Perinatal Psychosis

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General Disclosures

The UW Department of Psychiatry gratefully acknowledges receipt of philanthropic support for this activity – working to expand access to perinatal behavioral health services throughout Washington State.

Speaker Disclosures

• PAL for Moms phone consultation line for providers State of Washington Health Care Authority 206-685-2924 or 1-877-PAL4MOM, M-F 9-5

Learning Objectives

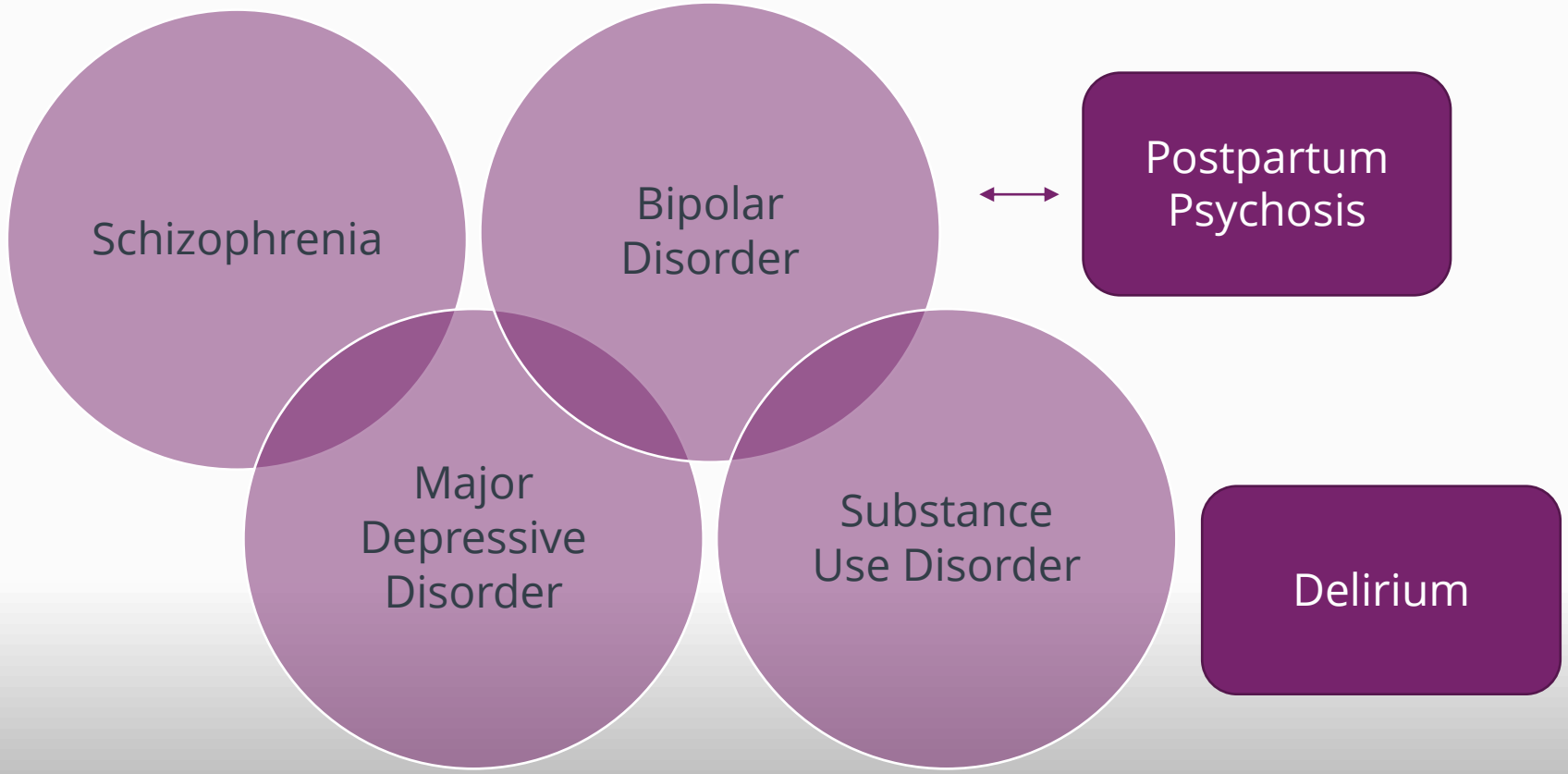
To understand risks of psychosis in pregnancy

