Opiate Addiction in Pregnancy

Opiate Addiction

- Epidemiology
- Neurobiology of addiction
- Treating Opiate Addiction in Pregnancy
- Continuing challenges

Heroin Addiction and Overdose Deaths are Climbing

Opiates-Perinatal M & M

- Perinatal
  - 2-3 fold increase in PTB
  - LBW
  - Stillbirth
  - Neonatal Abstinence syndrome
What's wrong with those people! $#@*

Addiction is a Developmental Disease: It Starts Early

- 12-17 years old: 12%, report prescription opiate abuse
- 18-25 years old: 22%
- Avg. age of first Heroin: 21 years

Young, dumb & full of...

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Addiction - multiple factors

Di Chiara and Imperato, PNAS, 1988
Di Chiara et al., Neuroscience, 1999.

Natural Rewards Elevate Dopamine Levels


Effects of Drugs on Dopamine Release

Di Chiara and Imperato, PNAS, 1988
Brain Reward Pathway
A Medical Treatment for Diacetylmorphine (Heroin) Addiction

JAMA 1965, Drs. Vincent Dole and Marie Nyswander

Methadone Treatment

- Prevent withdrawal
- Reduce drug cravings
- Block euphoria from illicit opiates
- Reduce needle-sharing and criminal behavior
  - HIV, STIs, hepatitis, exposure to violence

Withdrawal in Pregnancy

- Rementeria and Nunag AJOG Aug 1973
  - Perinatal death in 6 of 46 heroin pregnancies acutely withdrawn from heroin or methadone

Methadone Withdrawal

- Zuspan AJOG May 1975
Methadone Maintenance in Pregnancy

- Compared to untreated (heroin), methadone maintenance therapy...
  - ↑ prenatal visits
  - ↑ compliance with HIV meds
  - ↓ preterm birth
  - ↓ IUGR

Methadone Treatment

- "Methadone maintenance treatment (MMT) is the current standard for the treatment of Opiate dependence in pregnancy"... Obstetrics: Normal & Problem Pregnancies, 5th Ed

Buprenorphine

- Partial agonist
- Can produce euphoria
- Can precipitate withdrawal in patients on morphine, methadone
- Combined with naloxone
- Suboxone, Zubsolv, Bunavail
- Mono therapy - Subutex

Neonatal Abstinence Syndrome after Methadone or Buprenorphine Exposure

- Randomized double-blind, double-dummy
- Primary outcome NAS
- 175 patients randomized
Discontinuation
- 16 of 89 (18%) - methadone
- 28 of 86 (33%) - buprenorphine
NAS
- methadone 57%
- buprenorphine 47%
New Visions

- Admission & stabilization
  - No prenatal care ER drop in
  - Prenatal care… addiction reported or discovered

New Visions

- Substances abused?
  - Severity
  - Barriers to treatment
  - Pre-admission counseling

New Visions

- No illicit substances for at least 24 hours
- Patient presents for admission in withdrawal
- Assessment by New Visions staff
  - Not intoxicated, in withdrawal
- Medical evaluation, obstetrical evaluation and treatment

Lab Evaluation

- CBC, CMP, Urine culture
- Witnessed urine toxicology screen daily
  - Include methadone and buprenorphine
- Serum gabapentin level?
- Blood alcohol
- Hepatitis A, B, C and HIV
- TB skin test
- Cervical cultures
- OB ultrasound, cervical length
Clinical Evaluation

- Clinical Opiate Withdrawal scale q 4-6 hours X 48 hours
- Fetal monitoring (NST) twice daily

Medications

- 1/2 NS with 20 KCl plus one ampule multivits daily
  - EtOH? - thiamine
- GI: Antiemetics, antidiarrheal
- Pain:
  - acetaminophen
  - ibuprofen - limit to 48 hours
  - < 32 wks gestation
  - Omit if oligohydramnios, fetal growth restriction, preeclampsia
- gabapentin - for pain, restlessness, agitation
  - 400 mg P.O. every 6 hrs prn
- Buprenorphine (Subutex)
  - Initial - 4 mg. Consider repeat in 4-12 hours based on COWS and observation
  - Add 4-6 mg following day, as needed
- Methadone - for those planning methadone maintenance

Weaning & Detoxification?
Detoxification can be done in pregnancy
Rapid and slow wean protocols reviewed
NO excess miscarriage in first trimester
NO excess preterm birth in third

J Kentucky Med Assoc Oct 2010

• 301 opiate-addicted pregnant patients were fully detoxified during pregnancy with no adverse fetal outcomes
  • NAS - 94 newborns treated (31%)
  • 108 patients acutely detoxified while incarcerated, NAS 18.5%
  • 23 mothers had inpatient detox with intense outpatient follow-up management, NAS 17.4%
  • 93 slow output detox, NAS 17.2%
  • 77 inpatient detox without intense outpatient follow up, NAS 70.1%

Challenges

Beyond the womb, beyond the nursery

The Focus on Family Studies

Beyond the womb, beyond the nursery


- Opiate Addiction
  - Social deprivation
  - Economic disadvantage

Is VERTICALLY transmitted!!!!!

Addiction → Pregnancy

- High pregnancy rates
- 25% of addicts -- 5 or more pregnancies
- Unplanned
  - Poorer pregnancy outcomes, worse infant outcome
- Very low rates of contraception use
Substance Abuse