POSTPARTUM PTSD SECONDARY TO TRAUMATIC DELIVERY
Purpose/Goal(s) of this Education Activity
The purpose/goal(s) of this activity is to enable healthcare providers to have a better understanding of postpartum PTSD resulting from traumatic childbirth.

1.0 Contact Hour(s)
This continuing nursing education activity was approved by the Northeast Multistate Division, an accredited approver by the American Nurses Credentialing Center’s Commission on Accreditation. Maine, New Hampshire, New York, Rhode Island, Vermont Nurses Associations are members of the Northeast Multistate Division of the American Nurses Association.

1.0 AMA PRA Category 1 Credit™
Accreditation: Women & Infants Hospital is accredited by the Rhode Island Medical Society to sponsor intrastate continuing education for physicians. Women & Infants Hospital designates this online educational activity for a maximum of 1.0 AMA PRA Category 1 Credit™. Physicians should only claim credit commensurate with the extent of their participation in the activity.
Dr. Shenai graduated from Saint Louis University School of Medicine and completed her psychiatry residency training as well as psychosomatic medicine fellowship at the University of Pittsburgh Medical Center. She currently is an assistant professor at the University of Pittsburgh and is the medical student site director for the psychiatry consult and liaison service. Her research has focused on identifying risk factors and developing a screening tool for post-traumatic stress disorder following childbirth trauma. Her clinical interests include women’s mental health, perinatal addictions, and medical student education.

**Learning Objectives:**

Upon completion of this activity, participants should be able to:

- Recognize changes in DSM criteria for acute stress disorder and post-traumatic stress disorder
- Identify risk factors associated with postpartum PTSD secondary to childbirth
- Examine the impact of postpartum PTSD on maternal health
- Describe treatment guidelines and pharmacologic considerations postpartum

**Scope of Practice:**

- This activity is appropriate for the current and future scopes of practice for attending physicians and other clinicians and Allied Health professionals involved in perinatal care.

**Core Competencies:**

- Medical Knowledge and Patient Centered Care

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**Disclosure:**

- Neeta Shenai, MD has identified that she receives grant/research support from Magee-Women’s Hospital.
- No other persons responsible for the planning or implementation of this activity have any financial interests to disclose.

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**Further Information:**

For more information regarding this program please email education@npic.org or call 401-274-0650.
DISCLOSURES AND SUCCESSFUL COMPLETION OF THIS ACTIVITY

- No commercial support has been provided for this activity.
- Dr. Shenai has identified that she receives grant/research support from Magee-Women’s Hospital. The planning committee does not believe this relationship will negatively influence this presentation in any way. No other persons involved in planning or presenting this program has a conflict of interest.
- There will be no discussion of off-label usage of any products.
- In order to successfully complete this activity and receive 1.0 Contact Hour/1.0 AMA PRA Category 1 Credit™ you must attend/watch the program and return the completed post-test/evaluation to NPIC.
Postpartum PTSD Secondary to Traumatic Delivery

Neeta Shenai, MD
Assistant Professor
University of Pittsburgh Medical Center,
Western Psychiatric Institute and Clinic
Learning Objectives

- Recognize changes in DSM criteria for acute stress disorder and post-traumatic stress disorder
- Identify risk factors associated with postpartum PTSD secondary to childbirth
- Examine the impact of postpartum PTSD on maternal health
- Describe treatment guidelines and pharmacologic considerations postpartum
PTSD: DSM V Criteria
• Exposure to: death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence in the following way(s):
  – Direct exposure
  – Witnessing the trauma
  – Learning that a relative or close friend was exposed to a trauma
  – Indirect exposure to details of the trauma, usually in the course of professional duties (e.g. first responders, medics)
DSM Changes

- New category
- Criterion A2: Removed that response to traumatic event involved intense fear, hopelessness, or horror
- Avoidance and numbing clusters separated in two criterion
- Addition of: negative thoughts or feelings that worsened after traumatic event
DSM V: Posttraumatic Stress Disorder

- Criterion B: Traumatic event is persistently re-experienced
- Criterion C: Avoidance of trauma-related stimuli
- Criterion D: Negative thoughts or feelings that began or worsened after the traumatic event (2 required)
- Criterion E: Trauma related arousal and reactivity that began or worsened after the traumatic event (2 required)
- Symptoms last for at least one month
PTSD: Neurobiology
Neuroendocrine Factors:
• Disruption in HPA axis
• Decreases in cortisol (not consistent)
PTSD: Neurobiology in Pregnancy

Figure 1. Log-transformed cortisol levels across 1 day by the four groups.