To be able to recognize symptoms and treatment approach to postpartum psychosis

To be able to understand risks and benefits of antipsychotic use in pregnancy and postpartum

Is postpartum psychosis mood disorder or primary thought disorder?

Psychotic Symptoms



Schizophrenia

- **Peak age of onset is childbearing age**
- **In 2009 fertility rate comparable to unaffected population(Vigod et al 2012)**
- **No increase in acute relapse during pregnancy**
- **Relapse if untreated**

Gentile et al. 2019

- Unplanned and unwanted pregnancy
- Limited support
- Poor prenatal care and inability to recognize labor
- Higher rate of substance use
- 41 % need hospitalization
- High risk of rapid repeat pregnancy (Gupta et al. 2019)

Symptoms

- Delusions
- Hallucinations
- Disorganized Thinking
- Grossly Disorganized or catatonic behavior
- Negative Symptoms

Poor functioning is 2 or more major areas compared to before

Table 1. Impact of schizophrenia on pregnancy, neonatal, infant, and offspring neurodevelopmental outcomes

Study	Maternal diagnosis	Pregnancy outcomes	Congenital anomalies	Neonatal/infant outcomes	Neurodevelopmental outcomes
Hizkiyahu *et al.*, 2010[14] ($N = 97$)	Schizophrenia/ schizoaffective disorders	No effects	Congenital anomalies OR: 2.1 95%CI: 1.1–3.9	Low birthweight OR: 1.7 95%CI: 0.9–3.1	Not studied
King-Hele *et al.*, 2009[15] ($N = 19$)	Schizophrenia and related disorders	No higher risks of stillbirth in babies of women with schizophrenia-related disorders compared with other psychiatric disorders	Congenital anomalies RR: 2.2 95%CI: 1.1–4.1	No higher risks of neonatal death in babies of women with schizophrenia-related disorders compared with other psychiatric disorders	Not studied
Webb *et al.*, 2008[16] ($N = 15\,932$)	Schizophrenia and related disorders	Not studied	Fatal congenital anomalies RR: 2.34 95%CI: 1.45–3.77	Not studied	Not studied
Jablensky *et al.*, 2005[17] ($N = 382$)	Schizophrenia	Abruption of placenta OR: 3.17 95%CI: 1.55–6.49 Antepartum hemorrhage OR: 1.65 95%CI: 1.02–2.69 Fetal distress OR: 1.38 95%CI: 1.06–1.78	Cardiovascular congenital anomalies OR: 2.50 95%CI: 1.19–5.46	Low birthweight OR: 1.38 95%CI: 1.00–1.90	Not studied
Schneid-Kofman *et al.*, 2008[18]	Psychiatric disorders	Fetal distress $P = 0.003$	Congenital anomalies	Perinatal mortality $P < 0.001$	Not studied

Summarized

- Congenital Malformations (6 studies)
- Unexplained perinatal death of offspring
- Fetal deaths from severe neurological malformations
- More likely to have Intellectual Disability
- Developmental Delay
- Gestational HTN
- Pregnancy and Birth complications
- 2 fold increase risk of GDM (Uguz 2019)

Gentile et al 2019

Postpartum Psychosis

Postpartum Psychosis (PP)

- < 1 per 1000 births
- Cause is unclear
- Most episodes occur within 2 weeks (Jones et al 2014)
- 50% within 1–3 days
- Psychiatric emergency!!
- Trigger: Child Birth

Bergink et al 2016

Risk Factors

- Primiparity
- **Prior postpartum psychosis**
- **History of mania/psychosis**
- **Discontinuation of medications**
- **Family history of postpartum psychosis**
- Older age

