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## An Overview of Postpartum Psychosis

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### ABSTRACT

The Postpartum period is characterized by overwhelming emotional, biological, physical, and social changes. It needs significant personal and interpersonal adaptation, especially in primigravida. Pregnant women and their families are colored by the joyful arrival of a new baby in the postpartum period. But also, the mother in the postpartum period can be vulnerable to a range of postpartum psychosis. Postpartum psychosis is one of serious mental disorder that can result in adverse consequences such as suicide. Suicide is rare during the acute episode, but the rate is high later in the mother's life and first-degree relatives. Psychosis postpartum is frequently under-diagnosed, it needs early screening and diagnosis to determine the appropriate treatment as a mandatory part of postpartum care.

## 1. Introduction

Childbirth is a strong trigger of mental illness, and psychiatric episodes during the postpartum period can cause significant morbidity and mortality, with suicide a leading cause of maternal death. Although extensive efforts, definitive pathophysiology for postpartum psychiatric disorders has remained elusive.<sup>1</sup> Postpartum psychosis (PP) is a serious mental health problem in the postpartum period, affecting 0.89 to 2.6 per 1000 women. PP is characterized by a sudden onset, and rapid deterioration, with symptoms including delusions, hallucinations, disorganized behavior, and depression. A mother's poor mental health is linked with an increased risk of adverse outcomes, such as suicide and decreased mother-infant bonding. It needs immediate assessment and management in secondary mental health services.

Maternal care, as well as pharmacological intervention in the hospital, are almost always required. Family members are important in this process and should be involved in care and treatment planning.<sup>1,2</sup> With appropriate treatment, the symptoms resolve within 2 to 12 weeks. However, women remain at increased risk of the following postpartum and non-postpartum episodes, including depression and anxiety. PP can have a detrimental impact on well-being and long-term functioning, and also, the result of postpartum psychosis is feeling guilty, loss, fear, and shame. Several studies have recommended psychological intervention and psychosocial support for mothers with postpartum psychosis; however, the psychological factors underpinning recovery or the types of intervention

found to be effective are yet very little known.<sup>3</sup>

Postpartum psychosis is mostly underdiagnosed and untreated. Untreated postpartum psychosis can have far-reaching ramifications for a family, and it is associated with an increased risk of suicide and the potential risk of infanticide in some cases. In consequence, early diagnosis and management of postpartum psychosis are extremely important.<sup>2,4</sup> Hence, this review aims to study the potential risk of postpartum psychosis and describe the typical clinical manifestation of postpartum psychosis. We can do early screening to diagnose and manage postpartum psychiatric disorders.

## 2. Methods

The author searched for all studies published between 1 August 2011 and 1 August 2021, using the following databases: google scholar and PubMed. The following keywords were applied in the databases during the literature search: "Postpartum Psychosis." The type of articles included in this study is systematic reviews and literature reviews. We only study all articles published in English. The inclusion criteria were studies that describe postpartum psychosis and postpartum suicide. In the first step, the researcher assesses the titles and abstracts of the studies to exclude articles based on the criteria. In the second step, the researcher read and evaluated the full-text studies that met the criteria.

## 3. Results

In this study, The PubMed and google scholar search results identified 37 studies. After assessing all the studies' titles and abstracts, there identified ten studies for potential inclusion in the review. Reasons for exclusion of other studies were: 21 of them were excluded because the study's main discussion is about another postpartum mental illness, four studies mainly discuss drugs' effect on postpartum mental illness, and two studies were about hormone effect on postpartum mental illness. Therefore, in this study, ten articles were eventually assessed.

