Safety Action Series

Time to Panic? Psychosis, Suicidality, and Drug Overdose in the Perinatal Period
Speakers

M. Camille Hoffman, MD, MSc
Associate Professor, Maternal-Fetal Medicine
Departments of Ob-Gyn & Psychiatry
University of Colorado School of Medicine

Scott A. Simpson, MD, MPH
Medical Director, Psychiatric Emergency Services
Denver Health Medical Center;
Associate Professor,
University of Colorado School of Medicine
Disclosures

➢ M. Camille Hoffman, MD, MSc has no real or perceived conflicts of interest.

➢ Scott A. Simpson, MD, MPH has no real or perceived conflicts of interest.
Objectives

• Discuss response to a pregnant patient with psychosis

• List strategies for decreasing risk among suicidal patients

• Describe challenges in the diagnosis of psychosis and list treatment options for substance use disorders
Case 1
32 yo G4 P3003 at 37w0d

- Preeclampsia at 37 weeks
- Two prior cesarean deliveries followed by a successful term TOLAC
- History of preeclampsia at term
- History of postpartum depression
  - Took medications for 3 months PP in 2015
  - EPDS + (10) at 26 weeks
32 yo G4 P3003 at 37w0d

- Successful TOLAC
- Discharged on post-op day #3
  - Lovenox x 7 days (BMI, parity, preeclampsia)
  - 6 week LARC
  - Still breastfeeding 2 year old, no additional lactation support needed.
  - 2 week mood check
32 yo G4 P4004, 6 weeks Post-Partum

- Altered Mental Status over 2 preceding days
- Husband provided history
- Disorganized speech, confused
- Bumped baby’s head into door frame
32 yo G4 P4004, 6 weeks PP

- Patient’s mother reports history of PP psychosis 7 years ago (California, baby #2).
- Different FOC, so current husband unaware of this.
- Diagnosis: Bipolar I disorder, manic with PP onset
  - Admitted to inpatient psychiatry x 6 days
  - Olanzapine 10mg (breastfeeding)
  - Hydroxyzine 100mg
  - Sertraline 100mg added
  - Elevated BPs, started on nifedipine 30mg daily by medicine
32 yo G4 P4004, now 10 weeks PP

• Depressive episode with PES visit 8/28/17

• Bipolar I disorder, manic with PP onset
  – Olanzapine 10mg (breastfeeding)
  – Sertraline 100mg
  – Began psychotherapy (kept 2 appointments)
Postpartum psychosis – something completely different?

• 0.1% prevalence
  – Probability of repeat episode is 30%
• Almost all episodes resolve by 6 months
• Typically categorized as a bipolar disorder

Wesseloo 2016 (26514657); Bergink 2015 (26183699); Maneta 2014 (23932531)
## “Psych” or delirium?

<table>
<thead>
<tr>
<th>Primary psychiatric illness</th>
<th>Delirium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vital signs within normal, or with chronic abnormalities</td>
<td>Abnormal vital signs</td>
</tr>
</tbody>
</table>
| Intact consciousness and attention | **Impaired attention**  
  • Cannot spell LUNCH backwards  
  • Months of year backwards + subjective confusion  
  **Impaired consciousness**  
  • RASS ≠ 0 |
| Intact orientation | Impaired orientation |
| Known psychiatric illness | New illness, especially after age 40 |
# Bedside tests for delirium

<table>
<thead>
<tr>
<th></th>
<th>Sensitivity</th>
<th>Specificity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RASS &gt;1 or &lt;-1</strong></td>
<td>6-25%</td>
<td>99%</td>
</tr>
<tr>
<td><strong>RASS ≠ 0</strong></td>
<td>71-93%</td>
<td>81-89%</td>
</tr>
<tr>
<td><strong>RASS ≠ 0 &amp; LUNCH backwards</strong></td>
<td>98%</td>
<td>55%</td>
</tr>
<tr>
<td><strong>Months of year backwards</strong></td>
<td>94%</td>
<td>84%</td>
</tr>
</tbody>
</table>

Han 2015 (26113020); Han 2013 (23916018); Oregan 2014 (245696988)
Postpartum psychosis – treatment

- Low threshold to psychiatrically hospitalize
- Ensure safety of newborn
- Pharmacotherapy:
  - Mood stabilizer, usually lithium
  - Second generation antipsychotic, usually risperidone or olanzapine
  - Benzodiazepines for symptom control but will not shorten course of psychosis

- Treatment resistance: electroconvulsive therapy
What do Agitated Pregnant Patients Receive?

