MAT and Pregnancy

From the street to the NICU

Richard Christensen, PA, CAS

Johann Hari

Truths

- Treatment works
- Disconnect with pregnant women seeking treatment
- Disconnect between community and science
- Medication is not a stand-alone treatment
- Substance use disorders as a group of brain disorders
- Science Vs. Philosophy
- The science and evidence is not for MAT in general, but methadone specifically
- All programs are not created equal
- No outcome studies for Vivitrol or buprenorphine
Comprehensive treatment is just that, regardless of what medication is used.

Two critical points:
- Regularity of prenatal care
- Absence of drugs and alcohol, including tobacco

Strategies to Accomplish this:
- Coordination with OB
- Ensure Pt is receiving adequate dose
- Focus on FAS to reduce the likelihood of NAS
  - No study on FAS since 1975
This is not about high vs. low dose, this is about ADEQUATE dose

...a dose of addiction medication where the patient is well for at least 24 hours, has little or no cravings, feels neither high nor sedated, and does not feel the effects of opiates if they should use.

Pharmacology of methadone

- Where people land on their dose of methadone is genetic.
- Methadone is metabolized by 2 proteins, cytochrome 3A4,2D6 in the liver and is highly protein bound.
- Dr. Mary Jeanne Kreek, Rockefeller University:
  - Identified the opiate gene and found 2 variants.
  - In one variant they needed higher doses of methadone and in one gene variant they required lower methadone doses.
  - Has nothing to do with Height, weight, or opiate habit.
  - How methadone is metabolized has to do with these proteins and genetics.
  - You do not need to genetic testing.
  - The patient will tell you when they are stable.

CSAT Guidelines

- Ceiling methadone doses inconsistent with current science and medicine
- Breastfeeding needs to be encouraged
ACOG Recommendations on Tx of pregnant patients dependent on opiates

- The standard for care for the opiate addict is methadone maintenance
- Based on new information, buprenorphine should be considered for those who might be appropriate
- Detoxing pregnant opiate addicts should never be considered due to high rate of relapse and uncontrollable FAS during the withdrawal period
- Methadone and breastfeeding are compatible

MOTHER Study

- 50% of neonates in both groups did not require medication
  - For those that did, buprenorphine neonates were in the NICU for a shorter period and required less medication

What’s missing in this study

- No description of care and tx during the pregnancy
- Methadone doses were in the 70 mg range and not split
- Description of neonatal environment post delivery
  - In my experience, 50% of neonates born on medication do not require tx.
  - 25% can be managed in a calm environment, soft lights, frequent feeding, swaddling
    - Likely won't require NICU
  - 25% will land in NICU
  - Complicated by all of the above
Center for Hope SAMHSA Study

- The majority of birth outcomes fell within the target range even for births where women received medically-managed methadone for opiate withdrawal.
- 88% had no pregnancy complications
- 86% reached the target gestational age
- 100% had Apgar scores within the target range
- 80% were in the target range for birth weight, 68% for length, 76% for head circumference
- 98% had negative toxicology screens
- 95% of newborns had no health issues at birth

John McCarthy, MD Retrospective

Higher doses of methadone during pregnancy and maternal and fetal outcomes.

Retrospective view of clinical data for 81 mothers who received methadone, and their offspring.

Cohort divided into high dose (>100mg) and low dose (<100mg)

Results

There were no differences in the rate of medication treatment for neonatal abstinence symptoms or days of infant hospitalization between the high-dose (mean, 132 mg) and low-dose (mean, 62 mg) groups. Despite longer histories of opiate abuse, the high-dose group had less illicit drug use at delivery. The whole cohort, which received an average of 101 mg/d, had an 81% rate of negative toxicology screens at delivery.
Conclusion

High doses of methadone were not associated with increased risks of neonatal abstinence symptoms but had a positive effect on maternal drug abuse. Arbitrarily limiting methadone dose as a way of minimizing the risks of neonatal abstinence symptoms may be unwarranted.

Recommendations

Bi-Valley Medical Clinic, Sacramento, CA

On-going study generates these recommendations:
1. Treat the maternal addiction and stop the fetal exposure to drugs and alcohol
2. Stabilize the disordered maternal and fetal brain chemistry through adequate dosing
3. Avoid NICU, encourage rooming-in, skin to skin contact beginning at birth, breastfeeding

Average dose in on-going study was 140 mg/day, always split 2-4 times a day. With this approach, only 28% have required tx for NAS

Profile of Patient appropriate for Subutex

- Already taking Suboxone or Subutex when they become pregnant (switch to Subutex)
- After informed consent with all options for MAT, patient chooses Subutex
  - Pt. responsibly taking pain meds who becomes pregnant should convert to Subutex unless pain is intractable, in which case they should switch to methadone
  - Pt. being admitted to drug tx facility and chooses Subutex
  - Low dose street oxycodone or hydrocodone, or small amounts of heroin for short period, and chooses Subutex
  - Pt. is allergic to methadone or it’s components
- Subutex should only be offered as a adjunct to comprehensive drug treatment in the form of counseling, pregnancy groups, outside support, resource development to provide food, clothing, shelter and transportation.
Profile of Patient appropriate for methadone

- A person currently on methadone and gets pregnant
- After informed consent, anyone who chooses it
- Heroin or opiate dependent people with large habits and long hx of addiction
- IV drug users
- Those with co-morbid psychiatric Dx
- Those with complicated social issues
- Jail and prison patients

Mother/Infant Rooming-In Reduces Need for NAS Treatment

Seiko in England reports a rate of treatment of 11%: the lowest rate of treatment ever reported.
Abrahams in Vancouver reports a treatment rate of 30%
Do neonates go into withdrawal from the mother? (Maternal Absence Syndrome)
Do NICU environments exacerbate NAS?
How necessary are NICUs for NAS management?
Can NAS scoring be done with the mother present?

Recommendation for hospitals and community

- Coordinated system of care rather than “island” approach
- Focused NAS community group to help facilitate this
- Hospital OBs and MATs need to require ROI
- Recognize that care starts at first point of contact, not in the NICU
- Focused education at the treatment centers to ensure science based tx
- Educate hospitals and OB so we’re all on the same page