Treatment of Opioid Dependence in Pregnancy

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Disclosures

- I have no conflicts of interest to disclose.
Objectives

• We will discuss and explore the:
  • prevalence of opioid use in pregnancy
  • risks of chronic opioid use in pregnancy
  • Treatment options for women with addiction or chronic pain
  • Pregnancy management for these women
  • Pain management during labor and delivery
  • Postpartum issues
  • Importance of interdisciplinary management team
The Problem

- The misuse of opioids in young women of reproductive age continues to rise.
- Hydrocodone/acetaminophen: most commonly prescribed medication in any category.
The Problem

- In 2007-2008, Tennessee ranked first among all states for past-year non-medical use of pain relievers among persons age 26 or older.

- Top ten states for other illicit drug use for > 12 years of age.

- The drug-induced death rate in Tennessee is higher than the national average.

- Approximately 8 percent of Tennessee residents reported past-month use of illicit drug

  - Source: CDC, National Survey for Drug Use and Health, 2007-2008
The Problem

- Opioid abuse in Tennessee is escalating.

- 2001: 9,816 admissions for substance abuse treatment
  - 762: Opiates

- 2011: 13,409 admissions for substance abuse treatment
  - 4,018: treatment of heroin or opiates

The Problem

• Substance abuse in pregnancy is common (4-16%)
• Prevalence of opioid use in pregnancy ranges from 1-21%. (Brown, et al.)
• The incidence Neonatal Abstinence Syndrome is increasing (1.2 to 3.39 per 1000, 2000-2009)
• Over 54,000 pregnancies in the US affected by opioid abuse. (likely an underestimate) (NIDA)
• Opioid use in first trimester of pregnancy increased from 8-20% over 2005-2009.
Complications of opioid dependence in pregnancy

- Lack of prenatal care
- Often chaotic lifestyle with subsequent maternal and fetal risks
- Higher incidence of abuse, incarceration, prostitution, exposure to STDs, IV drug use, etc.
- Increased medical costs and utilization of resources
**Complications of Opioid Dependence in Pregnancy**

- Miscarriage
- Preterm Labor
- Preterm Premature Rupture of Membranes
- Intrauterine Growth Restriction
- Stillbirth
- Neonatal Abstinence Syndrome
- Infectious disease exposure i.e. HIV, Hepatitis C
- Concommittant substance use
- Psychiatric co-morbidities
Figure 1
Effects of opioid intoxication/withdrawal in pregnancy

Legend: IUGR=Intrauterine growth restriction; IUFD=Intrauterine fetal demise; PPROM=Premature preterm rupture of membranes
Co-use of opioids and other drugs

- Tobacco abuse is 4 times higher compared to other pregnant women. (Jones, Heil)
- Tobacco exacerbates other complications of opioid use in pregnancy.
- Alcohol abuse is seen in 14% of women with opioid dependence.
- Unclear what the long-term cognitive neurobehavioral outcomes are with concomitant use.
Long-term risks to children of opioid dependent mothers

- Sudden Infant Death Syndrome
- Higher risk for neurocognitive disorders such as learning disabilities, ADHD and other behavioral problems. (Hayford, Epps)
- Long-term risk of addiction
- Unknown whether this is due to opioid exposure itself
Congenital anomalies and Opioid use

- New data suggesting association between first trimester exposure to opioids and congenital anomalies. (2011 National Birth Defects Prevention Study)
- Association with gastroschisis, spina bifida, and heart defects
- Did not measure degree of tobacco or ETOH use
- Important to answer this question due to rapidly increasing exposure during first trimester.
Identification of women at risk for substance use

<table>
<thead>
<tr>
<th>Options</th>
<th>Validated tools for Pregnancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal Screening</td>
<td>T-ACE (Tolerance, Annoyance, Cut down, Eye-opener)</td>
</tr>
<tr>
<td>Validated screening tool</td>
<td>AUDIT-C (Alcohol Use Disorders Identification Test)</td>
</tr>
<tr>
<td>Routine UDS as part of prenatal labs (controversial)</td>
<td><strong>4PS PLUS (PARENTS, PARTNER, PAST, PREGNANCY)</strong></td>
</tr>
<tr>
<td></td>
<td>TWEAK (Tolerance, Worry about drinking, Eye-opener, Amnesia, K/Cut down)</td>
</tr>
<tr>
<td></td>
<td>TQDH (Ten Question Drinking History)</td>
</tr>
</tbody>
</table>
Universal Screening

- 4P's Plus Modified Screening Tool
- Parents: Did any of your parents have a problem with alcohol or other drug use?
- Partner: Does your partner have a problem with alcohol or drug use?
- Past: In the past, have you had difficulties in your life because of alcohol or other drugs, including prescription medications?
- Present: In the past month have you drunk any alcohol or used other drugs?

- First ob visit and L&D
- Eliminates provider bias and assumptions
- Allows for early intervention and education

Box 3
Evaluation of the pregnant opioid-dependent woman

Screening for substance use
- Tobacco
- Alcohol
- Benzodiazepines
- Cocaine
- Marijuana
- Amphetamines
- Prescription drugs

Laboratory tests
- Routine prenatal labs
- Urine drug screening
- Serum blood alcohol
- HIV
- Rapid plasma reagin
- Hepatitis B surface antigen
- Hepatitis C antibody

Screening for psychiatric comorbidities
- Substance intoxication/withdrawal
- Mood disorders
- Anxiety disorders
- Eating disorders
- Adjustment disorder
- Personality traits/disorders
- Disorders due to general medical condition

Imaging
- Fetal ultrasound
Treatment of opioid dependent women

- Comprehensive treatment program
- Ob, Psychiatry, Social Work, Case Managers, Anesthesiology
- Importance and challenge of therapeutic alliance
- Improved outcomes for women who receive integrated prenatal care and substance abuse treatment. (Goler, et al.)
- Importance of education of ancillary staff.