Medication Doses (n=34) Received by 31 Pregnant ED Patients

- Haldol IM combos
- Lorazepam only
- Risperidone+lorazepam
- Haldol PO
- Risperidone only
- Other

Ladavac 2007 (17189743)
Medications for Agitation – For Pregnancy

- Known psychiatric disorder
- ± psychosis
- No etoh/benzo withdrawal
- Etoh/benzo withdrawal
- CNS stimulant
- CNS depressant

Delirium

Intoxication

Oral 2nd generation antipsychotic
- Risperidone 2mg (C)
- Olanzapine 5-10mg (C)

Oral benzo
- Lorazepam 2mg (D)
- Diazepam 5-10mg (D)

Oral 1st generation antipsychotic
- Haloperidol 2-10mg (C)

Wilson 2012 (22461918)
Second & Third Line Options in Pregnancy

Oral 2nd generation antipsychotic
Risperidone 2mg (C)

Oral 1st generation antipsychotic
Haloperidol 2-10mg (C)
± PO Benzo

Oral 1st generation antipsychotic
Haloperidol 2-10mg (C)

IM 1st generation antipsychotic
Haloperidol 5mg IM with DPH 50mg or Lorazepam 2mg
Haloperidol 2.5-5mg IV

Oral benzo
Lorazepam 2mg (D)
Diazepam 5-10 mg (D)

IM/IV benzo
Lorazepam 2mg (D)
Diazepam 5-10 mg (D)

You should only be here for alcohol withdrawal or DTs
What are the Risks of Antipsychotic Treatment During Pregnancy?

- All antipsychotics are FDA category C, except for clozapine (B)
- **Metabolic complications** – metabolic syndrome in mother, increased BW in child (2º generation drugs)
- **Structural teratogenicity** – cleft palate, anal atresia, pulmonary atresia, limb malformations
- Unclear **behavioral outcomes** among children
- **Breastfeeding**: olanzapine, risperidone present in very low infant plasma levels

Gentile 2010 (18787227); Babu 2015 (26330648)
Medications during lactation

**Relative infant dose (RID) >10%**
- Lithium (15%)
- Clozapine (M/P 2.8)

**RID <3%**
- Olanzapine (1.6%)
- Risperidone (3.6%)
- Quetiapine (<1%)
  - few studies
- Clonazepam (M/P 0.3)
- Carbamazepine (M/P 0.6)
- Aripiprazole (1-8%)
- Haloperidol?

Uguz 2016 (27028982); Uguz 2016 (27297617); Kronenfeld 2017 (28714610)
Case 2
24 yo G2 P1001 at 33 weeks

- Presented to PES after mobile crisis called (Welfare check)
- Bipolar 1 disorder
- Methamphetamine abuse
- A1GDM
- Previous cesarean delivery

PES diagnoses:
- Agitated catatonia
- Overt psychosis
- Admitted to inpatient psychiatry
- Benzodiazepines given
24 yo G2 P1001 at 38 weeks

• Stayed on inpatient psychiatry until 38+ weeks
  – Psychosis
  – Schizoaffective vs bipolar vs “deficit syndrome” from methamphetamines

• Repeat cesarean delivery at 38+ weeks - once patient capable of consenting to procedure. (high risk of relapse)
24 yo G2 P2002, POD#2

• Meeting postoperative milestones
• Baby taken by social services (methamphetamine)
• Contraception POPs to Nuvaring.
24 yo G2 P2002, 2 weeks PP

