IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

A COMPREHENSIVE REVIEW ON POSTPARTUM DEPRESSION

G. Ushasree[1*], Dr. K. Thirumala Naik[2]

[1*] Pharm.D Intern, Krishna Teja Pharmacy College, Tirupati, Andhra Pradesh, India.

[2] Associate Professor, Department of Pharmacy Practice, KTPC, Tirupati, Andhra Pradesh, India.

Abstract: Postpartum depression (PPD) is among the most prevalent complications following childbirth, underscoring the importance of identifying effective treatments to promote optimal outcomes for mothers, infants, and families.When determining appropriate treatment for PPD, factors such as the severity of depression, whether the mother is breastfeeding, and the mother's preferences should be taken into account.Around 40% of new mothers experiencing various types of postpartum mood disorders, including symptoms of depression, before and during pregnancy. Maternal postpartum depression (PPD) is a common and debilitating complication of childbirth, often underdiagnosed and undertreated.The strongest risk factor for postpartum depression is a history of mood or anxiety disorders, particularly if the symptoms are active during pregnancy.Early detection and intervention are crucial in the treatment of postpartum depression due to the heightened vulnerability of infants in the early weeks of life. This article will provide a brief outline on PPD and helps in early detection and management.

Keywords: Depression, Postpartum Depression, Postpartum Complications, Baby blues symptoms, Postpartum Psychosis.

I. INTRODUCTION

The postpartum period, which refers to the 12 weeks following childbirth, is a crucial time for new mothers and their families and can be considered as an extension of the pregnancy period, often referred to as the fourth trimester.[1] During this time, various mood disorders may occur within the first 6 weeks after childbirth, falling under the umbrella term of the postpartum period.[2]

These mood disorders are relatively common, can be disabling, but are treatable.Postpartum depression (PPD) is among the most prevalent complications following childbirth, underscoring the importance of identifying effective treatments to promote optimal outcomes for mothers, infants, and families.Advances in understanding the pathophysiology of PPD and emerging therapeutic approaches provide potential avenues for complementing existing medications, somatic treatments, and evidence-based psychotherapy. It is essential to consider the benefits and potential risks of treatment, particularly in the context of breastfeeding.[3]

When determining appropriate treatment for PPD, factors such as the severity of depression, whether the mother is breastfeeding, and the mother's preferences should be taken into account. Nurses specializing in maternal health can offer guidance to depressed mothers regarding treatment options, provide suitable recommendations, facilitate timely and accessible referrals, and encourage active participation in treatment.[4]

Maternal depression can have adverse effects on the development of the fetus and the infant. Diagnosing major depression during the perinatal period can be challenging, but it can be addressed by assessing persistent cognitive and affective symptoms as well as functional impairment. Effective treatment options include interpersonal psychotherapy and selective serotonin reuptake inhibitors (SSRIs).[5]

Depression often manifests with reduced speech rate, diminished eye contact, decreased emotional expressiveness and responsiveness. Depressed mothers may exhibit slower responses to their infants' cues and signals of distress or social interaction, engage in less frequent eye contact and vocalizations, and participate less in rhythmic imitation and joint activities.Furthermore, mothers with depression may focus less on their infants' actions and abilities in their speech, face challenges in providing optimal levels of stimulation, offer less touch to their babies, and display more functional rather than affectionate touch.[6]

It is important to emphasize that postpartum depression is not a character flaw or a sign of weakness.[7]

II. EPIDEMIOLOGY

Four million births occur globally every year, with around 40% of new mothers experiencing various types of postpartum mood disorders, including symptoms of depression, before and during pregnancy.[2] Approximately one out of ten mothers suffer from depression symptoms.[8] Depression during the postpartum period is a significant concern for public health. It affects 8% to 15% of women worldwide [5,9,10] but the rates are higher, ranging from 23% to 52%, in low-income populations.[6] In the United States, the prevalence of postpartum depression is between 10% and 20%[4], and the screening rates for depressive symptoms in African American women can be as high as 35%.

The prevalence rates of postpartum depression vary across countries, with rates ranging from 6.9% to 12.9% in high-income countries and exceeding 20% in some low- or middle-income countries.[5,11] A recent study found that 33% of women with postpartum depression actually experienced symptoms during pregnancy, and an additional 27% had symptoms before becoming pregnant.[11]

III. ETIOLOGY

The exact causes of postpartum major depression are still not fully understood. It is believed that some women may be more sensitive to hormonal changes that occur during reproductive events such as menstruation, pregnancy, and menopause.The significant drop in hormone levels after childbirth may also contribute to the development of postpartum depression. There is evidence suggesting a link between cortisol levels and depressive symptoms during pregnancy and the postpartum period. Additionally, it is possible for major depression to begin during pregnancy and continue into the postpartum period.[12] Maternal postpartum depression (PPD) is a common and debilitating complication of childbirth, often underdiagnosed and undertreated. Reports of mental illness related to childbearing date back to ancient times, but the outcomes of treatment are still not optimal.Recent scientific advancements in understanding the underlying mechanisms of PPD and the emergence of somatic treatments offer promising therapeutic options.[11]

