

OPIOID USE DISORDER IN PREGNANCY: EVIDENCE-BASED TREATMENT

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Objectives

- Review screening for substance use disorders in pregnancy
- Review data on medication assisted withdrawal management
- Review medications for opioid use disorder

Epidemiology

- 5.4% of pregnant women ages 15-44 used illicit substances¹
- 2019: estimated prevalence of opioid use in pregnancy = 6.6%
 - 21.2% reported misuse²
- Rate of opioid use disorder (OUD) ↑ from 1.5 per 1000 delivery hospitalizations in 1999 to 6.5 in 2014³

OUD In Pregnancy

- Untreated heroin addiction:
 - Lack of PNC
 - Increased risk of fetal growth restriction (FGR)
 - Placental abruption
 - Preterm Labor
 - Fetal death
 - Intrauterine passage of meconium⁴

HOW DO YOU DIAGNOSIS?

HOW DO YOU TREAT?

Screening

- ACOG: universal screening at 1st prenatal visit using a validated tool
- Screening tools:
 - 4 P's Plus© - only screening tool validated in pregnant population
 - CRAFFT
 - NIDA quick screen⁴

Medical Assisted Withdrawal (MAW)
VS.
Opioid Agonist Treatment

The background of the slide features a soft, misty landscape of rolling green mountains. The mountains are layered, with the foreground being a darker shade of green and the background fading into a light, hazy white, creating a sense of depth and tranquility.

Medically Assisted Withdrawal/Detoxification

- Traditionally discouraged due to case reports of fetal demise
- Zuspan, et al. 1975
 - Serial amniocentesis on pregnant patient undergoing methadone taper
 - Low catecholamine levels in amniotic fluid during MTD treatment
 - ↑ catecholamine levels noted during methadone taper⁵
- Past 20 years → studies w/ ~500 patients undergoing MAW
 - No fetal losses⁶
 - Can be done safely
- Known to have high relapse rates = return to illicit use exposes pregnant patient/fetus to associated risks⁶
- If MAW successful, NOWS rates may be reduced

Medically Assisted Withdrawal/Detoxification

Bottom Line:

- Can be done without increase in fetal mortality
- Recent case studies show high rates of relapse
 - Range from 17-96%, average 48%⁶
- Relapse rate lower on medication-assisted therapy when compared to MAW in pregnancy⁶
- NOWS rates may be reduced when women successful w/ MAW in pregnancy⁷ → overall, not been shown due to ↑ relapse rates⁶
- Concern maternal/fetal stress may induce epigenetic modifications that could have an effect on development of chronic disease⁶

Medications for Opioid Use Disorder

- Standard of care per:
 - World Health Organization
 - National Institute on Drug Abuse
 - American Society of Addiction Medicine
 - Centers for Disease Control and Prevention
 - ACOG

Role of Medications

- Medications alone improve mortality rates
- All FDA-approved medications for OUD should be available for all patients with an OUD⁸

Medication Types

- Opioid agonists
 - Methadone
 - Buprenorphine
- Opioid antagonist
 - Naltrexone
- All pregnancy category C

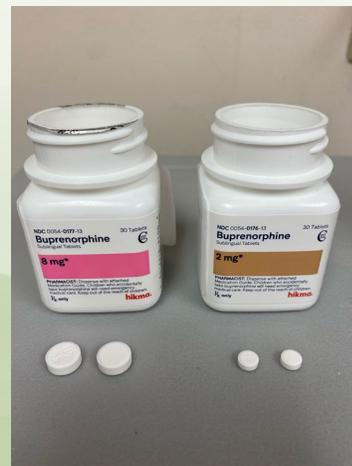
Opioid Agonist Treatment

- 70% reduction in overdose related deaths
- Decreased risk of HCV, HIV, HBV
- **Increased engagement in PNC⁹**
- Fetal benefits
 - ↓ fetal demise
 - ↓ FGR
 - ↓ preterm delivery⁹

Opioid Agonist Medications¹⁰

Buprenorphine

- Partial mu agonist/kappa receptor antagonist
- High affinity
- Mean half-life 24-42 hours
- Buccal/sublingual
- OBOT



Methadone

- Full mu agonist
- Wide individual variability in pharmacokinetics
- Orally bioavailable
- OTP



MOTHER Study¹¹

Randomized trial of methadone vs buprenorphine

Primary outcome: NAS rates

- No difference in NAS treatment rates (M = 57%, B = 47%)
- NAS less severe, shorter neonatal LAS in (BUP vs. MTD)
 - 89% less morphine to treat NAS
 - 43% less time in hospital (10 vs. 17.5 days)
- Similar maternal tx/delivery outcomes
- More d/c'd treatment on BUP vs. MTD

Childhood Development Outcomes

Kaltenbach, et al. 2018¹²

- 96/131 dyads from MOTHER Study
- 0-36 months



No deleterious effects of buprenorphine relative to methadone

No deleterious effects treated NAS vs. no NAS:

- Growth
- Cognitive development
- Language ability
- Sensory processing
- Temperament

What About Naltrexone???

Naltrexone

- Mu receptor antagonist
- Limited data
- Australia, case studies using 6 month implantable naltrexone
 - No ↑ PTD
 - APGAR5/birth weight/HC within normal ranges¹³
- Towers, et al. 2019
 - MAW, transition to naltrexone vs. OAT
 - No difference in +opioid urine screens
 - NAS rates: Naltrexone Group = 8.4%, Agonist Group = 75%¹⁴

Medications for Opioid Use Disorder

Bottom Line:

- OAT recommended treatment in pregnancy
- Buprenorphine may have some benefits over methadone (less severe NOWS, increased access)
- Accumulating data suggests naltrexone safe
- Long-term outcomes in exposed children unclear and difficult to study due to longitudinal aspect and confounding variables

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