• Mobile Crisis evaluation
• Poor hygiene and self-care
• Self harm (cutting)

• Assaulted grandmother (had a restraining order already)
Drug-induced psychosis and primary psychosis cannot be differentiated based on symptoms

<table>
<thead>
<tr>
<th>Methodology</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administering methamphetamine to healthy volunteers (Bell 1965; Bell 1973)</td>
<td>“Amphetamine...produced a ‘model psychosis’ that has a closer resemblance to schizophrenia than that produced by any other...drug.”</td>
</tr>
<tr>
<td>Standardized interview of LSD-induced psychotic inpatients compared to schizophrenic patients (Vardy 1983)</td>
<td>“In most respects the LSD psychotics were fundamentally similar to schizophrenics...”</td>
</tr>
<tr>
<td>Evaluation using standardized symptom scales of inpatients (Medhus 2013)</td>
<td>“...no differences in positive psychotic symptoms between the two groups.”</td>
</tr>
<tr>
<td>Discriminant function analysis with standardized interviews and scales of inpatients (Srisurapanont 2013)</td>
<td>“..the severity of psychotic symptoms, including the negative ones observed in MA psychotic and schizophrenic patients are almost the same.”</td>
</tr>
</tbody>
</table>
Persisting methamphetamine psychosis

<table>
<thead>
<tr>
<th>Time since use</th>
<th>Prevalence of psychosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 weeks</td>
<td>33%</td>
</tr>
<tr>
<td>2-3 months</td>
<td>15-28%</td>
</tr>
<tr>
<td>6 months</td>
<td>10-28%</td>
</tr>
</tbody>
</table>

- Rapid recurrence of psychosis with exposure to methamphetamine
- Appears independent of family history
- Affects multiple neurotransmitter systems, including dopamine, glutamate, serotonin, and GABA
Treatment options

• American Society of Addiction Medicine Placement Criteria recommend assessment of
  – Intoxication/withdrawal potential
  – Biomedical conditions and complications (eg, pregnancy)
  – Psychiatric conditions and complications
  – Readiness to change
  – Relapse and continued problem potential
  – Recovery environment
Treatment options

• Medical or psychiatric hospitalization
  – Dangerousness or inability for care for self
• Some states have processes for court-ordered substance treatment if families petition
• Voluntary substance treatment
• Outpatient specialty substance treatment
Case 3
37yo G4 P0030 at 10 weeks

- MFM consult for diamniotic/dichorionic twin pregnancy, AMA, and chronic pain

- Long-standing history of opioid and benzodiazepine (years) use secondary to multiple chronic pain syndromes
  - Chronic Pelvic Pain, endometriosis
  - Orthopedic
  - Back

- Had pain contract in place with her PCP
37yo G4 P0030 at 10 weeks

Medications:
• Cymbalta 90mg daily
• Oxycontin 40mg daily
• Ambien 10mg qHS
• Xanax 1mg “prn”
37yo G4 P0030 up to 27 weeks

- Fired by PCP by end of first trimester
- Fired by generalist Ob/Gyn group by mid-trimester
  - Established pain contract(s), then same-day ED visits for pain
- Multi-page PDMP of opiate prescriptions

- High-concern for overdose, ultimately agreed to methadone conversion w/perinatal addiction specialist clinic
37yo G4 P0030 at 27 weeks

• Presented with sudden onset of bleeding and pain.

• Placental abruption with emergent cesarean delivery (& BTL).
  – Twin A demised at birth
  – Twin B ultimately discharged from NICU and into custody of the FOC
37yo G4 P0131 postpartum

• 3 ED visits to one center for overdoses and suicidal ideation

• 4 other ED visits around metro area for other issues

• 1 DUI in past year

• **Current reported medications:**
  – Methadone 20mg TID
  – Ativan prn
Maternal Mortality Risk in Colorado: Self-Harm

Maternal deaths in Colorado from 2004 to 2012 (N=211)