IV. RISK FACTORS

The strongest risk factor for postpartum depression is a history of mood or anxiety disorders, particularly if the symptoms are active during pregnancy.[3,6,11] Women who have previously been diagnosed with postpartum depression have a 25% risk of recurrence.[6] Social stressors, such as poverty, intimate partner violence, a history of pregnancy loss, and unintended pregnancy, have adverse effects on maternal health.[2,13] Certain sociodemographic factors contribute to postpartum depression, including lower educational status of mothers, residing in rural areas, lower family income,[13,14] poor obstetric experiences,lack of sleep,[13] and social stressors like poverty, marital difficulties, intimate partner violence, previous abuse, and history of pregnancy loss or unintended pregnancy.[2,11] Additionally, being a first-time mother (primipara), delivering a preterm baby, and experiencing adverse events in newborns are also significantly associated with postpartum depression.[14]

V. MULTIPLE FACTORS CONTRIBUTING TO PPD

Various factors contribute to postpartum depression (PPD) without changing the reference numbers. These factors can be categorized into three main groups: infant factors, caregiver factors, and ecological factors.

5.1. Infant factors

Infant factors play a role in increasing the risk of PPD. Mothers with high-risk pregnancies or infants with low birth weight, poor motor functioning, neonatal irritability, and prematurity are more susceptible to developing depression.[6]

5.2. Caregiver factors

Caregiver factors also influence the likelihood of PPD. Women with a history of major depressive disorder are at a higher risk of relapse during pregnancy. The presence of a supportive partner acts as a protective factor, leading to higher-quality interactions between depressed mothers and their infants.Positive reactions from fathers during pregnancy predict reduced symptoms of depression and increased maternal attachment to the infant.[6]

5.3. Ecological factors

Ecological factors encompass various environmental aspects. High levels of stress, a greater number of life events, low self-esteem, low family income, dissatisfaction with social support systems, limited positive interactions between mothers and infants, unskilled occupation of the head of household, lower maternal education, racial/ethnic minority status, and lower family support are all associated with an increased risk of PPD. Interestingly, working mothers demonstrate more interest in their babies compared to non-working depressed mothers, while the latter group exhibits a higher proportion of negative facial expressions, including irritation and disinterest.[6]

VI. PATHOPHYSIOLOGY

The pathophysiology of postpartum depression is complex and not yet fully determined. However, there is evidence to suggest that biological factors, including hormones, genetics, and immune function, may contribute to its development.

6.1. Hormones

Hormones play a crucial role in postpartum depression. The rapid changes in estrogen and progesterone, the reproductive hormones, during pregnancy and immediately after delivery have long fascinated researchers studying PPD. These hormones also regulate various biological systems that are implicated in major depression, such as thyroid function, lactogenic hormones, the hypothalamic-pituitary-adrenal axis, the immune system, and genetic expression. Studies have indicated that fluctuations in allopregnanolone, a major metabolite of progesterone, may play a critical role in PPD. Allopregnanolone modulates γ-aminobutyric acid (GABA) receptors, which are involved in anxiety and depression. Recent research has shown that the sudden decrease in allopregnanolone levels after childbirth may trigger PPD through GABA receptors.[11]

6.2. Genetics

Genetic factors have also been implicated in the pathophysiology of PPD. Studies examining candidate genes associated with PPD have identified certain polymorphisms that are also found in nonperinatal depression, such as the Val66Met polymorphism of brain-derived neurotrophic factor. Genome-wide linkage studies have identified genetic variations on chromosome 1q21.3–q32.1 and 9p24.3–p22.3, as well as in the gene Hemicentin-1 (HMCN1), which contains several estrogen-binding sites. These genetic factors appear to increase susceptibility to PPD. Estrogen-induced epigenetic DNA methylation changes have also been implicated in PPD.[11]

6.3. Immune Function

The immune function is another factor that may play a role in PPD. Estradiol, which fluctuates during the perinatal period, regulates the immune axis. Anti-inflammatory cytokines, responsible for immunosuppression, are elevated during pregnancy to protect the fetus. However, following delivery, the immune system rapidly becomes proinflammatory and remains so for several weeks.[11]

VII. SYMPTOMS:

A diagnosis of major depressive disorder requires the presence of five key symptoms that last at least two weeks and impair normal function. Depressed mood or anhedonia must be present.[12] Postpartum blues, postpartum affective disorders or major depressions, and postpartum psychosis have distinct symptoms with corresponding implications for social work interventions and treatment strategies.Major depression is a distinct clinical syndrome for which treatment is clearly indicated, whereas the definition and management of minor depression are less clear. Symptoms of depression after childbirth vary, and they can range from mild to severe.

