Opioid use disorder: pregnancy and the neonate

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Disclosures

• No financial disclosures
• Treatments for opioid use disorders in pregnancy – not specifically FDA approved for pregnancy
• Trade names referenced - familiarity of use in clinical settings

Objectives

• Review pregnancy complications associated with opioid use disorder (OUD)
• Discuss best practices for OUD in pregnancy
• Identify diagnosis and treatment of neonatal opioid withdrawal syndrome
• Introduce legal considerations with substance use disorders in pregnancy
Women and Substance Use

PREGNANCY COMPLICATIONS AND OUD

OUD: Maternal Complications

- Infectious exposure
  - Sexually transmitted infectious (increase in syphilis)
  - Hepatitis C
  - HIV
  - Endocarditis
  - Osteomyelitis
  - Cellulitis
  - Sepsis
- Injury, overdose, death
- OB: preterm labor, placental abruption
OUD: Fetal/Neonatal Complications

- Fetal growth restriction – preterm birth, stillbirth
- Preterm delivery – neurological, physical complications, death
- Transplacental/peripartum infection
  - Syphilis
  - HIV
  - Hepatitis
- Neonatal opioid withdrawal syndrome
- Small head circumference

Pregnancy and OUD

- Conflicting interests
  - Maximize long term maternal recovery
  - Minimize infant complications
- Social context does not promote disclosure
  - Stigma of substance use
  - Inability to understand addiction as a chronic medical disease
  - Criminalization of medical disorders in pregnancy

Treatment in pregnancy

- Prevent opioid withdrawal symptoms
- Prevent complications of nonmedical opioid use
- Improved adherence with prenatal care and addiction treatment
- Reduce the risk of obstetric complications
Treatment of Opioid Use Disorder

- Medication-assisted treatment (MAT)
  - Methadone
  - Buprenorphine (Subutex)
  - Buprenorphine/naloxone (Suboxone)
  - Naltrexone (Vivitrol)

- Detoxification/Abstinence

Methadone in Pregnancy

- Improved outcomes: prenatal care compliance, decreased illicit opioid use, decreased fetal morbidity and mortality
- Established pregnancy safety
- Established breastfeeding safety

- Split/increased dosing
- No access in OB office, communication limits
- 35-70% neonatal withdrawal
Buprenorphine in pregnancy

- Improved outcomes
- Treatment in OB office
- Established pregnancy safety
- Established breastfeeding safety
- Less severe, shorter neonatal withdrawal
- Need withdrawal to start
- Lower retention in treatment (58% vs. 78%)

Jones HE 2010

OUD treatment in pregnancy

- "Opioid agonist pharmacotherapy is the recommended therapy ...preferable to medically supervised withdrawal because withdrawal is associated with high relapse rates, which lead to worse outcomes." ACOG

- " A pregnant woman with OUD should be offered...methadone or buprenorphine." SAMHSA

ACOG, 2017, NICHD 2017

Treatment of Opioid Use Disorder

- Medication-assisted treatment (MAT)
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- Detoxification/Abstinence
Buprenorphine/naloxone

- **Suboxone**
- Added antagonist to decrease diversion
  - Not absorbed with correct use, acute withdrawal with misuse
- Theoretical HPA axis effect concerns
- Reduced diversion
- Covered by most insurance
- Addiction provider comfort

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Buprenorphine/naloxone

- Positions are evolving on combination product in pregnancy
- Emerging data suggest absence of adverse newborn effects
- Decision to continue or initiate based on benefit vs. risk to the dyad:
  - What if this is only medication covered?
  - What if social context with high risk of diversion?
  - What if patient prefers combination product?

Debalak 2013, Wiegand 2015, Dooley 2016, SAMHSA 2018

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Medically Supervised Withdrawal

- Slow medication taper
- Close medical supervision (inpatient, intensive outpatient)
- 56% success - no illicit use at delivery
- Neonatal withdrawal still documented
- No long term outcomes noted – maternal or infant

Stewart 2013, SAMSHA 2018
Medically Supervised Withdrawal

- “If a woman does not accept treatment with an opioid agonist or treatment is unavailable”
- Recent studies find NO clear evidence of an association between medically supervised withdrawal and fetal death or preterm delivery
- Relapse rates up to 90%

Naltrexone

- Vivitrol
- Formulations – oral, monthly injection, 5-6 month implant
- Limited safety data
- Limited ability to provide pain management
- Unknown breastfeeding safety
- Informed consent, stable patient

