NATIONAL CURRICULUM IN REPRODUCTIVE PSYCHIATRY

Emergencies

Progressive Case Conference

Facilitator's Guide

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Required Pre-Reading

- Rodriguez-Cabezas L, Clark C. Psychiatric Emergencies in Pregnancy and Posptartum. Clinical Obstetrics & Gynecology 2018; 61(3): 615-627.
- Bergink, V., Rasgon, N., & Wisner, K. L. (2016). Postpartum psychosis: madness, mania, and melancholia in motherhood. *American journal of psychiatry*, *173*(12), 1179-1188.

Overview

The goal of this module is to utilize a progressive clinical case presentation to broaden learners' knowledge of how to diagnose and treat psychiatric emergencies in the perinatal period. After completion of this module, learners should have a preliminary understanding of how to assess for alcohol withdrawal and how to treat that in pregnancy; of how to manage agitation in the pregnant patient; and of the epidemiology, phenomenology, pathophysiology, diagnostic considerations, prevention, and treatment of post-partum psychosis. This session is designed to last 60 minutes but can be modified for a longer or shorter session. The session is best utilized for psychiatry residents who have some clinical experience with pregnant and/or postpartum patients. Prior to the session, residents should read the articles included in the pre-reading section of this module.

Session Outline

1. Case Presentation parts 1-4 and questions 1-6: read aloud, discuss, and answer questions as a large group (20 minutes)
2. Case Presentation part 5 and questions 6-10: Read the case presentation aloud, then divide residents into small groups to discuss questions (15 min)
3. Groups present their findings to the large group (15 minutes)
4. Large group continues with reading aloud "Case Presentation Conclusion" and wrap-up discussion led by facilitator (10 minutes)

Goals and Objectives

1. Understand how to examine a pregnant patient for withdrawal from common substances and how to treat that withdrawal in pregnancy
2. Understand how to treat psychiatric emergencies including agitation in pregnancy
3. Understand how to identify and diagnose Postpartum Psychosis utilizing phenomenology
4. Understand evidence-based treatment for postpartum psychosis

Resources Required

1. A faculty (or senior resident) facilitator
2. A board for taking notes generated during the large group discussion
3. Relevant articles for reading prior to the session.

Case presentation, part 1:

You are a PGY3 working overnight in the emergency room of a busy city hospital. You are the sole psychiatrist in the hospital, and the attending of record is a medical ER attending. Just when you think it is shaping up to be a quiet night, the door from the ambulance bay opens up to two medics pushing a stretcher with an agitated woman. The patient is lying on her back, struggling against the restraint belts and roundly cursing the medics. You rush to examine her. She spits towards you and lets out a stream of invective; her speech is slightly slurred and her face is flushed. She is an obese woman who appears to be about 30 years old; she is tremulous and sweating. You know nothing about her history and are concerned that she may be withdrawing from a substance. Fortunately, one of the things the patient is agitated about is an urgent need to use the bathroom; you employ verbal de-escalation techniques and the patient calms enough to give you a urine sample and withstand a blood draw. You know that it will take the lab a while to conduct the tox screen, but your ER has point-of-care testing and the urine pregnancy test comes back positive.

Facilitator pauses for discussion.

1) How can you determine whether the patient is withdrawing from opioids?
Facilitator elicits the following:
Use the COWS: Clinical Opiate Withdrawal Scale (based on the CIWA)

5-12 = mild
13-24 = moderate
25-35 = moderately severe
more than 36 = severe withdrawal

For each item, write in the number that best describes the patient's signs or symptom.
Rate on just the apparent relationship to opiate withdrawal.
Resting pulse rate
Sweating
Restlessness
Pupil size
Bone or joint aches
Runny nose or tearing
GI upset
Tremor
Yawning
Anxiety or irritability
Gooseflesh skin

Case presentation, part 2:

The patient, whose name is Maria, has a COWS of only 5, including pupils of normal size. You are less concerned about opioids, but you notice that, in addition to the signs you saw on admission, the patient has brisk reflexes and tongue fasciculations.

Facilitator pauses for discussion.

2) What substance are you now concerned about and how can you assess this?