Clinical Presentation

Prodromal Symptoms:

- **Insomnia/Sleep deprivation**
- **Anxiety**
- **Mood fluctuations**
- **Irritability**

Rapid change
Wide range
Fluctuation

Subsequent symptoms:

- **Disorganization**
- **Abnormal thought content (command hallucination)**
- **Delusions involving the baby**
- **Obsessive thoughts related to infant, childbirth**
- **Delirium like: Disorientation, confusion, derealization and depersonalization**
- **Thoughts of harm to self or new born**

Osborne et al. 2018, Gilden et al 2020

Differential Diagnosis for PP

- **Postpartum depression**
- **Postpartum OCD**

Other medical cause:

- **Infections**
- **Autoimmune**
- **Medication reaction (steroids)**
- **Sheehan's Syndrome**
- **Encephalitis**
- **Metabolic**

Osborne et al. 2018

Diagnostic Consideration

Assessment

- Past psychiatric history
- Ask about psychotic symptoms, guilt
- Non-judgmental but direct inquiry about self harm or harm to infant
- Screen for substance use

Examination:

Physical and neurological examination

Labs

CBC, CMP, TSH, T4, TPO antibodies , Ammonia levels, UA

Imaging

if neurological symptoms then consider brain imaging

Bergink et al.2015

Inpatient Admission

The New York Times

Giving Birth Landed Me in the Psyc Ward

Here's how to recognize the signs of postpartum psychosis, a rare condition that strikes new moms.

Lisa Abramson went from feeling on top of the world to seeking mental health treatment after the birth of her daughter. via Lisa Abramson

- **Decision will depend on clinical and other psychosocial factors**
- **Risk of Infanticide and Suicide**
- **Preferably inpatient mother and baby units**

TREATMENT

Care of Women with Severe Mental Illness

- Planning for motherhood
- Discuss potential risk of relapse and recurrence
- Preconception planning for healthy behaviors and meds
- Medication risks and benefits
- Liaison with other services

Which medications are used in Postpartum Psychosis?

Postpartum Psychosis Treatment

Benzodiazepines

- Promote sleep
- Short half life
- Short time period

Lithium

- Lower rate of relapse
- Combined with antipsychotics or monotherapy
- Prophylaxis

Antipsychotics

Which antipsychotic use in pregnancy and postpartum has most evidence?

Antipsychotics

Typical /First generation antipsychotics

Atypical /Second Generation Antipsychotics

FDA warning for ALL Antipsychotics

Exposure in 3rd trimester complications

- Extrapyramidal signs (EPS)
- Sedation
- Breathing and feeding difficulties
- Agitation
- Muscle tone changes
- Tremor

It can resolve spontaneously or may need additional hospitalization

First Generation Antipsychotics (FGA)

- **High potency FGA: No consistent increased risk of major congenital malformations**
- **Limited data has not demonstrated effects on behavioral and cognitive development**
- **Low potency are MORE teratogenic**
- **Use of anticholinergic meds**

Babu et al 2016

Risks

- Lower mean birth weight
- Higher incidence of small for gestation age
- Anticholinergic side effects: sedation, hypotension, tachycardia, GI effects
- Extrapyramidal Symptoms (EPS)

Extrapyramidal Signs

- **Motor restlessness**
- **Tremor**
- **Hypertonicity**
- **Dystonia**
- **Parkinsonism**

Usually transient and resolve in days

Second Generation Antipsychotics (SGA)

No consistent studies showing increased risk of:

- major congenital malformations
- fetal cardiac malformation (Except Risperidone)
- Spontaneous abortion, miscarriages, stillbirths,
- small or larger for gestational age

EPS

Withdrawal symptoms

Increased risk of Metabolic Syndrome

Huybrechts et al 2016, Habermann et al 2013)

Metabolic Side Effects

- Weigh gain, Gestational Diabetes and Dyslipidemia
- Large for gestational age
- Psychotic disorders or bipolar disorder increase risk (Stubbs et al 2014, Vancampfort at al 2015)
- Meds: 2nd Generation > 1st Generation Antipsychotics

