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Psychiatry and Addictions Case Conference

UW Medicine | Psychiatry and Behavioral Sciences

MANAGING ADHD IN PREGNANCY AND BREASTFEEDING

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Integrated Care Training Program
UW Psychiatry & Behavioral Sciences

project ECHO

GENERAL DISCLOSURES

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SPEAKER DISCLOSURES

Medical Director, PAL for Moms

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OBJECTIVES

1. Discuss risks of ADHD medications during pregnancy
2. Discuss risks of ADHD medications during breastfeeding
3. Outline general guidelines for managing ADHD during pregnancy and breastfeeding

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CASE

- A 30 year old woman with a history of ADHD would like to become pregnant for the first time. She functions better on stimulants and is taking Adderall XR 30 mg qam, Adderall 15 mg in the early afternoon, and an additional 15 mg at about 5pm if she is working late. She is an attorney and is the major breadwinner for her family. She would like to breastfeed.

ADHD

- Prevalence 3.2 % in adult women
- Symptoms before age 12
- 6 months minimum duration
- 2 or more settings
- Significant impairment
- Not explained by another disorder
- 5 or more symptoms of inattention, hyperactivity or both (6 or more in children)

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INATTENTION

- Lack of attention to details, careless mistakes
- Trouble sustaining attention
- Doesn’t seem to listen when spoken to
- Doesn’t follow through, finish/complete tasks
- Trouble with organization, time management
- Avoids tasks requiring sustained mental effort
- Loses things
- Easily distracted
- Forgetful

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HYPERACTIVITY

- Fidgets
- Leaves seat in class or workplace
- Restless/moves around
- Trouble engaging in quiet activities
- “On the go”
- Talks excessively
- Interrupts
- Difficulty waiting turn
- Blurts out answers, completes others’ sentences

DIFFERENTIAL DIAGNOSIS AND COMORBIDITIES

- Anxiety
- Mood disorders
- Substance use (increased rate of smoking, SUD)
- Learning disabilities
- Low cognitive functioning
- Medication side effects
- Medical disorders (e.g. TBI, thyroid disorders)

FUNCTIONAL IMPAIRMENT

- Trouble driving, traffic and other accidents
- Relationship problems
- Unemployment, trouble keeping jobs
- Lower income, achievement

- About 1/3 need medication for typical functioning in adulthood

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ADHD TREATMENTS

- Stimulants
  - Methylphenidates (e.g. Ritalin, Focalin, Concerta)
  - Amphetamines (e.g. Adderall, Dexedrine, Vyvanse/lisdexamphetamine)
- Bupropion
- Atomoxetine
- Guanfacine, clonidine, modafinil
- Therapy (e.g. CBT)

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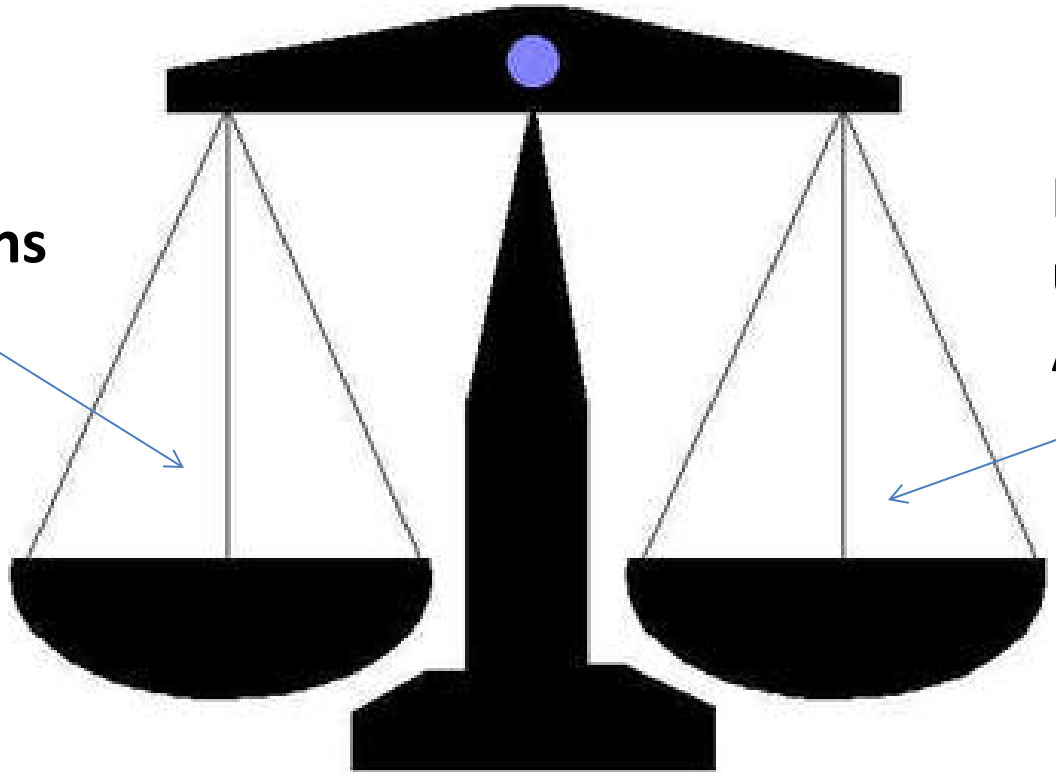
RISK-RISK ASSESSMENT