Seng et al, 2017
PTSD: Neurobiology

- **Hallmark feature:** reduced hippocampal volume
- **Amygdala:** fear response (increased)
- **Decrease volume of prefrontal cortex (anterior cingulate cortex)**
- **Increase dopamine (mesolimbic)**
- **Increase NE**
- **Decrease 5HT**
PTSD: Traumatic Delivery

Epidemiology
Risk factors
Screening/Diagnosis
Impact
Case: Ms. A

- 28 yo G4P4 who was s/p SVD complicated by sepsis with prolonged ICU hospitalization (~1 month), supra-cervical hysterectomy and resulting chronic abdominal pain.
  - Nightmares/ Difficulty falling asleep
  - Intrusive images of waking up from sedation in the ICU
  - Hypervigilence: easily startles with beeping of IV
Epidemiology: Traumatic Delivery

- Up to 1/3 of women experience delivery as distressing
- Postpartum PTSD:
  - Community samples: 4%
  - High risk groups: 18.5%
- 25-30% experience subclinical and/or partial PTSD
Risk Factors: Traumatic Delivery

Obstetrical events in delivery
  E.g. EmCS
  IVD
  Preterm delivery

Subjective appraisal of birth as traumatic
  E.g. Fear
  Dissociation
  Level of care

Psychosocial factors
  E.g. Previous traumatic events
  Psychiatric morbidity

Acute stress reaction
  (< 1 month)

PTSD
  (> 1 month)

Maintaining factors

Chronic PTSD
  (> 3 months)

Resolution

Pre-partum, intra-partum

Post-partum
### Risk Factors

**Table 5.** An overview of factors investigated in relation to PTSD development, ranked after points.

<table>
<thead>
<tr>
<th>Top rated factors</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjective distress in labor</td>
<td>54</td>
</tr>
<tr>
<td>Negative emotions or experience of labor, distress</td>
<td>14</td>
</tr>
<tr>
<td>Loss of control</td>
<td>12</td>
</tr>
<tr>
<td>Perinatal dissociation</td>
<td>8</td>
</tr>
<tr>
<td>Pain in labor</td>
<td>8</td>
</tr>
<tr>
<td>High fear for self and/or baby</td>
<td>5</td>
</tr>
<tr>
<td>High fear of labor</td>
<td>7</td>
</tr>
<tr>
<td>Obstetrical emergencies</td>
<td>47</td>
</tr>
<tr>
<td>Emergency cesarean section</td>
<td>20</td>
</tr>
<tr>
<td>Instrumental delivery</td>
<td>26</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intermediately rated factors</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other obstetrical factors</td>
<td>29</td>
</tr>
<tr>
<td>Maternal prepartum complication</td>
<td>12</td>
</tr>
<tr>
<td>Maternal intra/postpartum complications</td>
<td>10</td>
</tr>
<tr>
<td>Elective cesarean section</td>
<td>7</td>
</tr>
<tr>
<td>Infant complications</td>
<td>29</td>
</tr>
<tr>
<td>Infant having complication/ handicap</td>
<td>9</td>
</tr>
<tr>
<td>Asphyxia</td>
<td>6</td>
</tr>
<tr>
<td>Low Birth Weight</td>
<td>2</td>
</tr>
<tr>
<td>Preterm birth</td>
<td>12</td>
</tr>
<tr>
<td>Mental difficulties in pregnancy</td>
<td>28</td>
</tr>
<tr>
<td>Depression in pregnancy</td>
<td>16</td>
</tr>
<tr>
<td>Traumatic stress/anxiety in pregnancy</td>
<td>12</td>
</tr>
<tr>
<td>Psychosocial factors</td>
<td>27</td>
</tr>
<tr>
<td>Previous mental health difficulties</td>
<td>14</td>
</tr>
<tr>
<td>Low coping skills/sense of coherence</td>
<td>10</td>
</tr>
<tr>
<td>Lack of specific positive memories from pregnancy</td>
<td>3</td>
</tr>
<tr>
<td>Low support</td>
<td>26</td>
</tr>
<tr>
<td>Low support from medical staff</td>
<td>14</td>
</tr>
<tr>
<td>Low support from partner</td>
<td>12</td>
</tr>
<tr>
<td>Previous psychological trauma or sexual abuse</td>
<td>24</td>
</tr>
<tr>
<td>Previous traumatic life experiences</td>
<td>13</td>
</tr>
<tr>
<td>History of sexual abuse/trauma or previous traumatic childbirth</td>
<td>11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bottom five factors</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychosocial factors</td>
<td></td>
</tr>
<tr>
<td>Parity</td>
<td>−1</td>
</tr>
<tr>
<td>Unplanned pregnancy</td>
<td>1</td>
</tr>
<tr>
<td>Low socio-economic status</td>
<td>−1</td>
</tr>
<tr>
<td>Obstetrical factors</td>
<td></td>
</tr>
<tr>
<td>Duration of labor</td>
<td>−2</td>
</tr>
<tr>
<td>Episiotomy and perineal lacerations</td>
<td>1</td>
</tr>
</tbody>
</table>
Risk Factors: Adverse Childhood Events (ACE)