Suicide or accidental overdose: n=63
Motor vehicle crash: n=36
Non-cardiovascular conditions: n=35
Cardiovascular conditions: n=22
Embolism: n=19
Homicide: n=15
Infection: n=10
Hemorrhage: n=7
Undetermined: n=2
Other trauma: n=2


Maternal deaths in Colorado from 2004 to 2012 (N=211) classified by cause. The x-axis delineates the percentage of maternal deaths in each category stated on the y-axis with the frequency in each category provided at the end of each bar. Classifications are mutually exclusive. Fig. 1. Metz. Maternal Deaths From Self-Harm in Colorado, Obstet Gynecol 2016.
Suicidal ideation screening

• **Ask Suicide-Screening Questions (ASQ)**
  In the past few weeks, have you...
  – Wished you were dead?
  – Felt that you or your family would be better off if you were dead?
  – Been having thoughts about killing yourself
  – Ever tried to kill yourself?

• **PHQ9**
  – “Nearly every day” on the ninth question correlates with future self-harm (0.3% annual incidence)

If yes: Are you having thoughts of killing yourself right now?
Inquiring about suicidal ideation

- Thoughts of death
- Suicidal ideation
- Plan for suicide
- Means available and rehearsal
- Intent

McDowell 2011 (21709131)
Suicidal ideation

• 20% of patients with positive screen for SI in the ED have 1 suicide attempt in the following 12 months
  – Completed suicide rate 363/100k person-years

• No strategy for identifying high/moderate/low risk “is sufficiently accurate as a basis to determine allocation to intervention.”
Evidence-based suicide risk reduction

- Treat acute symptoms
  - Intoxication, agitation, psychosis
- Complete safety planning
  - Triggers / Coping Skills / Contacts
- Lethal means restriction
- Provide warm hand-off to treatment
- Certain treatments based on diagnosis

Miller 2017 (28456130); Nordentoft 2017 (28760024);
Woods 2002 (12072138); Bryan 2017 (28142085)
Summary 1

• Agitation can be treated in the Ob setting (while awaiting psychiatry input), regardless of etiology, with:
  – Lorazepam 2mg
  – Risperidone 2mg
  – Haldol 2mg
  – Others
Summary 2

- **Substance Abuse** Treatment options include the following:
  - Hospitalization
    - Dangerousness or inability to care for self
  - Court-mandated substance treatment
  - Contact your local crisis line: 800-273-8255
  - Voluntary substance treatment
  - Outpatient specialty substance treatment
Summary 3

• Suicide and self-harm are leading causes of maternal mortality in Colorado.

• Strategies
  – Treat acute symptoms
    • Intoxication, agitation, psychosis
  – Complete safety planning
    • Triggers / Coping Skills / Contacts
  – Lethal means restriction
  – Provide warm hand-off to treatment
  – Certain treatments based on diagnosis

• No strategy for identifying high/moderate/low risk “is sufficiently accurate as a basis to determine allocation to intervention.”
Q&A Session
Press *1 to ask a question

You will enter the question queue
Your line will be unmuted by the operator for your turn

A recording of this presentation will be made available on our website:
www.safehealthcareforeverywoman.org
Next Safety Action Series

Assessing and Minimizing Risk of Infection After Gynecologic Surgery

Tuesday, October 16, 2018
12:30 p.m. Eastern Time

Linda R. Greene, RN, MPS, CIC
Infection Prevention Manager,
University of Rochester Medical Center, Highland Hospital

Oluwatosin Goje, MD, MSCR
Reproductive Infection Diseases Program
Cleveland Clinic

Click Here to Register
The Council on Patient Safety in Women’s Health Care will be developing new resources to help institutions implement our patient safety bundles. We invite you to share how you and your organization implements our patient safety bundles to help us identify what tools will be most useful to you.

Share your successes, challenges, and overall experience with the patient safety bundles.

Haven’t implemented a bundle yet? We want to hear why!

Click HERE to Complete the Survey

The Bundle Feedback survey can be found on our website https://safehealthcareforeverywoman.org/feedback/