Elicit the following:

- Alcohol
- Use the CIWA or other objective alcohol withdrawal scale

Appendix: Addiction Research Foundation Clinical Institute Withdrawal Assessment for Alcohol (CIWA-Ar)

Patient_____ **Date** |__|__|__| y m d **Time**____:____ **(24 hour clock, midnight = 00:00)**

Pulse or heart rate, taken for one minute: _____ **Blood pressure:** _____/_____

NAUSEA AND VOMITING—As "Do you feel sick to your stomach? Have you vomited?" Observation.
0 no nausea and no vomiting
1 mild nausea with no vomiting
2
3
4 intermittent nausea with dry heaves
5
6
7 constant nausea, frequent dry heaves and vomiting

TREMOR—Arms extended and fingers spread apart. Observation.
0 no tremor
1 not visible, but can be felt fingertip to fingertip
2
3
4 moderate, with patient's arms extended
5
6
7 severe, even with arms not extended

PAROXYSMAL SWEATS—Observation.
0 no sweat visible
1 barely perceptible sweating, palms moist
2
3
4 beads of sweat obvious on forehead
5
6
7 drenching sweats

ANXIETY—Ask "Do you feel nervous?" Observation.
0 no anxiety, at ease
1 mildly anxious
2
3
4 moderately anxious, or guarded, so anxiety is inferred
5
6
7 equivalent to acute panic states as seen in severe delirium or acute schizophrenic reactions

AGITATION—Observation.
0 normal activity
1 somewhat more than normal activity
2
3
4 moderately fidgety and restless
5
6
7 paces back and forth during most of the interview, or constantly thrashes about

TACTILE DISTURBANCES—Ask "Have you any itching, pins and needles sensations, any burning, any numbness or do you feel bugs crawling on or under your skin?" Observation.
0 none
1 very mild itching, pins and needles, burning or numbness
2 mild itching, pins and needles, burning or numbness
3 moderate itching, pins and needles, burning or numbness
4 moderately severe hallucinations
5 severe hallucinations
6 extremely severe hallucinations
7 continuous hallucinations

AUDITORY DISTURBANCES—Ask "Are you more aware of sounds around you? Are they harsh? Do they frighten you? Are you hearing anything that is disturbing to you? Are you hearing things you know are not there?" Observation.
0 not present
1 very mild harshness or ability to frighten
2 mild harshness or ability to frighten
3 moderate harshness or ability to frighten
4 moderately severe hallucinations
5 severe hallucinations
6 extremely severe hallucinations
7 continuous hallucinations

VISUAL DISTURBANCES—Ask "Does the light appear to be too bright? Is its colour different? Does it hurt your eyes? Are you seeing anything that is disturbing to you? Are you seeing things you know are not there?" Observation.
0 not present
1 very mild sensitivity
2 mild sensitivity
3 moderate sensitivity
4 moderately severe hallucinations
5 severe hallucinations
6 extremely severe hallucinations
7 continuous hallucinations

HEADACHE, FULLNESS IN HEAD—Ask "Does your head feel different? Does it feel like there is a band around your head?" Do not rate for dizziness or lightheadedness. Otherwise, rate severity.
0 not present
1 very mild
2 mild
3 moderate
4 moderately severe
5 severe
6 very severe
7 extremely severe

ORIENTATION AND CLOUDING OF SENSORIUM—Ask "What day is this? Where are you? Who am I?"
0 oriented and can do serial additions
1 cannot do serial additions or is uncertain about date
2 disoriented for date by no more than 2 calendar days
3 disoriented for date by more than 2 calendar days
4 disoriented for place and/or person

Total CIWA-A Score_____
Rater's Initials_____
Maximum Possible Score 67

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Case presentation, part 3:

You determine that the patient is withdrawing from alcohol.

Facilitator pauses for discussion.

3) Should you report this patient to child protective services for lack of prenatal care and drinking?

Elicit the following:

-Cannot file with child protective services during pregnancy
-Women with SUD in pregnancy often present later in pregnancy – higher rates of unplanned/unexpected pregnancy, shame and guilt and fear of stigma

4) What treatment do you recommend?

-Management of withdrawal in pregnancy:
Treat with a benzodiazepine taper
Lorazepam is preferred over other benzodiazepines ***(link with module for benzodiazepine use in pregnancy)***
If misusing benzodiazepines, manage taper with same medication being abused
Limited data regarding the impact of alcohol or benzodiazepine withdrawal on pregnancy
Setting for withdrawal management individually determined based on obstetric status, gestational age, medical and psychiatric comorbidity
-Treat comorbid psychiatric issues: dual diagnosis program
-Engage with domestic violence advocate
-Regular follow with OB – encourage provider to continue to provide care whether or not patient engages in treatment or achieves sobriety – this is a difficult population to treat (women who use substances during pregnancy have more severe psychiatric comorbidities)
-Limited data on medications used for relapse prevention during pregnancy:
Naltrexone *- emerging data for use in pregnancy, few small studies mostly in OUD - no adverse birth outcomes*
Disulfiram (Antabuse) *- not recommended for use in pregnancy due to data re: fetal malformation and risk of severe reaction with ETOH use*
Acamprosate (Campral) *- no human pregnancy data*
Psychosocial treatments such as peer supports, counseling, or sober living should be offered concurrently.