- In SGA highest risk: Clozapine> (chlorpromazine) > Olanzapine > Quetiapine
- Lowest risk: Aripiprazole, Brexiprazole, Cariprazole, Lurazidone and Haloperidol

Baseline	12/40	16/40	20/40	28/40	36/40	40/40	After birth
Height, Weight,BP, U/E FBG, lipids, CBC, LFT,, TFT, B12, folate, ECG	Weight, BP, FBG if indicated	Early GTT	Weight, BP	GTT	Weight, BP	Weight, BP	GTT if indicated
	High res US for NT		High res US				Observe infant for withdrawal sedation, toxicity

Monitoring for Metabolic Syndrome

Medications

	Pros	Cons
Risperidone	Effective for psychosis Acute agitation	Possible increase risk of cardiac malformation
Quetiapine	Effective for mood stabilization, depression, anxiety and psychosis. Sedation Lowest placental transfer 23.8%	Metabolic Syndrome risk Sedation
Aripiprazole	Lower risk of metabolic syndrome	Less effective as antipsychotic Akathisia risk

	Pros	Cons
Olanzapine	- Effective for mood stabilization, psychosis - Sedation - Well tolerated - Low levels in breast milk	Metabolic Syndrome!!! Sedation Case report of NTD (?) *Highest Placental transfer 72.1%
Ziprasidone	- Lower risk of Metabolic syndrome	- Limited data
Clozapine	- Treatment resistant psychosis	- Close monitoring needed - Agranulocytosis - Increase adverse effects in breastfeeding

Newer Antipsychotics– No Human Data

Med	In animal studies
Asenapine (Saphris)	- No increase in congenital malformation
Cariprazine (Vraylar)	- Interfered with embryo development and viability
Lurasidone (Latuda)	- No increase in risk of congenital malformations
Brexpiprazole (Rexulti)	- No increase in risk of congenital malformations

Antipsychotic Use in Breastfeeding

FGA and Lactation (Reprotox)

		Relative Infant Dose
Haloperidol	• <10 mg daily produce low levels and no adverse effects • Negative effects when combined with other • Monitor drowsiness and developmental milestones	- 3%
Perphenazine	- Limited data - No adverse effects with dose upto 24 mg	- 0.1%
Chlorpromazine	- Limited data - Drowsiness in infants	- 3%

SGA and Lactation

		Relative Infant Dose *
Risperidone`	- Doses upto 6 mg produced low levels in milk - Limited data	- 2.8-9.1%
Quetiapine	- Doses upto 400 mg produced low levels - No adverse effects noted	- -0.07-0.1%
Aripiprazole	- Doses upto 15 mg produced low levels in milk - It can LOWER SERUM PROLACTIN	- 1%
Olanzapine	- Doses upto 20 mg showed low level - Monitor for sedation - Recommended first line in breastfeeding	- 0.3-2.2 %
Clozapine	- Limited data - Sedation and risk of agranulocytosis	- 1.33-1.4%

