist with delivery planning.
- CD4 cell counts should be monitored at the initial antenatal visit and at least every 3 months during pregnancy. Prophylaxis against opportunistic infections should be initiated as needed according to protocols found at http://aidsinfo.nih.gov, considering the safety, tolerability, and potential toxicity of specific agents in pregnancy.

**Intrapartum**
- For HIV-infected women receiving antepartum combination antiretroviral therapy (cART) regimens who have HIV RNA ≤ 1,000 copies/ml during late pregnancy and near delivery and no concerns regarding adherence to the cART regimen:
  - Continue antepartum cART drug regimen on schedule as much as possible during labor and before cesarean (for usual obstetric indications)
  - IV zidovudine is NOT required
  - Avoid artificial rupture of membranes (AROM), fetal scalp electrodes, operative delivery with forceps or a vacuum extractor (unless there is a clear obstetric indication), episiotomy, or other invasive procedures that could increase the infant's exposure to maternal blood or other bodily secretions
• For HIV-infected women with HIV RNA >1,000 copies/mL (or unknown HIV RNA count and/or positive admission screen for HIV) near delivery:
  o Cesarean delivery is recommended to minimize perinatal transmission
    ▪ Should be scheduled at 38 weeks' gestation
    ▪ IV zidovudine recommended for 4 hours prior to scheduled cesarean
  o Administer IV zidovudine
    ▪ 2mg/kg loading dose at least 4 hours prior to cesarean followed by infusion of 1mg/kg/hr until cord clamp.

**Postpartum**
• Resume/continue cART after delivery.
• Breastfeeding is not recommended for HIV-infected women in the United States due to increased risk of neonatal transmission and availability of formula.
• If new maternal diagnosis, immediate linkage to HIV care and comprehensive follow-up, including confirmation of HIV infection.
  o Positive HIV test on admission should be confirmed according to hospital protocols.

**Special Considerations for postpartum hemorrhage:**
• In women who are receiving a cytochrome P450 3A4 enzyme inhibitor such as protease inhibitors (Ataznavir, Lopinavir, Darunavir, Fosamprenavir, Indinavir, etc), methergine should be used only if no alternative treatments for postpartum hemorrhage are available and the need for pharmacologic treatment outweighs the risks. If used, methergine should be administered in the lowest effect dose for the shortest possible duration. *Misoprostol and carboprost (hemabate) should be first line agents for hemorrhage.*

• In women who are receiving a CYP3A4 enzyme inducer such as nevirapine, efavirenz, or etravirine, *additional uterotonic agents may be needed* due to potential for decreased methergine levels and inadequate treatment effect.

**Reference(s):**


Reviewed: 7/13/16