Naloxone

- Narcan
- Recommended as overdose treatment
- Visibly pregnant
  - Uterus displaced to left
  - Left lateral tilt
- No change in treatment dosage
Patient Centered Treatment

- Shared decision-making tool
- Pharmacotherapy for OUD prior to pregnancy
  - Continue vs. taper medication
  - Standard of care, risks/benefits, reasons likely/not likely to relapse, reasons to take/stop medication
- 64% continued, 36% tapered
- 96% sufficient information to make decision

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BEST PRACTICES: OUD IN PREGNANCY

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Issues and Obstacles for Care

- Substance use screening
- Dual diagnosis
- Tobacco use disorders
- Birth expectations
- Communication
- Legal obligations

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Guille 2019

Gopman S et al., 2014
Best Practice – Universal Screening

- Universal screening at first prenatal visit
  - 12.9% women – illicit use past year
- Nonjudgmental - purpose: healthy mother, healthy baby
- Electronic, paper form, provider questioning
- Inquire privately
- Standardized screening tool, SBIRT

Wright 2016

Universal Screening

- ACOG Committee Opinion 633
  - “Routine screening for substance use disorder should be applied equally to all people, regardless of age, sex, race, ethnicity, or socioeconomic status.

ACOG 2015

4 Ps Plus

- Parent: Did either of your parents ever have a problem with alcohol or drugs?
- Partner: Does your partner have a problem with alcohol or drugs?
- Past: Have you ever drunk beer, wine, or liquor?
- Pregnancy: In the month before you knew you were pregnant, how many cigarettes did you smoke?
  - In the month before you knew you were pregnant, how many wine/beer/liquor did you drink?

Chasnoff 2007
SBIRT

<table>
<thead>
<tr>
<th>Component</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening</td>
<td>Assess substance use and its severity</td>
</tr>
<tr>
<td>Brief intervention</td>
<td>Increase intrinsic motivation to affect behavioral change (i.e., reduce or abstain from use)</td>
</tr>
<tr>
<td>Referral to treatment</td>
<td>Provide those identified as needing more treatment access to specialty care</td>
</tr>
</tbody>
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Universal Screening

- Overwhelmed providers
- Inadequate training
- Question of clinical utility
- Fear of mandatory reporting
- Uncertainty for referrals
- Inadequate reimbursement

ACOG 2008; Wright 2016

Universal Screening

- Solutions
  - Clinic wide training
  - Standardized provider scripting- screening and reporting
  - Resources for local referrals
  - Advocacy – SBIRT reimbursement

ACOG 2008; Wright 2016
Best Practice: Prenatal Care

- Psychosocial Support
  - Interview privately
  - Screen for environmental stressors
  - 50% co-addicted partners/family
  - Social work involvement
  - Perinatal care coordination
  - Consider residential treatment

Psychosocial assessment

- Emotional support
  - Support groups, peers
  - Spiritual support
  - Mental health
  - Interpersonal violence
  - Prior healthcare experience
  - Partner substance use
  - ACEs

Psychosocial assessment

- Instrumental support
  - Advocate/navigator
  - Child care
  - Transportation
  - Mental health, AODA services
  - Insurance
  - Aftercare programs
  - Residential facilities
  - Housing, food security
  - Financial resources

WAPC, perinatalweb.org, 2018
Psychosocial assessment

• Informational support
  – Communication with providers
  – Navigating the system
  – Educational, employment counseling
  – Parenting support
  – Substance use education
  – Tobacco cessation
  – Neonatal withdrawal and infant development
  – Breastfeeding

OB Perspective: Prenatal Screening

Best Practice: Prenatal Care

• High prevalence dual diagnosis
  – Depression, anxiety, PTSD
• Counseling
  – No specific technique
  – Identify triggers for relapse, motivation interviewing, stress reduction education, support groups
• Pharmacotherapy
  – Untreated depression - increased preterm birth, poor fetal growth
  – Increased risk/severity NAS – SSRI, benzo, gabapentin
• Trauma informed care

Gopman et al. 2014
Best Practice: Prenatal Care

• Tobacco use/abuse
  • 85-90% pregnant women in MAT smoke cigarettes
    – 16% in all pregnant women
  • 20-45% smokers quit spontaneously in pregnancy
    – Almost none in MAT
• Incentive based treatment - effective

Akerman et al., Choo et al., Winklbaur et al

Best Practice: Prenatal Care

• Decreased tobacco consumption
  • Heavy use (20+ cigarettes per day) vs. lighter use (10 or less per day)
    – Lower birth weight and neonatal length
    – Higher peak neonatal withdrawal scoring
    – Longer duration to peak neonatal withdrawal