## 4. Discussion

Postpartum psychosis has multiple and varied etiology. It can be triggered by pre-existing bipolar affective disorder, previous postpartum psychosis, possibly major depressive disorder, and a family history of a psychiatric disorder.<sup>1</sup> Guidelines and clinical description of psychiatric disorder, Fourth Edition of Diagnostic and Statistical Manual of Mental (DSM-IV-TR) and ICD-10 classification of mental and behavioral disorders, classify postpartum mental and behavioral disorders differently. If the onset occurred within four weeks postpartum, the psychiatrist is allowed by DSM-IV-TR to use the "with postpartum onset" specifier to concise psychotic disorder or a current major depressive, manic, or mixed episode with psychotic features in Bipolar Disorder or major depressive disorder. In the ICD-10, psychiatric disorders associated with puerperium or childbirth are coded according to the presenting psychiatric disorder. In some cases, a special code is allowed by the ICD-10, F53 when there is insufficient information for classification or special additional features, and it can only be used if it occurs within six weeks of delivery. The determinant "with postpartum onset" for depressive and bipolar disorders with the determinant "with peripartum onset" replaced by DSM-V. If the onset of mood symptoms manifestation occurs during pregnancy or within the fourth weeks following delivery, accordingly, it's used "with peripartum onset" determinant. Nevertheless, postpartum mental disorders may manifest weeks beyond the first month or six weeks after delivery.<sup>4</sup>

Postpartum psychosis has a complex multifactorial risk factor, such as parity, history of postpartum psychosis in a previous pregnancy, history of mental disorder, family history of psychosis or mental disorder, and discontinuation of psychiatric medications during pregnancy. In patients who were suffering from affective disorders like bipolar and first-time pregnancy with a previous personal or family history of bipolar, the prevalence of occurrence of mental illness is higher and considered the single most important risk factor. Other factors such as deficit of

sleep and hormonal fluctuations (the rapidly falling estrogen levels) after childbirth may also pose a risk; a previous study proposed that estradiol treatment may be beneficial as an additional treatment for women with psychosis in schizophrenia. Yet, the following study found minimal benefits of prophylactic estradiol administration in pregnant females with a history of bipolar and schizophrenia to prevent relapse in the postpartum period. In another study conducted on postpartum women with a history of bipolar disorder, sleep loss triggering episodes of mania was considered an important marker to determine the predisposition to developing postpartum psychosis. The conclusion was that the risk experienced an episode of postpartum psychosis in women who reported a lack of sleep leading to manic episodes was twice as higher.<sup>5</sup>

Numerous studies have found a higher risk for PP in primiparous women, maybe due to the increased psychosocial stress of a first child, but some may also be due to unknown biological factors. Some studies found no increased PE risk in women with PP, but one recent registry-based study found a strong relationship between PE and first-onset postpartum psychiatric episodes. Other studies reported that the precipitous drop in estrogen and progesterone in the 24 hours following childbirth is a tempting candidate for the etiology of postpartum psychiatric disorders. Most studies have shown little difference in absolute levels of reproductive hormones between healthy women and those experiencing psychiatric symptoms. There has been very little study on hormonal contributors to postpartum psychosis specifically, such as women with hypoparathyroidism and Sheehan's syndrome, and on the role of melatonin.<sup>6</sup>

Postpartum psychosis incidence around 0.89 and 2.6 in 1000 births and there is one study that reported the prevalence of pp is 5 in 1000 births. These incidences are relatively consistent with the frequently quoted prevalence of 1–2 in 1000 births for postpartum psychosis in the general population.<sup>7</sup> Postpartum psychiatric syndromes are seen more commonly (81%) in patients under 25 years of age.

Most Indian women conceive during this part of the childbearing age because marriage is relatively young. A family history of mental disorders was observed in 25% of the patients.<sup>2,4</sup>

The most common symptoms include elation, lability of mood, rambling speech, disorganized behavior, and hallucinations or delusions. However, the presentation and course of PP may be more diverse and complex, with transient or alternating episodes of delusions of guilt, persecution, auditory hallucinations; delirium-like symptoms and confusion; and excessive activity. At times, delusions revolve around the infant, especially that the infant is possessed, has special powers, is divine, or is dead. Infanticide and suicide are observed in 4% and 5% of women suffering from PP, respectively.<sup>1</sup>

There is no standardized questions or screening tool for postpartum psychosis, and the diversity of presentation makes it difficult to create an algorithm for screening. In general, the priority is on the physical health and recovery of the mother and baby during and after pregnancy, general practitioners and obstetricians in primary care providers should assess the patient's mood and feelings during pregnancy, and postpartum used a questionnaire directly. Edinburgh postnatal depression scale and mood disorder questionnaire are fast and effective screening tools to identify signs of depression and mania in at-risk mothers. This evaluation can extremely help in risk assessment for future psychiatric illness in the critical puerperal time zone.<sup>5,6</sup>

