Universal Prenatal Screening for HIV?

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Yes!!!

Overview

- Why?
  - Perinatal HIV epidemiology
- Who?
  - Epidemiology of HIV among women
  - Which pregnant women get tested for HIV
- How?
  - HIV testing strategies
    - Opt-out vs. opt-in
    - Documentation
- When?
  - Timing of transmission
    - 3rd trimester screening
    - Rapid HIV testing on L&D
- What... do to with the information???
  - Resources

Recent Case at SFGH... what shouldn’t happen

- 29 yo G2P1 at 32wks w/ hx migraine HA
- New immigrant from Honduras
- Prenatal care at SFGH, declined HIV test twice
- 2 week hx HA, nausea and occasional emesis
- AST/ALT 200-range, Hct 36, nl BP, no proteinuria, neg Hep serologies, nl RUQ sono
- Given BMZ for R/O Pre-Eclampsia/HELLP
- Considered induction
- Several days later, HIV test +
Follow-up on case

- CD4 count 103
- Acute change in MS when disclosing result
- Head CT 4cm ring enhancing lesion
- Presumptive treatment for toxo encephalitis
- LFT’s worsened, Viral load 232,000
- Started on antiretrovirals

Follow-up on case

- Non-reassuring FHT at 34wks, NVP \(\rightarrow\) c/section
- Pt readmitted post-partum with seizures
- Pt then reported that her 1\textsuperscript{st} husband died of AIDS in Honduras
- Infant HIV test negative
- 2\textsuperscript{nd} Husband HIV-positive
- 4 mos post-partum readmitted with respiratory distress and died of unclear etiology

Why screen for HIV?

- For the woman’s health!
- Prevention of perinatal HIV transmission
  - Timely identification of HIV in pregnancy (or before!)
  - \(\rightarrow\) effective antiretroviral therapy
  - \(<1\%\) risk of perinatal HIV transmission
- Prevention of “horizontal” transmission

Epidemiology of HIV in US

- Over 1 million living with HIV/AIDS in U.S.
- Estimated 40,000 new infections/yr in U.S.
- Over 25% of HIV+ people do NOT know
  - 252,000-312,000
- Antiretroviral therapy prolongs life
  - 1993-95: 9.1 years
  - 2002-04; 23.6 years
  - Risk of morbidity/death \(\uparrow\) when start antiretrovirals at \(\downarrow\) CD4 count

CDC 2006, Lima AIDS 2007
Why screen women?

- Epidemiology of HIV/AIDS among women is changing
- 26% of HIV/AIDS in U.S. among women
- AIDS as a cause of death
  - #1 African American women aged 25–34 years
  - #4 Hispanic women aged 35–44 years
  - #5 all women aged 35–44 years
- The only diseases causing more deaths of women were cancer and heart disease
Who gets tested?

- Conflicting data, cohort-specific
- Connecticut cohort (1996-7)
  - 5900 prenatal patients from 9 hospital/community clinics
  - Predictors of testing
    - Patient: adolescents, Latinas
    - Organizational: dedicated counseling staff, longer counseling
- FL, CT, NY cohort (n=1357)
  - 86% women in prenatal care accepted HIV testing (self-report)
  - Testing associated with:
    - strong beliefs about the benefits of testing
    - knowledge about vertical transmission
    - perceived provider endorsement of testing
    - social support
- UK cohort
  - Knowledge about HIV not assoc with testing
- SFGH cohort (2000-2006)
  - Dramatic in testing with counselor → nurse consent
  - Structural variables >>> patient variables

Women who decline testing

- FL, CT, NY cohort (n=1357)
  - Decliners didn’t perceive themselves to be at risk (21%) or faced administrative difficulties (16%)
- London cohort (n=430)
  - Pregnant women declining testing had ↓ knowledge scores
  - Increased risk of HIV among “refusers”
    - UK study: HBV prevalence in acceptors vs. refusers of HIV testing: RR 1.9 (p = 0.022)

- Explore reasons for declining

Prenatal HIV Testing Strategies

- Opt-in: voluntary, women sign consent to test (CA)
- Opt-out: voluntary, sign if decline testing (TN, OR)
- Mandatory newborn screening (NY, Connecticut)
- Uptake of HIV testing by testing policy
  - CDC study evaluating geographical differences in testing
    - Opt-in (San Francisco, Portland): 25-69%
    - Opt-out (Tennessee, Canadian provinces): 71-98%
  - Policy change opt-in → opt-out in Canada
    - Immediately following the policy change, testing ↑ by 28%
  - Policy change pt request → opt-in → opt-out in Scotland
    - 6% → 35% → 88%
What do the women think?

- Limited data
- SFCH study (n=247)
  - 72% of patients accepted HIV testing
  - 69% of patients said that prenatal HIV testing should be routine
  - 27% said that it should be done only after specific written consent
  - Viewed same as screening for other infections in pregnancy
- London cohort (n=843)
  - 67% of women thought that all pregnant women should be offered the HIV test and then make their own decision
- Scotland RCT (n=2704)
  - 4 arms: different combinations of written/verbal communication --> direct offer of test and written consent
    - Pre-trial control: no information, no direct offer of test, available if patient-initiated
  - No differences in anxiety score or satisfaction among different methods of offering HIV testing or between offering (any type) and control group
- On-going RCT at SFCH: patient satisfaction with standard vs. abbreviated pre-test counseling


When?

- As early as possible in pregnancy
  - Antiretrovirals $\rightarrow$ suppression of virus
  - Median time to viral suppression
    - 5.6 weeks (as long as 19 weeks)
- Repeat testing in 3rd trimester
- During breastfeeding for women at risk of incident infection?