Akerman et al., Choo et al., Winklbaur et al

Best Practice: Prenatal Care

• Increased infectious disease
  – Up to 60% incidence of hepatitis C
  – HIV, Tb, hepatitis B, syphilis
  – Rescreen third trimester
  – Barrier contraception, needle exchange

Akerman et al., Choo et al., Winklbaur et al
Best Practice: Prenatal Care

- Constipation
  - Don’t forget to ask
  - Docusate twice daily, less effective
  - Polyethylene glycol as needed
Best Practice: Prenatal Care

• Non-judgmental environment
  – Anticipate absences from care
  – Transportation/child care
• Flexibility in scheduling
• Anticipate less/less frequent care
  – Batch care at visits - US, NICU consultation

Winstock et al. 2008

Best Practice: Prenatal Care

• Preparation for parenting
  – Separate group for parenting education
  – Pediatrician with NAS experience
  – Lactation consultant
  – Peer recovery support

Winstock et al. 2008

Best Practice: Prenatal Care

• Management of expectations - overall
  – Compliance with prenatal care
  – Communication with MAT providers
  – State laws and reporting

Winstock et al. 2008
Best Practice: Prenatal Care

- Management of expectations – OB care
  - Surveillance during pregnancy (ultrasound, urine drug testing)
  - Provider coverage for deliveries and urgent visits
  - Pain management in labor, postpartum
  - Neonatal opiate withdrawal syndrome

Winstock et al. 2008

Communication

- CFR Confidentiality of Alcohol and Drug Abuse Patient Records (CFR Title 42: Part 2)
- Written informed consent – explicit description of SUD information to be disclosed
- Reports of suspected child abuse not protected

www.samhsa.gov 2018
Patient Perspective: Barriers to Prenatal Care

Best Practice: Fetal Surveillance

- Targeted fetal anatomy scan
- Interval fetal growth 28 and 34 weeks
  - May increase to improve patient engagement
- Antepartum surveillance (BPPs, NSTs):
  - Evidence of poor fetal growth
  - Evidence/suspicion of ongoing illicit use, relapse

Best Practice: Labor and Delivery

- Management of expectations
- Continue on outpatient medication
- Early epidural
- Increased pain medication requirements if cesarean section
  - May need PCA, TAP blocks
  - Adequate staff education is key
  - Avoid drug(s) of choice if prior prescription misuse
  - Contingency plan for C/S
Best Practice: Postpartum

- Breastfeeding
  - Minimal transfer of medication to neonate
  - Limited ability to reduce neonatal withdrawal treatment - breastfeeding/skin-to-skin
  - ACOG, AAP, ABA supported
  - Hepatitis C – avoid with bleeding nipples
  - Contraindications – ongoing illicit use and HIV

Best Practice: Postpartum Care

- Postpartum dosing
  - Decreased metabolism, volume of distribution
  - Watch for drowsiness
  - Co-ordinate discharge with treatment program
- Prevent relapse
  - Follow up 1-2 weeks, depression screening
- Postpartum contraception
  - Long acting reversible contraception
  - Discuss before delivery


Best Practice: Postpartum Care

- Infant care
  - Supportive and soothing environment
  - Appropriate feeding
  - Good skin care
- Infant home safety
- Signs/symptoms of withdrawal
- How to handle stressful situation
- Appropriate babysitting arrangements
- Follow up appointments

aap.org, accessed 2019
NEONATAL OPIOID WITHDRAWAL SYNDROME

Neonatal Opioid Withdrawal Syndrome

- a.k.a. Neonatal Abstinence Syndrome, NAS
- Prenatal chronic opioid exposure
- Up to 70% infants exposed
- Neurobehavioral dysregulation
- Pathophysiology remains poorly characterized
- 4-7 days after birth

Jansson 2019, Grossman 2019
Neonatal Opioid Withdrawal Syndrome

CNS
- Inconsolability
- High-pitched crying
- Skin excoriation
- Hyperactive reflexes
- Tremors
- Seizures

GI
- Poor feeding
- Excessive sucking
- Feeding intolerance
- Vomiting
- Diarrhea