*Ncrptraining.org

Treatment

Therapy

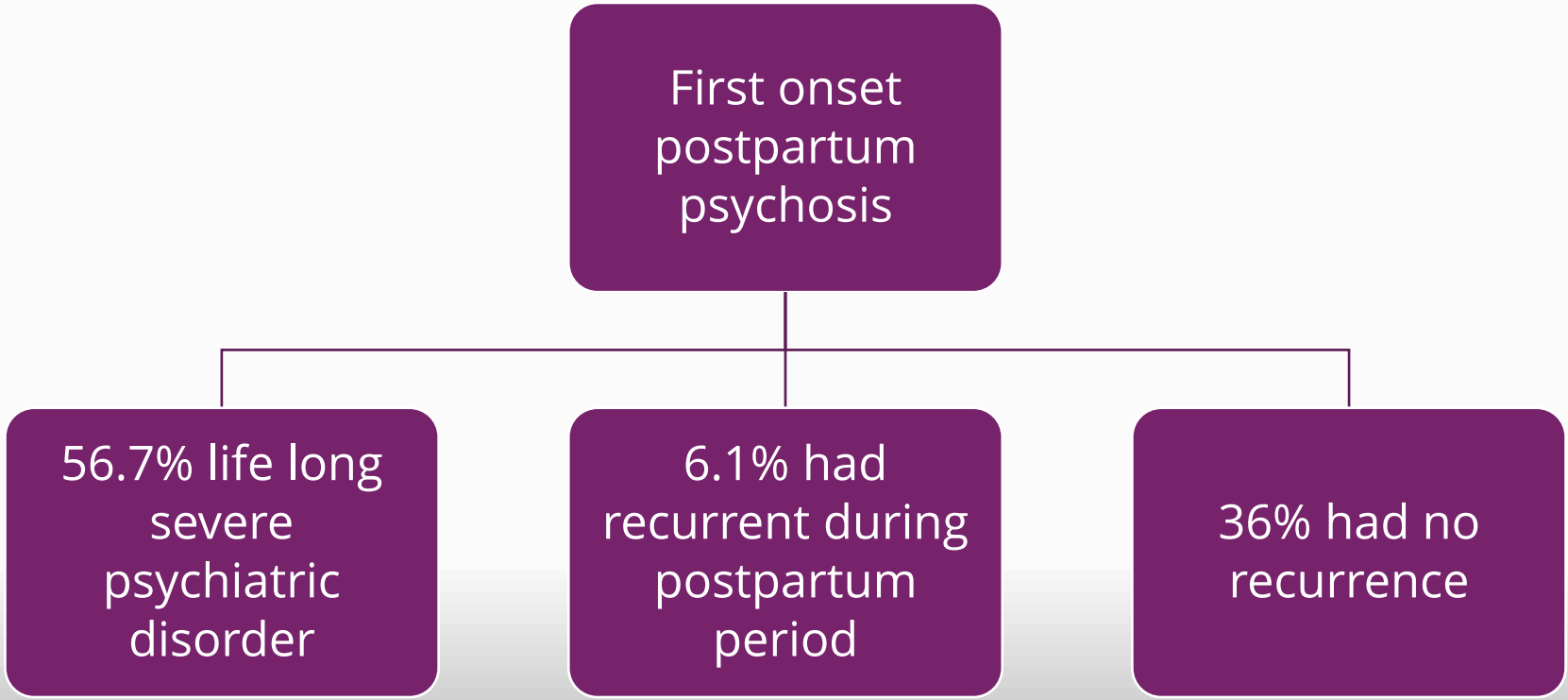
- Psychoeducation
- Support self esteem, build confidence in mothering

ECT

- Few studies, case series
- 3% or fetal complications and 5 % pregnancy complications (Anderson et al 2009)
- Treatment resistant cases
- Severe catatonia features

Bergink et al. 2016, Jones et al 2014

Risk of Recurrence of PP



Gliden et al. 2020

Prevention

Strongest risk factor: Bipolar disorder and h/o Postpartum Psychosis

In chronic bipolar disorder

- Pharmacologic prophylaxis during pregnancy and postpartum

In psychosis limited to postpartum periods

- Pharmacologic prophylaxis immediately after birth

Adequate Sleep

Family support

Coordination with Pediatric staff

Take Home Points

- In childbearing age group consider discussing about risks in pregnancy
- Schizophrenia, other psychoses and bipolar disorder are serious medical conditions– Impact on pregnancy, infant and neurodevelopment
- Stopping medication increases risk of recurrence during pregnancy and postpartum
- **Postpartum psychosis is an emergency- immediate treatment is recommended**
- While making decision about medication weigh risks of untreated disease versus potential risk of meds on unborn child
- Medications decisions based on past trials, if none tried then Quetiapine and Olanzapine preferred
- Consider prophylaxis in patients with history of past postpartum psychosis

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References and Resources

- **MGH website: Womensmentalhealth.org**
- **Reprotox**
- **LactMed**