Opiate Dependence in Pregnancy

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Goals

- Review salient features of methadone and buprenorphine
- Discuss peripartum and perioperative pain management
- Resources for finding help!
Background

- Antenatal opiate use is on the rise
  - 5x increase since 2000
    - From 1.2 to 5.6 per 1000 live births
- Neonatal abstinence more common
  - From 1.2 to 3.2 per 1000 live birth
- Increasing cost of treating newborns
  - $730M in 2000 to $1.5B in 2012
- Medication assisted treatment is common
  - Methadone and buprenorphine
The Changing Face of Opiate Addiction

- Then
  - Illicit heroin and oxycontin
  - IV, smoking, snorting, swallowing
- Now
  - Rx medications via “pain clinics”
- On the horizon
  - Resurgence of heroin as we recognize MD role in current epidemic
Subsets of Patients

1. Stable on maintenance opiates
   - Buprenorphine and methadone
2. Active users of illicit/diverted substances
   - Heroin, oxycontin, dilaudid, Rx opiates
3. Rx opiate dependent with chronic pain
   - Prior surgeries, orthopedic complications, etc
   - The very most difficult group to treat….
Perinatal Risks

- Data derived from heroin users…
- Higher rates of growth restriction, placental abruption, preterm birth
  - Confounded by concurrent tobacco, other substances, social disarray, etc.
- Risks may not generalize to the current demographics of opiate dependence
- *Neonatal Abstinence Syndrome*
Neonatal Abstinence Syndrome

- Potentially life-threatening withdrawal syndrome in the chronically exposed neonate

  High pitched cry, neurologic irritability, frantic sucking, yawning, sneezing, diarrhea, vomiting, tachypnea, and seizures if left untreated
## Incidence of NAS

<table>
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<tr>
<th>Drug</th>
<th>Onset, hours</th>
<th>Incidence</th>
<th>Duration, days</th>
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<tbody>
<tr>
<td>Heroin</td>
<td>24-48</td>
<td>40-80%</td>
<td>8-10</td>
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<tr>
<td>Methadone</td>
<td>48-72</td>
<td>13-94%</td>
<td>Up to 30 or more</td>
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<tr>
<td>Buprenorphine</td>
<td>36-60</td>
<td>22-67%</td>
<td>Up to 28 or more</td>
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<td>Prescription opioids</td>
<td>36-72</td>
<td>5-20%</td>
<td>10-30</td>
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Adapted from Kocherlakota, P *Pediatrics* 2014; 134(2):e547-561.
Rational for Long Acting Opiates

- Stop cycle of erratic use and withdrawal
- Lifestyle stabilization
- Reduced risk-taking behaviors
  - Exposure to infectious risk, trauma, interpersonal violence, etc etc
- Avoid risk of acetaminophen toxicity
Methadone

Advantages

- Well known, safe
- Multiple programs
- Treatment of acute pain more straightforward

Disadvantages

- Tightly controlled administration
- Higher OD risk
  - especially initiation
- Stigma barrier for some
  - Particularly Rx addiction for chronic pain
- Dose increase common
  - Physiologic changes of pregnancy and clearance
Buprenorphine

- Partial opiate agonist
- Office based prescribing by licensed providers
  - Does not require daily visits
- Suboxone vs Subutex
  - Buprenorphine +/− naloxone
  - Combination product outside pregnancy
- Initiation requires mild withdrawal
  - “induction” to avoid precipitated withdrawal from partial agonist
Buprenorphine

Advantages
• Reduced NAS
• Less safety data, though reassuring
• Less overdose risk
• Greater flexibility, convenience, reduced stigma

Disadvantages
• Requires licensed providers
• Less effective for highly addicted women
  • Higher failure rate
• Diversion increasing
  • especially Subutex
• Management of acute pain challenging
Methadone vs. Buprenorphine

Maternal Opioid Treatment: Human Experimental Research (MOTHER) Project

Figure 2. Mean Neonatal Morphine Dose, Length of Neonatal Hospital Stay, and Duration of Treatment for Neonatal Abstinence Syndrome.

Supervised Withdrawal

- Not currently advocated
  - Concern for PTL, SAB, and high relapse rates
- Limited recent data suggest it might be less risky than once thought with lower NAS
  - No difference in PTB
  - NAS 18% with close maternal f/u
  - Relapse 17-23% with intensive followup
- Ask me again in 5 years...

