OBJECTIVES

- Identify common psychiatric illnesses
- Discuss the categorization of medication in pregnancy and lactation
- Review common medications used in pregnancy
- Discuss implications of usage during pregnancy
- Review common medications used in lactation
- Discuss implications of usage during lactation
BACKGROUND

- Approximately 500,000 pregnancies in the US each year involve psychiatric illness
- At least one psychototropic drug is taken by as many as 21-33% of pregnant women
- Between 14-23% of pregnancies are affected by depressive symptoms
BENEFITS VS. RISKS?

- All psychotropic medications cross the placenta, found in breast milk
- Risk of possible teratogenic effects
- Risk of non-treatment
  + Poor compliance with prenatal care
  + Inadequate nutrition
  + Reliance on other substances (EtOH, tobacco, other illicit drugs)
  + Decrease in mother-infant bonding postpartum
COMMON PSYCHIATRIC ILLNESSES

- Depression
- Bipolar Disorder
- Schizophrenia
- Anxiety Disorders
WHAT TO DO FIRST?

- Establish a diagnosis
  - Previous history
  - Previous use of medications
  - Symptoms
- Establish expectations
  - Starting/stopping medications
  - Counselor/psychiatrist involvement
- Discuss implications of medication usage
- Always review SI/HI
DURING BREASTFEEDING?

- Same as above
- Review implications
- Timing of medication
  - Immediately following feeding
- Sleep deprivation
- Monitoring infant behavior prior to & after starting medication
Classification in pregnancy – FDA

A – controlled studies show no risk
B – no evidence of risk in humans
C – risk in humans cannot be ruled out
D – evidence of risk does exist
X – contraindicated in pregnancy
MEDICATION CATEGORIES

Classification in Lactation

+ L1 – compatible, no risk demonstrated
+ L2 – Probably compatible, limited studies
+ L3 – Probably compatible, no studies available or studies show only minimal adverse effects
+ L4 – Possibly hazardous, possible risk
+ L5 – Hazardous, significant risk, contraindicated
Untreated depression associated with:
  + Premature birth
  + Low birth weight
  + Decreased social support
  + Poor maternal weight gain
  + Tobacco, EtOH and other drug use
  + Children are more prone to suicidal behavior, conduct problems, emotional instability
ANTIDEPRESSANTS

- Tricyclic antidepressants:
  + “Triptylines”, desipramine, imipramine, doxepin
  + Cat C, L2
  + Doxepin – L5
  + Neonatal effects
    - Withdrawal symptoms
    - Irritability, tachycardia, hypertonia, clonus, tachypnea
ANTIDEPRESSANTS

- SSRIs (selective serotonin reuptake inhibitors)
  + Most studied antidepressants
  + Citalopram, Escitalopram, Sertraline, Paroxetine, fluoxetine
  + Little to no risk of teratogenicity (exception: paxil)
  + Cat C (Paxil cat D), L2-L3
  + Neonatal effects
    - Withdrawal syndrome
    - Persistent pulmonary HTN of newborn (late exposure)
ANTIDEPRESSANTS

- Paroxetine (Paxil) – Cat D
  - Studies have been inconsistent
  - Possible cardiac defects associated with use in first trimester
    - 1.5-2 fold increase risk
      - ASD and VSD, left OFT defects
  - Recommend fetal echo if exposure occurs in 1st trimester
  - First line choice in breastfeeding
SNRIs

- Similar to SSRIs
- Venlafaxine (Effexor), Duloxetine (Cymbalta)
- Cat C, L3
ANTIDEPRESSANTS

- Atypical antidepressants
- Bupropion (Wellbutrin)
  - Cat B, L3
  - Possible increase risk of miscarriage
- Mirtazapine (Remeron)
  - Cat C, L3
  - Possible increase risk of preterm birth
- Trazodone
  - Cat C, L2
BIPOLAR DISORDER

- Associated with:
  - Premature birth
  - Low birth weight
  - Decreased social support
  - Poor maternal weight gain
  - Tobacco, EtOH and other drug use
  - Children are more prone to suicidal behavior, conduct problems, emotional instability
BIPOLAR DISORDER

- Antipsychotics
- Anticonvulsants
- Mood stabilizers
BIPOLAR DISORDER

- Antipsychotics – typical
  - Haloperidol
    - Cat C, L2
  - Thorazine
    - Cat C, L3
  - Thioridazine
    - Cat C, L4
BIPOLAR DISORDER

Antipsychotics – atypical

- Aripiprazole (Abilify), Olanzapine (Zyprexa), Quetiapine (Seroquel), Risperidone (Risperdal), Ziprasidone (Geodon), Clozapine (Clozaril)
- Cat C (except Clozapine – Cat B)
- L3 (Seroquel & Geodon – L4, Olanzapine – L2)
BIPOLAR DISORDER

- Anticonvulsants
  - Lamictal (Lamotrigine)
    - Cat C, L3
    - First line for maintenance patients
    - Monitor infant for rash, apnea, drowsiness, poor sucking
BIPOLAR DISORDER

- Anticonvulsants/mood stabilizers
  - Lithium, Carbamazepine, Valproic acid
    - Cat D, L2 (lithium L4)
    - Valproic acid – NTD, cardiovascular, urogenital, craniofacial
    - Carbamazepine – NTD
    - Lithium – Ebstein’s anomaly, increased serum level in infant for breastfeeding
SCHIZOPHRENIA

Associated with:

- Congenital malformation (CV)
- Preterm delivery, low birth weight
- Placental anomalies, antenatal hemorrhage
- Increased rates of postnatal death
SCHIZOPHRENIA

- Anticonvulsants
  - As mentioned previously
  - $2^{nd}$ generation better tolerated over $1^{st}$ generation
  - Can see fetal and neonatal toxicity with $1^{st}$ generation (neuroleptic malignant syndrome, dyskinesia, extrapyramidal side effects)
ANXIETY DISORDERS

- Most commonly occurring psychiatric disorder in the general population
- Associated with:
  - Spontaneous abortions
  - Preterm delivery, delivery complications
  - Slowed mental development
- Antidepressants, Benzodiazepines
ANXIETY DISORDERS

- Benzodiazepines
  - Xanax, Librium, Klonopin, Valium, Ativan
  - Increased incidence of cleft lip/palate
  - Associated with floppy infant syndrome, neonatal withdrawal syndrome
  - Cat D, L3 (Valium L4 if chronic)
ANXIETY DISORDERS

- Non-benzodiazepines
  - Buspirone (Buspar)
    - Cat B, L3
  - Zolpidem (Ambien)
    - Cat B, L3
  - Lunesta and Sonata
    - Cat C, L2-L3
RECOMMENDATIONS

- Evaluate need for medication
- If needed, lowest dose possible for shortest period of time
- Monotherapy vs polytherapy
- Utilize psychotherapy
- Review implications with patient
RECOMMENDATIONS

- Lactation App
  - From the National Library of Medicine Toxicology and Data Network
  - LactMed
  - Free
“Bipolar disorders in pregnant women: treatment of mania & hypomania.” uptodate.com
“Risks of antidepressants in pregnancy.” uptodate.com
“Screening for Depression during and after pregnancy”, Feb 2010. acog.org
“Teratogenic and postnatal risks of antipsychotics, benzodiazepines, lithium, and electroconvulsive therapy.” uptodate.com