Case presentation, part 4:

Your attending is reluctant to treat the patient for her withdrawal due to the pregnancy, but you point out that alcohol withdrawal can be fatal, which would be worse for the fetus, and the attending reluctantly agrees. Later in the night, however, the patient again becomes acutely agitated; she attempts to kick a nurse in the face and you have to call in security. You are trying to determine what is the appropriate medication for the situation when your attending tells you that you can use only diphenhydramine for agitation in pregnancy. You are sure that cannot be true, and your page your local reproductive psychiatry attending for backup. What questions do you ask, and how does this attending answer?

Facilitator pauses for discussion.

5) Is it OK to use medications for agitation in pregnancy?

Elicit the following:

Yes! Psychosis, mania, and agitation in pregnancy are not good for mother or fetus. It is important to treat them, and most of the medications we use for agitation in the emergency setting are well-studied older medications about which we have considerable evidence for safety in pregnancy. If you need them, you can safely use haloperiodol or olanzapine, for example, or lorazepam, for acute agitation needs. Remember that the golden rule in pregnancy is minimum dose of as few medications as possible – so be sure to think about why you are using each medication and give them only if there is an indication.

6) What about physical restraints? We can't use those in pregnancy, can we?

Facilitator pauses for discussion.
Elicit the following:

As is true for all other patients, physical restraints should be used sparingly and as a last resort. In addition, you need to worry in pregnancy about placement of the patient – pregnant women should never lie completely supine out of concern for inferior vena cava syndrome. Left side is the best position, and this becomes increasingly important as the pregnancy advances.

Case presentation, part 5:

You treat Maria for her agitation and alcohol withdrawal. When she is calmer, she tells you that she stopped her medications for bipolar 1 disorder and relapsed into alcohol use during her pregnancy. She believes she is about 22 weeks pregnant, and she lives with her mother, who is supportive but also has strong feelings about the use of both substances and medications in pregnancy. The pregnancy was unplanned but is desired, and Maria plans to continue living with her mother, who will help her with child care. She is currently unemployed, but has worked as a school janitor in the past and hopes to go back to similar work after the child is born. You transfer her to the inpatient psychiatry unit for management of her untreated bipolar 1 disorder. Maria stays only a few days and does not follow up with the recommended outpatient treatment. You are not sure what has happened to her.

A few months later, you are again working in the ER and you are getting signout from your fellow resident. She tells you about a 29-year-old G1P1 at 6 days postpartum who was brought in last night by her mother, Mrs. P. Her son was born via SVD at 39 weeks, weighing 7lbs and 3oz. Mrs. P reports that Maria seemed to do "fine" in the first couple of days after delivery- she was fatigued and sometimes anxious but seemed enamored with her son and was able to initiate breastfeeding. However, a couple of days after discharge from the hospital (postpartum day 4), Mrs. P noticed some odd behaviors, such as checking behind counters and under tables for no apparent reason. When Mrs. P approached her about daughter about these incidents, she responded "I just want to make sure the baby is safe." Over the next 2 days her behavior was increasingly bizarre; she paced around the baby's room at night while he was soundly sleeping; she appeared confused and disoriented, stating that she wasn't tired and needed to be there for her son. She threw away all the soaps and baby lotions in the house, stating that they smelled "off" and she didn't want to expose her son to "those poisons." On the day of evaluation, Mrs. P found Maria standing standing by the side of the crib holding a pillow. Maria resisted Mrs. P's efforts to take the pillow, repeatedly stating, "I must save him, what are you doing"?
You go to meet Maria; she does not remember you from prior encounters. She has uncombed hair and is wearing mismatched socks and a wrinkled shirt with visible food stains. She is guarded and often looks around the room apprehensively. She exhibits psychomotor agitation evidence by repeated rocking motion with her upper torso. Her thought process is tangential, and she reports that she has "holy powers" and that she and her son are on a "divine mission." No illicit substances were detected on initial urine toxicology screen, and blood alcohol level was <10. You are concerned that Maria has postpartum psychosis.

Facilitator pauses for discussion.