• ACE’s are common
• ACE’s cluster
• ACE’s have a dose response relationship with many health problems
Risk Factors: Adverse Childhood Events (ACE)

- Population based cohort study
- Danish registers: women born between 1980-1998
- Exposure variables: ACE between 0-15 years
- Primary outcomes: in or outpatient contact 0-6 months postpartum
- Results: 52% of the sample experienced ACE
  - Highest risk: out of home placement, HR 2.57 (95% CI: 1.90-3.48)
  - 2 ACE had higher risk of postpartum psychiatric diagnosis

Meltzer-Brody et al, 2017
• Prospective study; 30 NICU mothers and 53 controls
• Investigating course of postpartum PTSD over one year

(Kim WJ, 2015)
Trajectories of Postpartum PTSD

• Haagen J, 2015: prospective study in Netherlands
• Completed questionnaires during pregnancy
  – 1 week postpartum, 3 months postpartum, 10 months postpartum
  – 348 participants enrolled with 21% reporting delivery as traumatic following delivery
  – Prevalence at 3 months was 0.57% and at 10 months 0.35%

• Limitations:
  • Did not control for prior PTSD
  • Almost a third of sample lost at 3 months postpartum
Screening Tool

Table 6  Predictive questionnaire for postpartum PTSD among women with complicated pregnancies

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>Yes/no</th>
<th>0 1 2 3 4 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did you experience sadness or anxiety during previous pregnancy or postpartum?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Describe your previous birth experience on a Likert scale of 1–5, where 1 reflects very good experience and 5 reflects a very difficult experience. (If there is more than one, choose the worst experience)</td>
<td>Yes/no</td>
<td></td>
</tr>
<tr>
<td>Do you prefer cesarean section due to experiences in previous deliveries?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did you have emotional crises during this pregnancy?</td>
<td>Yes/no</td>
<td></td>
</tr>
<tr>
<td>Describe your fear from childbirth on a Likert scale of 1–5, where 1 reflects very mild fear and 5 reflects a very severe fear</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Describe your expectation for pain during childbirth on a Likert scale of 1–5, where 1 reflects mild pain and 5 reflects a very mild pain</td>
<td>Yes/no</td>
<td></td>
</tr>
<tr>
<td>EPDS&gt;10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sum</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Polacheck et al, 2016)
• Hyperarousal and poor sleep are commonly associated with motherhood
• Self report questionnaire may result in higher prevalence rates than clinical interviews
Development of a Screening Tool

Screening Tool Development → Pilot: 1-2 weeks on postpartum unit → PSS-SR 10 weeks postpartum → Statistical Analysis & Revision of Tool
Screening for Trauma

• Many people have had experiences that were frightening/difficult in their lives. Have you had any experiences?
• Have you experienced an event where you thought your life was in danger?
• Screen for different types of traumatic events:
  – Accidents/natural disasters
  – Iatrogenic
  – Physical/sexual assault
  – Military
Primary Care PTSD Screen

In your life, have you ever had any experience that was so upsetting that, in the past month, you:

1. Have had nightmares about it or thought about it when you did not want to? [Y/N]
2. Tried hard not to think about it or went out of your way to avoid situations that reminded you of it? [Y/N]
3. Were constantly on guard, watchful, or easily startled? [Y/N]
4. Felt numb or detached from others, activities, or your surroundings? [Y/N]
5. Felt guilty or unable to stop blaming yourself or others for the events(s) or any problems the event(s) may have caused? [Y/N]

• 3/5 YES responses = +sensitive screen; 4/5 YES responses = +specific screen
Screening for Trauma: Challenges

• The patient is hesitant to discuss
  – Give the patient as much control as possible
  – Present rationale for question
  – It’s okay to not discuss!