There is also no completely standard set of laboratory tests due to the rarity of the disorder – but evidence about the biological etiology has grown enough to suggest a likely set of laboratory tests. To identify organic causes of psychosis, we can see the following thorough history, complete physical examination, and complete labs examination. A laboratory test, such as complete blood count, electrolytes, blood urea nitrogen, blood glucose, creatinine, vitamin B12, folate, thiamine, calcium, the function of thyroid tests, liver function tests, urinalysis, urine drug screen, urine/blood cultures,

and CT Scan or MRI of the brain. The whole lab tests help to rule out medical conditions and etiology that may present as psychosis. Examples are hypo and hypernatremia, hypo and hyperglycemia (such as diabetic ketoacidosis/ insulin shock), abnormal liver function tests (such as hepatic encephalopathy), and hypo and hyperthyroidism (such as thyroid and storm). Other examples are uremia, hypercalcemia in hyperparathyroidism, urine and blood cultures to rule out infection, and CT and MRI to see for a probability of a stroke, mainly in women with a history of pregnancy, hypertension, preeclampsia, and eclampsia.<sup>5,6</sup>

There is a differential diagnoses of PP, one of them is baby blues which affects 85-90% of women. Baby Blues is a self-limited syndrome of mood lability (up or down), tearfulness, and feeling overwhelmed, but without serious effects on the woman's functioning. It occurs within days of birth and is generally resolved within two weeks. It is unrelated to psychiatric history and requires no intervention other than support. Postpartum depression (PPD) is a more serious disorder that can include low mood, anhedonia, and sometimes suicidality. It affects 10-20% of postpartum women. The Diagnostic and Statistical Manual defines it as a depressive episode "with peripartum onset," beginning in the third trimester or within four weeks postpartum. Symptoms must last at least two weeks to qualify as a depressive episode, but any woman whose symptoms are severe and affect the functioning and/or is suicidal unable to function, or exhibits suicidality should be suspected of likely depression even if that time criterion has not been met.<sup>5</sup>

Perhaps the most difficult psychiatric condition to distinguish from postpartum psychosis is postpartum obsessive-compulsive disorder (OCD). There is evidence of an increased risk of onset and flare of OCD during times of reproductive transition, the frightening intrusive thoughts common in OCD (obsessions), and the delusions that characterize PPP. In addition to these psychiatric conditions, there are several medical conditions that must be considered in suspected cases of postpartum psychosis. The waxing and waning of

consciousness that is often seen is reminiscent of delirium, and delirium for medical causes (the most common infection surrounding parturition) should be at the top of any clinician's differential. Tests of attention and cognitive function, such as the Mini-Mental State Exam (MMSE) and the Montreal Cognitive Assessment (MoCA), can help determine whether delirium is present, as can lab tests including urinalysis and complete blood count. There have been several cases of autoimmune encephalitis presenting as postpartum psychosis, and postpartum abnormalities such as Sheehan's Syndrome or flares of autoimmune diseases (such as lupus) can also have neuropsychiatric presentations.<sup>6</sup>

The treatment setting of postpartum psychosis is a psychiatric treatment emergency that requires inpatient hospitalization. In much of the developed world, that hospitalization can occur in a dedicated mother-baby psychiatric unit, the type of facility deemed best practice in many countries. Many clinicians, whether obstetricians or psychiatrists, and many patients and families are therefore reluctant to seek hospitalization when it means a disruption of the mother-child bond and a disruption of breastfeeding. However, the severity of postpartum psychosis means that in the U.S. treatment setting, such separation is usually warranted. Pp is associated with high rates of suicide and infanticide, and treatment can occur most safely and rapidly in the context of inpatient hospitalization. Any obstetrician encountering a suspected case of postpartum psychosis should therefore seek immediate psychiatric consultation (if inpatient) or refer the patient to the emergency room (if outpatient).<sup>6</sup>

Approaches studied in the pharmacological treatment of PP included antipsychotics, mood stabilizers, hormones, propranolol, and electroconvulsive therapy (ECT). Some evidence of efficacy was found for all approaches except hormone therapy. The strongest evidence was found for ECT, for which three small studies reported improvement for all women undergoing ECT for postpartum psychosis. Since that time, the group of Bergink et al. reported a

