Open access Journal International Journal of Emerging Trends in Science and Technology

Postpartum Psychosis: Diagnostic Statistical Manual of Mental Disorder-5 Revision Updates

Author

Ramar G

Assistant Professor

Department of Psychiatric Mental Health Nursing,

Hind Institute of Medical Sciences, Safedabad, Lucknow, Uttar Pradesh, India

Email: *ramargurusamy8@gmail.com*

Abstract

Women are more likely to experience psychosis during the period following childbirth than at any other time in their lives. Postpartum psychosis appears to be a heterogeneous group of mood and psychotic disorders. These disorders have in common the emergence of psychotic symptoms such as delusions and hallucinations in the first weeks postpartum, although some women may present several months later, usually with psychotic depression. The onset of psychosis during the postpartum period constitutes a medical emergency. Women with postpartum psychosis are more likely to commit suicide or infanticide than the general population. Acute management emphasizes hospitalization to ensure safety, mobilizing the family to ensure care of the newborn, antipsychotic medication, and treatment of the underlying disorder. This article focuses on Diagnostic Statistical Mannual of Mental Disorde-5 Revision (DSM-5) update and major clinical issues regarding postpartum psychosis.

Keywords: *Postpartum, Psychosis, Peripartum, Depression, Bipolar disorder, Onset.*

1. Introduction

DSM-5 defines psychotic disorders as abnormalities in 1 or more of 5 domains: delusions, hallucinations, disorganized thinking, grossly disorganized or abnormal motor behavior, and negative symptoms. The current psychiatric nosology does not recognize postpartum psychosis as a distinct disorder. DSM-IV-TR allowed clinicians to apply the "with postpartum onset" specifier to brief psychotic disorder or to a current or most recent major depressive, manic, or mixed episode with psychotic features in MDD or bipolar disorder, if onset occurred within 4 weeks postpartum.

In preparation for DSM-5, evidence of the onset of symptoms in postpartum disorders was examined. Study findings suggest that 50% of major depressive episodes that present postpartum actually began during pregnancy. For this reason, the specifier "with postpartum onset" for depressive and bipolar disorders was replaced with the specifier "with peripartum onset" in DSM-5. The "with peripartum onset" specifier is applied if onset of mood symptoms occurs during pregnancy or within the 4 weeks following delivery. Thus, patients with postpartum psychosis with onset within 4 weeks after delivery could receive a diagnosis of current or most recent manic or depressed episode with psychotic

features in depressive or bipolar and related disorders with the specifier "with peripartum onset."

Alternatively, if a woman with postpartum psychosis meets criteria for a brief psychotic disorder, DSM-V suggests adding the specifier "with postpartum onset" if onset is during pregnancy or within 4 weeks postpartum. Many clinicians had hoped that the postpartum or peripartum specifier would be extended to 6 months after delivery in DSM-5, since clinical experience suggests that many mood and psychotic episodes present beyond 1 month postpartum. Unfortunately, there was a paucity of evidence to support 6 months.

2. Epidemiology

The prevalence of postpartum psychosis in the general population is 0.1% to 0.2%, which is significantly lower than the prevalence of postpartum blues (50% to 75%) and postpartum depression (10% to 13%).[1] Postpartum psychosis is one of the rarest psychiatric disorders, yet it is almost always considered a psychiatric emergency because of the rapid onset of severe maternal symptoms and the potential for a catastrophic outcome, such as infanticide or suicide.

Postpartum psychosis is the presentation of a psychotic disorder, such as schizophrenia, in 3.4% of women.[2] However, women with known schizophrenia have a 25% risk of puerperal exacerbation.[1] Postpartum psychosis occurs in 20% to 30% of women with known bipolar disorder.[3] Moreover, in women with bipolar disorder and a family history of postpartum psychosis in a first-degree relative, the rate of postpartum psychosis is almost twice that of women with bipolar disorder without such a history (74% versus 30%).[3]

Cross-sectional studies have reported an association of psychiatric, social, and obstetric variables with the onset of the syndrome (**Table 1**).[2,4] Once a woman has had an episode of postpartum psychosis, the risk of recurrence after a subsequent pregnancy can exceed 50%.[5] Depressive episodes may follow the acute psychotic symptoms in many women with postpartum psychosis, and 26% of women with postpartum psychosis who received pharmacotherapy remain symptomatic 1 year after delivery.[5] Studies have suggested that postpartum psychosis may be a variant of bipolar disorder and that hormonal and other physiological changes in the perinatal period may play an important role in its development. The strong link between postpartum psychosis and bipolar disorder is suggested by evidence of clinical presentation, longitudinal course, and family history.[6]