Risks of medications



Risks of untreated ADHD

Alternatives?

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RISKS OF STIMULANTS IN PREGNANCY

- Most information comes from stimulant abuse during pregnancy and lactation.
  - Confounds of alcohol, other substance use
- No evidence of increased rate of malformations.
  - ? Re methylphenidate and cardiac defects RR 1.28
    - » Huybrechts et al., JAMA Psychiatry, 2017
- Increased rates of:
  - Gestational hypertension, preeclampsia
  - Preterm birth
  - IUGR
  - Placental abruption
  - Fetal/neonatal death

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RISKS OF STIMULANTS DURING PREGNANCY

- 8542 pregnancies in women with methamphetamine abuse vs. 2,031,328 controls
- Increased rates of:
  - Gestational hypertension (5.6% vs. 3.2%)
  - Preeclampsia (6.8% vs. 2.9%)
  - Preterm birth (23.4% vs. 8.9%)
  - Fetal death (1.4% vs. 0.3%)
    - » Gorman et al., Am J Obstet Gynecol, 2014)

RISKS OF PRESCRIBED ADHD MEDICATIONS

- Increased risks of:
  - Preterm birth (RR=1.3; 7.9% vs. 4.2%)
  - Preeclampsia (RR=1.3)
  - NICU admissions (aOR=1.5; 16.3% vs. 8.3%)
  - CNS-related disorders (including seizures; aOR=1.9; 1% vs. 0.3%)
- No increased risk of malformations or fetal death

» Norby et al., Pediatrics, 2017; Cohen et al., Obstet Gynecol, 2017; Poulton et al., CNS Drugs, 2018

NEUROBEHAVIORAL EFFECTS

- Psychomotor and behavioral abnormalities
- Externalizing disorders
- Anxiety, depression
- Increased cortisol reactivity
- All reported with heavy stimulant abuse during pregnancy, multiple confounds (e.g. other drug and alcohol use)

» LaGasse et al., Pediatrics, 2012

RISKS IN BREASTFEEDING

- Methylphenidate
  - Infant levels <1% of maternal levels
- Amphetamines
  - Infant levels as high as 15%, usually <10% of maternal levels

- No adverse effects reported in babies

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BUPROPION

- Early reports of increased rate of cardiac defects not replicated
- No association with adverse pregnancy outcomes
- Low transmission into breast milk
- Seizures in 2 breastfed infants

ATOMOXETINE

- Little information
- Not expected to increase rate of birth defects
- No increase in placental abruption, SGA, preterm birth, or preeclampsia associated with filling prescription for atomoxetine in 453 pregnancies
  - » Cohen et al., Obstet Gynecol, 2017
- Slow metabolizers at 2D6 have 5x higher plasma concentrations and increased fetal exposure

GUANFACINE, CLONIDINE, MODAFINIL

- Little or no human data
- Clonidine and guanfacine may decrease blood pressure
  - theoretical concern for hypotension, low placental blood flow

ALTERNATIVES

- Cognitive behavioral therapy
- Bupropion?
- Decreasing doses as possible
- Skipping doses on weekends
- Stopping stimulant during maternity leave

CASE

- Patient decided to stay on stimulant during pregnancy
- Decreased dose by 15-30 mg daily
- No stimulant on weekends
- No stimulant during maternity leave (first 2 months of breastfeeding), then restarted
- No pregnancy complications

GUIDELINES/OVERALL APPROACH

- Risk-risk assessment
- Minimize medication doses
- Consider alternatives
- Monitor BP, weight gain
- Minimize/avoid amphetamines early in breastfeeding

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