3-step treatment algorithm. Step 1 was lorazepam at bedtime for three days (4 out of 64 subjects remitted at this stage); Step 2 was the addition of an antipsychotic (usually haloperidol 2-6 mg daily) on day 4 (12 of the remaining 60 subjects remitted at this stage); Step 3 was the addition of Lithium after two weeks of non-response to steps 1 and 2, to a targeted Lithium serum level among 0.8 and 1.2 mmol/L; Step 4 was ECT after 12 weeks of non-response to steps 1, 2, and 3, and no subjects advanced to this stage. The investigators tapered off benzodiazepines and antipsychotics after symptom remission and continued Lithium (or antipsychotics if the patient responded without Lithium) for nine months, with nearly 80% of patients retaining full remission at nine months postpartum. Because there is still a high rate of recurrence (over 54% recurrence of PPP in one recent study), prophylaxis with Lithium is recommended for subsequent postpartum episodes. This recommendation is based on the treatment algorithm of Bergink et al., as described above – in that study, only 10% of those maintained on Lithium throughout the follow-up period relapsed. While there are risks to using Lithium in both pregnancy and breastfeeding, those risks are much lower than was once thought and, for many women, will be outweighed by the risks of PPP (which include suicide, infanticide, poor mother-child bonding, and subsequent PPD with consequences for child development).<sup>6,9</sup>

Given the severity of symptoms, pharmacological treatment is always necessary for postpartum psychosis, but also we need family and psychosocial support. Low socioeconomic status and acute stressors increase women's risk for postpartum depression but do not affect the risk for postpartum psychosis – and evidence concerning psychosocial treatments is weak. Regardless of the type of mood symptoms involved (manic or depressive or both), insomnia is a prominent illness feature, and sleep hygiene interventions are crucial. If any, support for the other parent is also important, as is specific feedback designed to improve the mother-baby

interaction.<sup>6</sup>

Postpartum psychosis is a rare incident but may result in undesirable outcomes. The proper identification of risk markers would increase the ability to avert and manage the condition. In case left untreated, it may result in tragic consequences, such as suicide or filicide. It is a period of terrific stress for the family members involved in taking care of the patient and has notable psychosocial implications.<sup>5</sup> The suicide rate is higher in the families of mothers with postpartum psychosis and subsequent psychotic episodes, but not during acute puerperal manic/cycloid episodes. Filicides are also uncommon during acute postpartum psychoses without depressive features.<sup>8</sup>

Perhaps the scariest aspect of PPP for the practicing obstetrician is determining whether the patient is a danger to herself or the child. Because rates of suicide and infanticide are high, it is important to the assessment of suicide risk is necessary to determine whether a patient requires emergent hospitalization or can continue outpatient care. Depending to the American Psychiatric Association Practice Guidelines for the Assessment and Treatment of Patients with Suicidal Behaviors, a suicide risk assessment requires that the provider ask directly about 1) the patient's desire to live or die, 2) the specific thoughts about taking their life, 3) any plans they have to carry out the act, 4) access to means and, finally 5) the lethality of their intended means/plan. For patients who endorse thoughts of suicide or death, the clinician must ask about the frequency, intensity, and life stressors associated with the thoughts.<sup>1</sup>

Woman with psychiatric illness can and does make an excellent mother – but those with acute postpartum psychosis may be in danger of harming their children either deliberately or through neglect in the throes of illness. Involve psychiatry if possible in making this determination – it is easy for non-specialists to misinterpret intrusive, obsessive thoughts for psychotic thoughts.<sup>6</sup>

## 5. Conclusion

Postpartum psychosis is a devastating complication of childbirth that carries high risks for both mother and child and requires a thorough psychiatric evaluation as soon as possible. Early identification of women at high risk for developing PP and initiation of timely therapeutic approaches, consisting of pharmacological strategies and psychotherapeutic approaches, are the key factors to the successful management of PP. Appropriate detection of postpartum psychosis is needed to increase the chances that women will receive adequate therapy, which could help to mitigate the global disease burden and improve maternal and newborn health.

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