Pregnancy Management and HIV

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Disclosures: None
Objectives

• List the basic tenets of managing antiretroviral therapy (ART) in a pregnant woman
• State at least 3 topics providers should address prior to delivery with women living with HIV
• Explain your approach to a woman who is not virally suppressed by 35 weeks gestation
CDC: Perinatally Infected Infants

- HIV-infected women delivering infants annually
  - ≈ 8700 in 2006\(^1\)
  - ≈ 30% increase since 2000
- HIV-infected infants born in 50 states
  - 1650 in 1991
  - 151 in 2009\(^3\)
  - 69 in 2013\(^4\)

\(^1\)Whitmore, Pediatrics JAIDS 2011;57:p218; \(^2\)NHSS Surveillance Report 2013, vol 25; \(^3\)Taylor, 2012 CROI, abst 103; \(^4\)Taylor JAMA Pediatrics 2017
The numbers may seem small but they represent the tip of the iceberg.

Without diagnosis and treatment during pregnancy/labor, 25% of women with HIV will deliver infants infected with HIV.
Testing

• What we used to use
  – ELISA (antibody test)
  – Western blot (antibody test)

• In 2018 what is the recommended approach to testing?
TESTING
HIV Infection and Laboratory Markers

HIV RNA (plasma)

HIV p24 Ag

IgM

IgG

Infection Undetectable

Acute HIV Infection

4th generation HIV-1/2 immunoassay

- (+)
- (-) Negative for HIV-1 and HIV-2 antibodies and p24 Ag

HIV-1/HIV-2 antibody differentiation immunoassay

- HIV-1 (+) HIV-2 (-) HIV-1 antibodies detected
- HIV-1 (-) HIV-2 (+) HIV-2 antibodies detected
- HIV-1 (+) HIV-2 (+) HIV antibodies detected
- HIV-1 (-) or indeterminate
  - HIV-2 (-) NAT
    - NAT (+) Acute HIV-1 infection
    - NAT (-) Negative for HIV-1
• CDC 2006 recommended (opt out) HIV testing at first prenatal visit and, in high risk jurisdictions, in third trimester (ideally at <36 weeks). Expedited testing in Labor & Delivery if no third trimester test results available.

• High risk jurisdictions are areas in which prenatal screening identifies at least one HIV-infected pregnant woman per 1,000 women screened.

• However, screening is cost effective if prevalence 17 per 100,000 (0.17 per 1000).

https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5514a1.htm
ANTEPARTUM CARE FOR WOMEN WITH HIV
Antepartum Care—General Principles

• Goal of antiretroviral therapy (ART) is to maintain a viral load below the limit of detection throughout pregnancy
• What if she is already on a regimen?
• What if she is ART naïve?
What we know now

- 8075 mother-baby pairs followed 2001-2011
- NO perinatal transmission among the 2651 mothers who started ART prior to conception, continued during pregnancy, and had a VL<50 at delivery

Mandelbrot et al. Clinical Infectious Diseases 2015
Case 1

• Gloria is a 32 year old G3P2 diagnosed with HIV during her first pregnancy 7 years ago. She is on tenofovir/emtricitabine/elvitegravir (brand name Stribild) and has been virally suppressed on this regimen for two years.

• What do you recommend she take during pregnancy?
Poll #1

- A: Change her to a regimen containing AZT
- B: Keep her on the same regimen
- C: Change her to ART other than elvitegravir/cobicistat
- D: B or C
If already on ART:

- If on ART and virally suppressed, stay on same regimen (none of current antiretrovirals are known to be teratogenic)
- If on elvitegravir/cobicistat (such as Stribild or Genvoya), monitor viral load (VL) carefully or consider switch to more effective regimen

Case 2

• Sheila is a 23 year old G1P0 diagnosed with HIV at her first prenatal visit through routine pregnancy screening.
• What ART regimen do you start her on and when do you start it?
Poll #2

• A: It depends on her gestational age
• B: I would wait for the results of the HIV genotype to make sure her virus is not resistant to the drug I am prescribing
• C: I would place her on a regimen containing tenofovir alafenamide since that is the newest form of tenofovir
• D: A and B
If she has never taken ART before (ARV naïve):

• **Initiate ART as soon as HIV is diagnosed**
  
  – Begin ART while awaiting results of HIV genotype for resistance (if there is resistance to a prescribed drug, you can change it)
  
  – Consider including an integrase inhibitor such as raltegravir or dolutegravir if high viral load (VL) late in pregnancy (expect 1-log decrease per week)

• **Include tenofovir/emtricitabine (or tenofovir/lamivudine) if she is co-infected with hepatitis B (HBV)**

  
  
  *Brown RS et al. Hepatology. 2016*
What ARVs should I prescribe?