Bell et al AJOG Sept 2016; 215:364.e1-6
Prenatal Care

- Early US whenever feasible
  - Dating is crucial due to risk for IUGR
- Address psychiatric comorbidities
  - Present in 2/3 of women
  - NO BENZOS!!!
- Consider 3rd trimester repeat testing
  - STIs, HIV, HCV (where risk factors apply)
Reporting and Treatment

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*No specific law regarding obligation to report maternal substance abuse as child abuse.*

[Link to Guttmancher.org]
Antenatal Surveillance

- Stable patients on long-term maintenance
  - Detailed fetal survey at 18-22 weeks
  - Growth US at 32 weeks, testing based on results and subsequent obstetrical indications

- Polysubstance users
  - Detailed survey at 18-22 weeks
  - Growth US 28, 32, 36 weeks
    - 30 and 36 weeks reasonable
  - Weekly NST/AFI as of 34-36 weeks
Antenatal Testing and Methadone

- Longer time to reach reactive NST
  - 25 min vs. 21 min
- Higher incidence of a non reactive NST
  - 19% vs. 4%
- Longer time to complete BPP
  - 20 min vs. 4 min
- Buprenorphine has less impact on tracing

Salisbury et al Addiction 2012;107(Suppl1):36-44
Acute Pain Control

- Short acting opiates can be safely used
  - Tolerance and hyperalgesia are problematic
- Buprenorphine tightly binds μ receptors
  - higher doses required to achieve superimposed analgesia
- Partial agonists should be avoided, may precipitate acute withdrawal
  - nalbuphine (Nubain), butorphanol (Stadol), pentazocine (Talwin)
MISCONCEPTIONS

- “Maintenance therapy serves as analgesia”
  - Analgesia window 4-8 h but dosing is q24
  - Withdrawal prevention window 24-48 h

- “Giving opioids for acute pain will lead to relapse”
  - Untreated real acute pain is more likely to lead to relapse (fractures, surgery, etc)
Normal Labor

- Regional anesthesia highly effective
- IV narcotics are safe to bridge to regional block
  - But less effective for buprenorphine users
- Continue scheduled maintenance opiate at usual doses intrapartum
Postpartum: Vaginal Birth

- Hyperalgesia common
- Avoid *additional narcotic if possible*
  - Especially with buprenorphine
- Ketorolac (Toradol) and NSAIDs are helpful
  - Do not give ibuprofen and ketorolac concurrently
Planned Cesarean: Methadone

- Routine spinal
- Continue methadone on schedule
- Short acting narcotics for postoperative pain
  - Anticipate higher doses to achieve pain control
  - Consider oxycodone over combined meds
    - Limited to ≤ 3 g Tylenol in 24h (6-10 tabs)
- Develop a taper plan with patient *beforehand*
  - Typically 1-2 weeks, written out, no refills
Planned Cesarean: Buprenorphine

- Limited evidence to guide best practice…
- Buprenorphine strongly binds μ receptors
  - Takes 48-72 hours to clear from system
  - Harder to break through with full agonists and achieve acute pain control
- Up to 50% increase in postop pain medication use relative to non-opioid users
Perioperative Planning: Bup

• Option 1:
  • Hold buprenorphine day of surgery
  • Combined spinal/epidural with planned patient controlled analgesia (PCEA) for first 2-3 days
  • Short acting opiates for 2 weeks postop
  • Transition back to buprenorphine

• Option 2
  • Continue scheduled buprenorphine but divide daily dosing q6-8 hours for better analgesic effect
  • Add on short-acting narcotics
    • May end up using high doses, concern for increased sedation risk
Perioperative Monitoring: All

- Increased risk for respiratory depression with supplemental narcotics
  - Continuous pulse-oximetry for 24-48 hours
  - While titrating narcotics to effect, especially for patients requiring high doses to superimpose on buprenorphine
Postpartum Period

- Breastfeeding encouraged in stable patients
  - Methadone and buprenorphine felt to be safe
    - Associated with reduced NAS severity
    - Infant sedation higher with short acting opiates
- LARC contraception is CRITICAL
  - Nexplanon before discharge if feasible
  - Depo bridge at DC with planned IUD in 6 weeks
- Early follow up with treatment program
  - dose adjustment (2-5 days)
  - psychosocial support, relapse prevention
Antenatal Opiate Surveillance

- Frequent urine drug screening
  - If not already being performed
- Drug contracts, clear communication
- Utilize UT Controlled Substance Database
  dopl.utah.gov/programs/csdb
- Educate patients about “chronic” pain
  - It isn’t going away, narcotics will likely give you a second problem
Finding Local Resources

- Substance Abuse and Mental Health Services Administration (SAMSHA)

samhsa.gov

- Medication assisted treatment programs
- Buprenorphine treatment physician locator