Box 4: Comprehensive treatment of opioid dependence in pregnancy

- Psychiatric management
- Prenatal care
- Social work and counseling
- Group therapy
- Case management
- Mutual support groups (eg, Twelve-Step)
- Anesthesia consultation
### Treatment of opioid dependence

- Opioid maintenance is standard of care
- Detoxification is often not successful with 29% resuming use of street drugs.
- 12% opted for methadone maintenance after detoxification.
- 25% of detox patients had withdrawal which precipitated active labor. (Kaltenbach)
Methadone Maintenance

• Gold standard with decades of experience
• Increases adherence to prenatal care
• Improves pregnancy outcomes
• Decreases severity of NAS
• Decreased foster home placement

(Winklebaur et al; Kaltenback, et al.)
Methadone Maintenance

- For women on methadone prior to pregnancy, continue current dosing. May need increase dose in 3rd trimester due to increased plasma volume.
- Initiation of methadone: Start at 10-20mg and titrate to eliminate withdrawal symptoms without producing intoxication.
- Preferably done as inpatient
Methadone disadvantages

- Daily visit to treatment center
- Cost
- Stigma
- Continued exposure to others who are using
- Incidence of NAS is still 50%
Buprenorphine maintenance

• Partial mu opioid agonist and full kappa opioid agonist
• Neonatal outcomes similar to methadone (MOTHER trial)
• Less severe NAS with shorter hospitalization and less morphine requirement.
• Office-based treatment
• More insurance coverage
• Feels less like being “on something.”
Buprenorphine Maintenance

- If on Suboxone, change to buprenorphine (Subutex).

- Little data on appropriate way to initiate buprenorphine during pregnancy.

- Must be in moderate withdrawal which is risky in pregnancy. Great care must be taken not to precipitate severe withdrawal.

- Must be at least 6 hours since last dose of short-acting opioid.

- Start with (2-4mg) and titrate for relief of withdrawal symptoms.
Buprenorphine Disadvantages

• No rigorous studies on initiation during pregnancy
• Often not effective for women using high doses of IV opiates.
• Higher drop out rate than methadone in MOTHER trial (33% vs. 18%)
• Physician must obtain waiver to write rx.
Chronic pain in pregnancy

• Limited data

• Some studies suggest that NAS is less severe in this population.

• 11% NAS compared to 59% in methadone maintenance group. (Sharpe, et al.)

• Case series of women maintained on opioids for pain: NAS 38% (Hadi, da Silva, et al)

• Treatment plans must be individualized and if tapering is done must be done with caution.
# Intrapartum Pain Management: Vaginal Delivery

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<th>Methadone</th>
<th>Buprenorphine</th>
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<tbody>
<tr>
<td>• Continue current dose</td>
<td>• d/c buprenorphine +/- methadone OR continue buprenorphine OR divide dose by 25% and give q6h</td>
</tr>
<tr>
<td>• Regional anesthesia</td>
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</tr>
<tr>
<td>• Avoid stadol/nubaine</td>
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<td>• PP: Schedule NSAIDS</td>
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# Intrapartum Pain Management: Cesarean Delivery

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</tr>
<tr>
<td>- Local anesthetics</td>
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</tr>
<tr>
<td>- PP: NSAIDS and short-acting opioids with monitoring for respiratory depression.</td>
<td>- PP: NSAIDS and short-acting opioids</td>
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Postpartum Considerations

- Plan for continued addiction treatment or pain management.
- Discourage detoxification in the immediate PP period.
- High risk for PP depression.
- May get financially detoxed from methadone treatment facility.
- Social work assistance for placement may be needed.
- Breastfeeding is safe for women who are maintained on methadone or buprenorphine and should be supported.
- Breastfeeding decreases severity of NAS, promotes mother-infant bonding, and increases maternal self-esteem.
Breastfeeding

• Breastfeeding is safe for women who are maintained on methadone or buprenorphine and should be supported.

• Breastfeeding decreases severity of NAS.

• Promotes mother-infant bonding

• increases maternal self-esteem.

(Abdel-Latif, et al.)
Contraception

- Should be addressed throughout pregnancy
- 86% of pregnancies in opioid dependent women are unintended. (Heil, Jones, et al.)
- Pregnancy spacing has benefits for all women but probably more so for opioid dependent women and their offspring.
- For women desiring sterilization, every effort should be made to accomplish this in the immediate PP period.
- LARC methods should be offered to women wanting reversible contraception.
Future directions

• Evidence based regimen for initiation on buprenorphine.

• Regimen for intrapartum pain management for women on buprenorphine.

• Management of women with chronic pain: Is there an optimal regimen?

• Genetic factors associated of moms and infants with NAS.


References


- Sharpe C, Kuschel. Outcomes of infants born to mothers receiving methadone for pain management in pregnancy *Arch Dis Child Fetal Neonatal Ed* 2004;89:1 F33-F36 doi:10.1136/fn.89.1.F33


Questions?