• “Give what she will take”*
  – Does she have trouble swallowing large pills?
  – Would she rather have 2 small pills or one large pill?
  – Most individuals adhere to once a day regimens better than twice a day regimens

• The guidelines are guidelines

* Deb Cohan
## Initiating ART in Pregnancy
(aka prescribe what they will take)

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<td>EFV</td>
<td>LPV/r</td>
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<td>Insufficient data</td>
<td>TAF</td>
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*aidsinfo.nih.gov* DHHS Perinatal Guidelines November 2017 with special thanks to Deb Cohan for her concise graphic summary of the 2017 Perinatal Guidelines
And if she has a low CD4 count

- **CD4 <200**: give sulfasoxazole/trimethoprim 800mg/160 mg (Bactrim DS) to prevent *pneumocystis jiroveci* pneumonia (yes, I know she is pregnant; benefits outweigh risks; make sure she is on prenatal vitamins—which contain folate)

- **CD4 <50**: give azithromycin 1200 mg weekly to prevent *mycobacterium avium* complex pneumonia
What nonstandard prenatal blood tests do I need to order?

- Liver and kidney function
- Hepatitis panel
- Hepatitis B surface antibody
- Hepatitis A antibody
- HLA5701 to rule out abacavir hypersensitivity
- HIV genotype for resistance

https://www.hiveonline.org/perinatal-providers/
Monitoring in pregnancy

- **Check VL**
  - 2-4 weeks after initiating treatment
  - monthly until undetectable
  - every 3 months
  - at 34-36 weeks to inform decision regarding mode of delivery and optimal management of newborn

- **Check CD4 count every 6 months in women who are virally suppressed and have CD4 counts >200**
Acute HIV: what do we mean by this and why does it matter?

• Recent diagnosis of HIV
  – For example: HIV negative in first trimester and HIV positive in third trimester

• Infants born to mothers infected with HIV during pregnancy (or breastfeeding) are at higher risk than infants whose mothers have had HIV prior to pregnancy

• Imperative to reduce viral load rapidly

• Dolutegravir is the preferred integrase inhibitor in this situation
Case 3

• Melanie is a 20 year old G1P0 at 35 weeks gestation who has been on ART since 18 weeks. She has an unstable living situation and her boyfriend has sometimes locked her out of her room, where she keeps her medications. Her viral load, which was undetectable at 26 weeks, is now 11,000.

• What do you do?
Poll #3

• A: Do a genotype for resistance
• B: Arrange for home health care or hospital admission to give directly observed therapy
• C: Schedule her for a Cesarean at 38 weeks
• D: Add an integrase inhibitor if she is not already on one
• E: A, B, and D
Lack of viral suppression

– Resistance vs. adherence
– Add integrase inhibitor such as raltegravir or dolutegravir
– Consider directly observed therapy
– Scheduled Cesarean if VL>1000 at 38 weeks

Rahangdale et al. AJOG. 2016; 214(3):385.e1-7
Don’t forget to discuss:

• Recommendation for lifelong treatment with ARVs (regardless of CD4 count)
• Mode of delivery
• Contraception plans: “When do you want to have your next baby?”
• Infant prophylaxis
• Infant feeding: “In the U.S. we recommend not breastfeeding. How do you feel about that?”
• No pre-chewing of infant foods
Don’t forget to give vaccinations:

- Flu
- Tdap
- Hep A and Hep B if not immune
Retention in Care after Delivery

• Nationally, women more successfully attend prenatal visits than primary care HIV appointments after delivery

• Two to four visits per year are recommended to follow VL and CD4 counts

• What can we do to improve long term follow-up after delivery?
Innovations in Care

• Adaptation of CenteringPregnancy (group prenatal care)
• Centering:
  – 10 two hour sessions during pregnancy
  – Focused activities and discussion of issues in pregnancy, e.g. nutrition, domestic violence, what to expect in labor, changes in relationships, contraception, postpartum depression
  – Women of similar gestational ages grouped together
What we have added

- Activities and discussions of HIV-related topics to each session
  - How and when were you diagnosed with HIV and what was that like?
  - To whom have you disclosed your HIV diagnosis and whom do you still want to tell?
  - Videos on how ART works and how taking ART prevents transmission of HIV to baby
  - How can you protect your partner if partner does not have HIV?
  - Meet the primary care and pediatric doctors and ask them questions about follow-up care
Collaboration with Houston Food Bank
Hypotheses

• Anticipate a greater reduction in sense of stigma and depression and a greater increase in knowledge and adherence to medication in the group vs. standard one-on-one care

• Expect more regular attendance at primary HIV care clinician visits in the year after delivery
National Perinatal HIV Hotline
24 hours a day, 7 days a week, 365 days a year
(888) 448-8765

The Clinician Consultation Center (CCC) provides free, confidential, and timely expert perinatal HIV and HIV-exposed infant consultation to clinicians of all experience levels and training backgrounds.

Advice is based on Federal treatment guidelines, current medical literature, and clinical best practices.

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Thank you!

- Let me know if you have questions
- jlevison@bcm.edu
Thank you!
To learn more, please visit www.nccc.ucsf.edu