7. How common is PPP and when are women at highest risk? What psychiatric diagnoses are associated with PPP?

Elicit the following:

- PPP is very rare. Inpatient admissions from large population-based register studies vary from 0.25 to 0.6 per 1,000 births.
- The risk for first onset of affective psychosis is 23 times higher within **4 weeks** after delivery compared with any other period during a woman's life. The majority of PPP cases, however, occur in the first **2 weeks** after birth.
- PPP is often considered a Bipolar **Spectrum Disorder**, although there is thought to be a subset of patients who only have episodes in the context of the postpartum time-period.
- Postpartum psychosis is associated with an increased risk for suicide and infanticide.

8. What are common symptoms of PPP? How are symptoms of PPP similar or distinct from affective psychosis in non-perinatal patients?

- Early symptoms may include insomnia, mood fluctuation, and irritability.
    - Postpartum psychosis is notable for delirium-like appearance, cognitive symptoms such as disorientation, confusion, derealization, and depersonalization may occur.
    - Women have a relatively **low incidence** of certain psychotic symptoms including thought insertion, withdrawal or broadcasting, passivity experiences, hallucinatory voices giving running commentary, or social withdrawal.
    - Distinct from affective psychosis occurring outside the perinatal period, women may experience mood-incongruent delusions often focused on the newborn (such as developing a delusion that a baby is defective in some way, possessed or otherwise in danger).
    - Disorganized, bizarre behaviors and obsessive thoughts regarding the newborn are typical.
    - Delusions of altruistic homicide (often with associated maternal suicide) to "save them both from a fate worse than death" may occur. Postpartum psychosis is associated with an increased risk for both suicide and infanticide. The risk of infanticide in the setting of psychosis is estimated at 4%.

9. What are some differential diagnostic considerations? What diagnostic tests should be considered?

- Differential diagnosis should include: acute infections, peripartum blood loss and anemia, exacerbation of preexisting endocrine and/or autoimmune diseases such as primary hypoparathyroidism, and thyroid disease (there is a well-documented postpartum rebound of thyroid peroxidase antibodies during the first months postpartum, and an initial negative screen immediately postpartum does not rule out thyroid disease). Neurological symptoms should raise concern for anti-N-methyl-D-aspartate (NMDA) receptor encephalitis. Late-onset inborn errors of metabolism can present with clinical features similar to postpartum psychosis.
- Diagnostic testing may include: CBC to evaluate infectious processes, UA to assess for cystitis, CMP, TSH, free T4, TPO antibodies, ammonia level (to rule out urea cycle disorders), alcohol and substance use screening to identify toxic or withdrawal syndromes.
- If a patient has neurological symptoms, such as seizures, decreased consciousness, dyskinesia, overt motor symptoms, or extrapyramidal symptoms, the treatment team should consider NMDA receptor autoantibody screening as well as brain imaging (MRI).

10. Describe potential treatment for Mrs. L. What level of care will she need? What treatment strategies might you suggest?

- Postpartum psychosis is a treatable psychiatric emergency and therefore requires immediate evaluation. **Inpatient psychiatric hospitalization is indicated to ensure the safety of the patient and her infant, especially when clinical judgement reveals elevated risk for lethality.** In the case of Maria, she presents a clear need for inpatient treatment due high risk of harm to herself and her infant.
- The largest evidence base exists for treatment with **lithium**, which is highly efficacious for acute treatment of postpartum psychosis, as well as maintenance treatment. Lithium is the drug of first choice during the acute phase of illness unless contraindicated (due to impaired renal function, or serious side effects).
- **Antipsychotics** and/or **benzodiazepines** might also be considered in the initial phase of treatment.

- **ECT** can be an effective treatment for both depression and mania, and associated risks of adverse effects are low. ECT during pregnancy does require the availability of obstetrical monitoring and support and ideally access to NICU care.

Case presentation, conclusion:

After thorough evaluation, you determine that Maria does indeed have PPP. She is again transferred to the inpatient unit, where she is treated successfully with Lithium and where family psychoeducation helps her mother to understand the risks of untreated illness. Maria is discharged to the women's mood clinic, stable on Lithium, with a plan for close follow up and close involvement of her mother in her care.

References

Bowen A, Tumback L. Alcohol and breastfeeding: dispelling the myths and promoting the evidence. Nurs Womens Health. 2011;14(6):454-61.

Carson G, Cox LV, Crane J, et al. No. 245-Alcohol use and pregnancy consensus clinical guidelines. J Obstet Gynaecol Can. 2017;39:e220–e254.