• The patient discusses in detail traumatic event
  – Elicit only information necessary for determining diagnosis of PTSD
Diagnosis of PTSD: Challenges

- Dissociative symptoms can be misdiagnosed as schizophrenia/psychosis
- Comorbid personality disorder/traits can be misdiagnosed as bipolar disorder
Impact of Postpartum PTSD

- Poor mother-infant bonding
- Strained marital relationships
- Increased risk of comorbid psychiatric illness
  - Anxiety/Depression in future pregnancies
- Avoidance of hospital setting/physicians
- Affects future reproductive decisions
PTSD: Treatment

General considerations
Special considerations in traumatic deliveries
Do’s:
• SSRI’s first line treatment
  – Sertraline and paroxetine have FDA indication
• Prazosin for nightmares
Don’t:
• Benzodiazepines
### Treatment: Breastfeeding Considerations

<table>
<thead>
<tr>
<th>Medication</th>
<th>RID (Relative Infant Dose)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sertraline</td>
<td>0.54-2.2%</td>
</tr>
<tr>
<td>Paroxetine</td>
<td>0.34-3%</td>
</tr>
<tr>
<td>Citalopram</td>
<td>0.2-5.9%</td>
</tr>
<tr>
<td>Escitalopram</td>
<td>4.5-6.4%</td>
</tr>
<tr>
<td>Fluoxetine</td>
<td>0.54-6.8%</td>
</tr>
<tr>
<td>Fluvoxamine</td>
<td>0.2-1.58%</td>
</tr>
</tbody>
</table>
Treatment (Nightmares): Prazosin

- Alpha-1 adrenergic receptor blocker
- Improves nightmares and can help with sleep disturbance, total sleep time, and sleep quality
- Improves hyperarousal symptoms (2 studies)
- Limited data for breastfeeding
Treatment: Special Considerations in Traumatic Delivery

• Increase support during delivery and postpartum
  – Referral to therapy/psychiatrist, support groups

• Trauma informed physical exam
  – Minimize medical traumatization and avoid triggering
• Locus of control remains with patient
  – Consent to exam
  – Empowering patient to communicate with you preferences (ex. Stop the exam, modifications)

• Explain the procedure
  – Offer overview of what will happen

• Discuss modifications that can be made to promote comfort
Treatment (Nightmares): Non-Pharmacological

• Rationale: nightmares are a **learned behavior**
• CBT-I most well validated treatment for primary insomnia
  – 4 studies in PTSD
• Image rehearsal therapy (IRT)
  – Step 1: Write out a typical nightmare (NOT worst)
  – Step 2: Write down new dream
  – Step 3: Practice new dream (2x/day for)
Treatment: Non-Pharmacological

- Cognitive behavior therapy (trauma focused)
  - Education
  - Emotion regulation
  - Correcting maladaptive beliefs
  - Trauma narrative
Treatment: Eye Movement Desensitization and Reprocessing (EMDR)

- Phase 1: History
- Phase 2: Stress reduction technique skill building
- Phases 3-6:
  - Identify: vivid visual image, negative belief about self, related emotions
  - Sets of eye movements, taps or tone
- Phase 7: Log of events
- Phase 8: Examination of progress
• Childbirth can be perceived as a traumatic event
• Postpartum PTSD affects mother-infant bonding and future reproductive decisions
• Identification of higher risk patients can decrease PTSD symptom burden through earlier referral to psychiatric services
References


References

QUESTIONS AND COMMENTS

Participants are encouraged to ask questions and share comments.

- Please use the chat box for questions or comments.
- Questions and comments are visible only to presenters.
- Questions will be answered in the order in which they are submitted.
- Should there not be enough time to address your question(s), please email education@npic.org so we may follow-up with you.
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For 1.0 Contact Hour or
1.0 AMA PRA Category 1 Credit™

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