2.1. Table 1

Table 1	Risk factor for Postpartum psychosis
Primiparity	
Continuation of mood stabilizer	
Obstretical complication	
Perinatal infant mortality	
Perivious bipolar episodes, psychosis or postpartum psychosis	
Family history of postpartum psychosis	
Family history of bipolar disorder	
Sleep deprivation	
Increased environmental stress	
Lack partner support	

3. Clinical Presentation

Postpartum psychosis has an acute onset within the first 2 weeks after delivery in 65% of cases, but onset can occur as early as postpartum day 1.7 Clinical features include elated, dysphoric, or labile mood; insomnia; agitation; and bizarre behavior (**Table 2**). Psychotic symptoms include mood-incongruent delusions with frequent content related to the infant (eg, the infant being harmed), thought broadcasting, ideas of reference, delusions of control, or command hallucinations.

Delusions are ego-dystonic and associated with a lack of insight and need to be differentiated from the ego-syntonic obsessive-compulsive thoughts that are common features in postpartum depression.[8] The patient's thought process is often disorganized, and the patient presents with what Wisner and colleagues[9] describe as "cognitive disorganization psychosis," referring to confusion, perplexity, cognitive clouding, and organic-like hallucinations such as olfactory or tactile.

It is estimated that 4% of women with postpartum psychosis commit infanticide and 5% commit suicide.[8,10] Any mother who presents with a postpartum mood or psychotic disorder should be asked about thoughts of harming herself or the infant.[8] The lack of reality testing and disorganized behavior can lead to unsafe and neglecting behaviors even in the absence of clear infanticidal ideation.[1]

3.1. Table 2

Table 2	Clinical features of postpartum psychosis
Onset	Acute, within 4 weeks of postpartum but as early as day 1
Cognitive	Poor concentration, delirium like impaired sensorium/ orientation; rule out organic causes
Behavioural	Agitated, hyperactive, emotional distance or coldness/perplexity
Mood	Elated, labile, dysphoric, or less frequently depressed
Affect	Flat or incongruent
Speech	Rampling
Sleep	Insomnia
Thought content	Mood incongruent delusion • Thought broadcasting • Ideas of reference • Infant being harmed / killed • Persecutory • Jealousy • Of being controlled Mood congruent delusion of grandiosity
Thought process	Disorganized, flight of ideas
Perception	Hallucinations • Organic (eg, visual, olfactory,,tactile) • Commanding auditory
Suicide/homicide	Suicide (5%) anticide (4%)

4. Etiology

Postpartum psychosis can be conceptualized as a psychiatric manifestation with abrupt onset following childbirth, an event filled with major biopsychosocial changes. Pathogenesis is likely multifactorial, and cross-sectional studies have not verified that any one risk factor has a causative link with the onset of symptoms.

Given its abrupt onset in the early postpartum period, a hypothesis of a strong biological component is compelling. The early postpartum period is characterized by a significant drop in gonadal steroids. While there are no quantitative differences in gonadal steroid levels between postpartum and nonpostpartum psychosis, one theory proposes that some women may have different susceptibility to normal hormonal changes associated with childbirth. Estrogen affects the monoaminergic system, particularly serotonin and dopamine; the former has greater impact on affective symptoms and the latter on psychotic symptoms.

Plausible candidate genes of interest include those for estrogen and progesterone receptors, dopamine and serotonin receptors, and enzymes involved in pathways of synthesis and catabolism of monoamines.[11] The study of the gene that encodes the serotonin transporter has yielded 2 possibilities. The first is that polymorphism in intron 2 influences susceptibility to postpartum psychosis in women with at least one prior episode of the syndrome.[12] The second is the association of postpartum psychosis with allele 10 of *5-HTTVNTR* of the serotonin transporter (*SERT*) gene.[13]

Jones and colleagues[14] conducted a genome-wide linkage study in families with bipolar disorder in which at least one woman had suffered a manic or psychotic episode within 6 weeks postpartum. They reported significant linkage signal on chromosome 16p13 and a suggestive linkage signal on chromosome 8q24, which suggests that chromosome 16 and chromosome 8 may contain genes potentially involved in predisposition to this disorder.

Sleep disruption in postpartum psychosis is a potential etiological factor, given the relationship between gonadal steroids and circadian rhythms. It is unknown if insomnia precedes or follows the onset of postpartum psychosis. Sleep loss has been proposed as the final common pathway of multiple causal factors in a susceptible postpartum woman.[15] Other recently reported potential etiologies include autoimmune thyroid dysfunction and immune system dysregulation.[16,17]

5. Treatment

An acute change in the mental status of a postpartum woman requires careful consideration of potential underlying medical issues. At the same time, it is important to initiate interventions that will prevent harm to the mother and infant. Complications from birth or organic causes must be ruled out, even when the patient has a past history of bipolar disorder, schizophrenia, or postpartum psychosis. Stroke, pulmonary embolism, amniotic fluid emboli, Sheehan syndrome, thyroid disorders, electrolyte abnormalities, acute hemorrhage, sepsis, drug toxicity, and drug withdrawal are some of the medical conditions that need to be evaluated while managing the patient's altered mental status.