Recommendations, Guidelines and Laws

- CDC
  - Universal, opt-out prenatal HIV testing
  - Repeat 3rd trimester testing in areas with high HIV prevalence and among “high-risk” women
  - Rapid testing on L&D
- ACOG Committee Opinion #304 (2004)
  - Opt-out prenatal HIV testing where legally possible
  - Repeat 3rd trimester testing
  - Rapid testing on L&D
- CA
  - Mandated offering of HIV test by prenatal provider at 1st visit
  - Must tell pt that testing is routine part of prenatal care
  - Pt must sign a consent to either accept or decline test
  - Law is under active review by state legislature

Repeat 3rd trimester testing

- AL, CT, DE, DC, FL, GA, IL, LA, MD, MA, MI, NV, NJ, NY, NC, PA, PR, RI, SC, TN, TX, VA
- Facilities identifying 1 case HIV-infection per 1000 screened
- Women at “high-risk”: IDU, IDU partners, sex workers, HIV+ partners, women with new or >1 partner in pregnancy
- Pregnant women with symptoms of acute infection (also get viral load)

Aziz IDSOG 2006
Documentation of HIV testing

- CA law
  - Must document offering of prenatal HIV test and whether woman accepted or refused
  - Treating providers on L&D must have result
  - Including HIV test results in chart is not considered a disclosure
  - Providers may disclose HIV test results to other providers without written consent for the purpose of diagnosis, care or treatment of that patient
- Canadian cohort (n=299)
  - Medical records and patient self-report not reliable

Rapid HIV Testing

HIV Testing Laws… a moving target

Compendium of HIV testing laws, updated March 2007

Ideally...

- All pregnant women would have prenatal care
- All pregnant women would have routine HIV testing
- All women would be tested for HIV before getting pregnant
Rapid Testing on L&D

- Same-day results, requires confirmatory testing
- Women w/o prenatal care or no HIV test despite prenatal care
- Rapid testing: cost-effective
  - $6 - 10.6 million savings to healthcare system
- No prenatal care associated with HIV infection
  - 15% of HIV+ ♀ w/o prenatal care (1993-6)
  - 35% HIV+ ♀ using drugs vs. 6% HIV+ ♀ not using drugs
  - 2% U.S. women w/o prenatal care
  - Associated with vertical transmission
  - 17.5% if no prenatal care vs. 8% if ≥ 3 visits (NY 1997-8)

Rapid HIV Testing

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<th>Spec</th>
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<td>99.6</td>
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MIRIAD: OraQuick Testing

- 11/01 – 9/04, 6 cities
- 4849 (84%) of 5747 eligible pregnant ♀ tested
- OraQuick and EIA (Western Blot, prn)
- 34 HIV-infected women (0.7% prevalence)
  - 27 in active labor (10 AZT, 8 AZT/NVP, 9 no ART)
  - Infant regimens: 17 AZT, 17 AZT/NVP
- 3 HIV+ infants (8.8%): 2/3 DNA+ @ birth
  - HIV+ infant with neg birth DNA: no intrapartum ART
- Test performance
  - 4 false + tests, No false negative tests
  - 100% sens. 99.9% spec. 90% PPV, 100% NPV
- Mean time blood draw → results: 66 minutes
  - Testing on L&D (45 min) vs. Lab (3 hrs)

How to manage positive rapid HIV test in labor??
Treat all positives as TRUE positives

-~66% MTCT in intrapartum period
-No ART/bottlefeeding: 25% transmission
-Intrapartum and/or neonatal ART ↓↓ MTCT
  - Intrapartum/infant ART: <10%

Be prepared!

- Easy access to written protocol
- Easy access to Perinatal HIV Hotline and/or consultants
  - 1-888-448-8765… Available 24/7
- Hospital supply of antiretrovirals
  - AZT (IV and liquid)
  - Nevirapine 200mg (PO)
- Patient educational materials

Intrapartum Management

- Alert pharmacy
- Decide on delivery route recommendations
- Disclose to patient
- Start maternal antiretrovirals
- Alert pediatrics and decide on neonatal regimen
- ↓ duration rupture of membranes and/or labor
- Avoid fetal scalp electrode, fetal scalp sampling
- Avoid forceps/vacuum if possible
- Avoid episiotomy if possible

Indications for Cesarean Delivery

- 38 weeks
- No ruptured membranes
- No labor
- Initiate maternal ART prior to cesarean
  - Ideally 3-4 hours prior to c/section
- If no labor or ROM and <38wks
  - consider hospitalization for ART, then c/section at 38 wks
Take It Home!

- Universal prenatal HIV testing
- Repeat 3rd tri testing in certain states/institutions
- Have a rapid HIV testing protocol for L&D
- Keep up-to-date about testing laws
- Evaluate prenatal testing rate in your facility
- Identify patient, provider and structural barriers to prenatal HIV testing
- Explore reasons for declining HIV test
- Consider universal HIV testing of all 13-65 yo
- Call if you need help

Need help???

- National Perinatal HIV Consultation and Referral Service (based at SFGH)
  - 1-888-448-8765
- CDC practical guide and model protocol,
  - [www.cdc.gov/hiv/rapid_testing](http://www.cdc.gov/hiv/rapid_testing)
- Natl Perinatal HIV Treatment Guidelines
  - [www.aidsinfo.nih.gov](http://www.aidsinfo.nih.gov)
- BAPAC
  - cohand@obgyn.ucsf.edu
  - 24/7 R&D pager: 415-719-8726

Need help?

- CDC recommendations
  - [www.cdc.gov](http://www.cdc.gov)
- ACOG guidelines
  - Committee Opinion #304 (November 2004)
- Compendium of HIV testing laws nationwide (March 07)
  - [www.womenchildrenhiv.org](http://www.womenchildrenhiv.org)

Thank you