Centers for Disease Control and Prevention. Fetal alcohol spectrum disorders (FASDs): Facts about FASDs. 2011. Retrieved from http://www.cdc.gov/ncbddd/ fasd/facts.html

Dejong K, Olyaei A, Lo J. Alcohol use in pregnancy. Clin Obstetrics and Gynecology. 2019;62(1):142-155.

Devido J, Bogunovic O, Weiss RD. Alcohol use disorders in pregnancy. Harv Rev Psychiatry. 2015;23(2):112-121.

Friedman SH, Hall RCW, Sorrentino RM Involuntary Treatment of Psychosis in Pregnancy. J Am Acad Psychiatry Law. 2018 Jun;46(2):217-223. doi: 10.29158/JAAPL.003759-18.

Heberlein A, Leggio L, Stichtenoth D, Thomas L. The Treatment of Alcohol and Opioid Dependence in Pregnant Women. 2012;25(6):559-564.

Kitsantas P, Gaffney K, Wu H, et al. Determinants of alcohol cessation, reduction and no reduction during pregnancy. Arch Gynecol Obstet. 2014;289:771–779.

National Institute on Alcohol Abuse and Alcoholism. Fetal alcohol exposure. 2012. Retrieved from http://www.niaaa.nih.gov/alcohol-health/fetal-alcohol-exposure

Scrandis DA. Bipolar disorder in pregnancy: A review of pregnancy outcomes. J Midwifery Womens Health. 2017 Nov;62(6):673-683. doi: 10.1111/jmwh.12645. Epub 2017 Oct 30.

Williams JF, Smith VC. Committee on substance abuse. Fetal alcohol spectrum disorders. Pediatrics. 2015;136:e1395–e1406.

World Health Organization. Guidelines for the identification and management of substance use and substance use disorders in pregnancy. 2014.

Aftab A, Shah AA. Behavioral Emergencies:Special Considerations in the Pregnant Patient. Psychiatr Clin N Am 40 (2017) 435–448

Wilson MP, Nordstrom K, Shah AA, Vike GM. Psychiatric Emergencies in Pregnant Women. Emerg Med Clin N Am 33 (2015) 841–851

Rodriguez-Cabezas L, Clark C. Psychiatric Emergencies in Pregnancy and Posptartum. Clinical Obstetrics & Gynecology 2018; 61(3): 615-627.

Gemmill et al, “Trends in pregnancy-associated mortality involving opioids in the United States, 2007–2016”, AJOG 220(1) 115-116)

Desai RJ, Hernandez-Diaz S, Bateman BT, Huybrechts KF. Increase in prescription opioid use during pregnancy among Medicaid-enrolled women. Obstet Gynecol 2014;123:997–1002).

Dube, S. R., Felitte, V. J., Dong, M., Chapman, D. P., Giles, W. H., Anda, R., F. (2003). Childhood abuse, neglect and household dysfunction and risk of illicit drug use: The Adverse Childhood Experiences Study. Pediatrics, (111)3, 564-72

Hans SL. “Demographic and psychosocial characteristics of substance abusing pregnant women.” Clin Perinatol. 1999 Mar;26(1):55-74.)

Substance Abuse and Mental Health Services Administration (SAMHSA). Center for substance abuse treatment: Clinical Guidance for treating pregnant and parenting women with opioid use disorder and their infants: (SMA) 18-5054. Published 2018

Wesseloo, R., Kamperman, A. M., Munk-Olsen, T., Pop, V. J., Kushner, S. A., & Bergink, V. (2016). Risk of postpartum relapse in bipolar disorder and postpartum psychosis: a systematic review and meta-analysis. *American Journal of Psychiatry*, *173*(2), 117-127.

Bergink, V., Armangue, T., Titulaer, M. J., Markx, S., Dalmau, J., & Kushner, S. A. (2015). Autoimmune encephalitis in postpartum psychosis. *American Journal of Psychiatry*, *172*(9), 901-908.

Bergink, V., Burgerhout, K. M., Koorengevel, K. M., Kamperman, A. M., Hoogendijk, W. J., Lambregtse-van den Berg, M. P., & Kushner, S. A. (2015). Treatment of psychosis and mania in the postpartum period. *American Journal of Psychiatry*, *172*(2), 115-123.

Bergink, Veerle, et al. "First-onset psychosis occurring in the postpartum period: a prospective cohort study." *The Journal of clinical psychiatry* 72.11 (2011): 1531-1537.