Autonomic
- Sweating
- Fever
- Nasal stuffiness
- Sneeze
- Tachypnea
- Mottling

Neonatal Opioid Withdrawal Syndrome

Symptoms Usually Occur by Day 5

<table>
<thead>
<tr>
<th>Drug</th>
<th>Onset</th>
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<tbody>
<tr>
<td>Heroin</td>
<td>Within 24 hours</td>
</tr>
<tr>
<td>Methadone</td>
<td>3–5 days</td>
</tr>
<tr>
<td>Buprenorphine</td>
<td>3–5 days</td>
</tr>
<tr>
<td>Prescription Opioids</td>
<td>24–36 hours</td>
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Finnegan Scoring

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### Neonatal Opioid Withdrawal Syndrome

- Within 2 hours of birth
- Every 3-4 hours until 8 or greater
- Score before feeding
- Median score non-affected infant: 2-5
- Clinical significant score: 8

*Jansson 2019, Grossman 2019, aap.org*

### Neonatal Opioid Withdrawal Syndrome

- Treat serial scores of 8
- Initial: supportive → pharmacologic

*Jansson 2019, Grossman 2019*

### Neonatal Opioid Withdrawal Syndrome

- Nonpharmacologic
  - Quiet, dim room
  - Avoid high traffic areas
  - Limit visitors
  - Skin to skin
  - Limit stimulus
  - Encourage breastfeeding
  - Non-nutritive sucking

*Jansson 2019, Grossman 2019*
Neonatal Opioid Withdrawal Syndrome

- Pharmacologic
  - Morphine
  - Methadone
  - Buprenorphine
- Scoring never scientifically validated
- Difficult to replicate
- New emphasis on function-based assessments

Jansson 2019, Grossman 2019

Eat, Sleep, Console

Mainequalitycounts.org

% Opioid-exposed Newborns Receiving Morphine

- 46% Baseline
- 51% Intervention Year 1
- 27% Intervention Year 2

% Opioid-exposed Newborns Receiving Adjunctive Agents

- 13% Baseline
- 7% Intervention Year 1
- 2% Intervention Year 2

Holmes 2016
Neonatal Opioid Withdrawal Syndrome

AAP Guidelines

Drug therapy is indicated to relieve moderate to severe signs of NAS and to prevent complications such as fever, weight loss, and seizures if an infant does not respond to a committed program of non-pharmacologic support.

Legal obligations/challenges

- Conflict in philosophy in care:
- Medical model - treatment reduces substance use in pregnancy
- Law enforcement policy – criminal punishment deters substance use in pregnancy

Medical Experts

- ASAM/ACOG, 2017
  - “oppose criminalizing and other punitive approaches to substance use in pregnancy”
- AAAP, 2015
  - “opposed…punitive actions against pregnant women who use substances”
  - “opposed…legislation or policies that requires mandatory reporting of illegal substances”
Wisconsin Statute

- WI Act 292 exception to doctor-patient confidentiality
- "examination of the expectant mother of an abused unborn child creates a reasonable ground for an opinion...that...physical injury inflicted on the unborn child was caused by the habitual lack of self-control of the expectant mother...in the use of alcohol beverages, controlled substances or controlled substance analogs, exhibited to a severe degree."
- Does not specifically mandate reporting

Wis. Stat. 905.04(4)(e)(3)

Legal barriers to care

- Mandatory reporting undermines patient-provider relationship
- Inconsistent treatment of chronic disease
  - Uncontrolled diabetes?
- Women avoid care, providers avoid screening
- Universal urine drug screening – bypasses conversation, collaboration

MN Stat 626.5561; Angelotta 2017 J Amer Acad Psych Law

System barriers to care

- Health care system mandatory urine drug screening
  - Background – risk based screening is not applied uniformly
- Replaces provider-patient screening collaboration
- Identifies use, not use disorder
- Is not a diagnostic test
Advocacy

• Change not made at a case law level
• Change is made at the local level
• Physicians infrequently utilize the power of their expertise, experience and patient stories
• Get involved – write letters, call
• Legislators, WMS, state chapters ACOG, ASAM

Resources

ACOG COMMITTEE OPINION

www.acog.org

CLINICAL GUIDANCE FOR TREATING PREGNANT AND PARENTERING WOMEN WITH OPIOID USE DISORDER AND THEIR INFANTS

www.store.samhsa.gov, February 2018
In conclusion...

- Opioid use disorder (OUD) is an increasingly significant contributor to pregnancy complications
- Medication assisted therapy is an integral component to comprehensive treatment, but may result in neonatal opiate withdrawal syndrome
- Women experiencing OUD in pregnancy have unique medical and biopsychosocial issues that must be addressed
- Collaborative multispecialty care and communication are imperative for best health outcomes
- Managing patient expectations will help calm the uncertainty of childbirth with OUD

References

References