Treatment is similar to that of nonpostpartum psychosis. Antipsychotics, mood stabilizers, and benzodiazepines are the interventions of choice. Treatment choice is also dictated by possible comorbidities, response to previous treatments, drug tolerability, the patient's ability to cooperate, and whether the patient is breast-feeding. Although monotherapy is preferable, quick remission of symptoms is paramount so that the mother's functioning can improve and she can continue to bond with and care for her infant.

Lithium is an important medication for the management of postpartum psychosis. Monitoring of lithium levels, thyroid and renal function, and adequate hydration are standards of care when using lithium. The use of lithium for breast-feeding mothers has generally been discouraged by the American Academy of Pediatrics (AAP) because of concerns regarding passage of the drug through breast milk. Plasma levels in the infant may exceed 10% of the mother's plasma levels, causing toxicity in the infant— especially if he is dehydrated. A recent review by the AAP states that these concerns, as well as a lack of data about long-term exposure, should be weighed against the clear benefits of breast-feeding.[18]

Valproic acid or carbamazepine may be used to manage postpartum psychosis. The AAP reported that both of these drugs are compatible with breast-feeding. Lamotrigine is FDA-approved for bipolar depression, but no studies have examined its efficacy in postpartum psychosis. It is unlikely to be used in the acute treatment phase, since its titration takes weeks, but it may have a role as maintenance treatment. Use caution with lamotrigine because high plasma levels of the drug have been found in breast-feeding infants.[18]

Atypical antipsychotics are often first-line choices for psychosis and mania because of their tolerability. On the basis of a recent review of data on adverse effects in infants, olanzapine and quetiapine were considered the most acceptable.[19] Chlorpromazine, haloperidol, and risperidone were classified as possible with breast-feeding with medical supervision that includes early follow-up, attention to alertness, infant weight gain, and monitoring.

Benzodiazepines may have a role in the acute treatment of postpartum psychosis. Intramuscular lorazepam and haloperidol can be used to achieve rapid tranquilization. Once the patient becomes more stable, oral agents can be used. However,

benzodiazepines are not recommended as monotherapy for postpartum psychosis. In a study of 51 women with first-onset psychosis in the postpartum period, 67% achieved remission with a combination of lithium, antipsychotics, and benzodiazepines; 18% with antipsychotics and benzodiazepines; and 6% with benzodiazepines alone.[20]

Electroconvulsive therapy (ECT) can yield rapid symptomatic improvement in mothers with postpartum psychosis or severe postpartum depression, but it may be challenging for women who have not previously received any psychiatric treatment to accept this treatment option. The only risks of ECT to a breast-feeding infant are the medications given for anesthesia and muscle relaxation, but since these medications are short-acting, it is expected that there is minimal transfer to the infant.[21]

Establishing a regular sleep pattern is critical to the goal of improving the symptoms of postpartum psychosis.[4] This can be achieved when a patient is hospitalized, since someone else is caring for the infant. Once the patient goes home, the support of the partner, family members, and visiting nurses or a doula are key in helping with the infant and letting the mother sleep. If the mother is breast-feeding, a combination of breast milk and formula at night may decrease the frequent nighttime interruptions.

Engaging family members is important in the treatment plan for any woman suffering from postpartum psychosis. Caring for a very ill mother and a newborn can be burdensome, and the acuity of the presentation can be very difficult for partners and family members. Careful explanation about the diagnosis, treatment, and prognosis as well as the development of a therapeutic alliance with the patient's support system can assist both in the implementation of a treatment plan and in the continuation of treatment once the patient returns home.

Separation from the infant may be necessary initially. Family members can be a great source of reassurance for patients once their mental status starts improving. Many patients may not remember details of what happened during acute psychosis. A nurturing stance toward the mother can help her develop more confidence in her ability to recover and mother her child appropriately. Peer support and access to information about postpartum psychosis are important as recovery continues.[22]

6. Recurrence Prevention

Lithium, divalproex, olanzapine, and estrogen have been examined for their efficacy in preventing the recurrence of psychosis.[23] Lithium has been effective in decreasing relapse rates after subsequent pregnancies, although it is not clear if lithium should be restarted during pregnancy or immediately postpartum. A recent study suggests that lithium prophylaxis may be more useful in women who previously had only postpartum psychosis than in women with bipolar disorder who have had mood episodes outside the postpartum period as well.[24]

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