7.1. Baby blues symptoms

Postpartum major depression is differentiated from "baby blues" by the severity and duration of symptoms. Baby blues begins during the first two to three days after delivery and resolves within 10 days.Symptoms include mood swings, brief crying spells, anxiety, sadness, irritability, feeling overwhelmed, reduced concentration, poor sleep, nervousness, appetite problems, trouble sleeping, and emotional reactivity. Suicidal ideation is not present.[7,12]

7.2. Postpartum depression symptoms

Postpartum depression may be mistaken for baby blues at first, but the symptoms are more intense and last longer. These symptoms may eventually interfere with your ability to care for your baby and handle other daily tasks. Symptoms usually develop within the first few weeks after giving birth, but they may begin earlier during pregnancy or later up to a year after birth.[7]

Postpartum depression symptoms may include: depressed mood or severe mood swings, decreased interest in pleasurable activities (anhedonia), overwhelming tiredness or loss of energy, inability to sleep (insomnia) or sleeping too much, feelings of worthlessness, shame, guilt, or inadequacy, decreased concentration or indecisiveness, crying too much, difficulty bonding with your baby, withdrawing from family and friends, loss of appetite or eating much more than usual, less interest and pleasure in activities you used to enjoy, intense irritability and anger, fear that you're not a good mother, hopelessness, restlessness, severe anxiety and panic attacks, thoughts of harming yourself or your baby, recurring thoughts of death or suicide, weight change, psychomotor retardation or agitation, and suicidal ideation.[7,12]

Symptoms of postpartum major depression may differ from nonpostpartum major depression. Women with postpartum major depression are less likely to report feeling sad but have notable feelings of guilt or worthlessness and a lack of enjoyment or interest in pleasurable activities.Decreased energy and disrupted sleep related to infant care may be difficult to differentiate from symptoms of depression. Asking a mother whether she can sleep when her infant sleeps at night may provide clarification because many women with postpartum major depression have difficulty falling or staying asleep.[12]

7.3. Postpartum psychosis

With postpartum psychosis, a rare condition that usually develops within the first week after delivery, the symptoms are severe. Symptoms may include feeling confused and lost, having obsessive thoughts about your baby, hallucinating and having delusions, having sleep problems, having too much energy and feeling upset, feeling paranoid, and making attempts to harm yourself or your baby.[7]

VIII. POSTPARTUM DEPRESSION IN THE OTHER PARENT

Studies indicate that postpartum depression is not limited to mothers alone; new fathers can also experience this condition. Symptoms such as sadness, fatigue, feelings of being overwhelmed, anxiety, and disruptions in eating and sleeping patterns are commonly reported by both mothers and fathers with postpartum depression.Consequently, paternal postpartum depression, as it is sometimes referred to, can have similar detrimental effects on partner relationships and child development as maternal postpartum depression.[7]

IX. SCREENING

The American College of Obstetricians and Gynecologists suggests that screening for antepartum or postpartum depression should be strongly considered. While there is insufficient evidence to support universal screening, patients with identified risk factors should be prioritized for screening. It is recommended to prepare for postpartum care and consider prophylactic treatment for these individuals. Prophylactic treatment may involve psychotherapy starting in the third trimester or medication offered immediately after childbirth. Research has shown that initiating sertraline immediately after delivery can reduce the recurrence of postpartum major depression.[12]

X. DIAGNOSIS

The distinction between thoughts of harm towards a child and obsessional symptoms is crucial in diagnosis. Obsessional symptoms refer to distressing thoughts or images of harming oneself or the child without any intent to act on them. However, concerns about self or infant harm should be taken seriously and immediately referred for psychiatric assessment and care.[11]

When diagnosing postpartum major depression, it is important to inquire about past manic episodes as well. A history of mania or hypomania may indicate bipolar disorder, which requires specific pharmacologic treatment. Bipolar disorder is also associated with a higher risk of mood episodes postpartum. Two recommended screening questions for past manic episodes are:

- "Have you ever experienced four continuous days when you felt exceptionally good, high, excited, or hyper, leading others to believe that you were not your usual self or that you got into trouble?"
- "Have you had four continuous days when you were so irritable that you found yourself shouting at people, starting fights, or engaging in arguments?"

Positive responses to these questions necessitate a referral to a psychiatrist.[12]

XI. LABORATORY TESTING

In cases of suspected postpartum major depression, physicians should measure thyroid-stimulating hormone levels as hypothyroidism can also cause depressive symptoms. Approximately 8 percent of women develop postpartum autoimmune thyroiditis, which can mimic many symptoms of postpartum major depression. It's worth noting that while blood loss during delivery can lead to anemia and significant fatigue it does not cause depressed mood or anhedonia.[12]

XII. ASSESSMENT AND POINTS OF INTERVENTION

Early detection and intervention are crucial in the treatment of postpartum depression due to the heightened vulnerability of infants in the early weeks of life. Primary care providers are advised to assess maternal mental health status during prenatal visits, monitor infant development and maternal mental health during the early hospital days after birth, and continue evaluating maternal mental health during regularly scheduled postnatal visits.[6]

XIII. EFFICACY OF TREATMENT INTERVENTIONS

13.1. Treatment targeting maternal depression- Regarding the treatment of maternal depression, a combination of medication and psychological treatment was not found to be more effective than psychological treatment alone. Extensive reviews suggest that psychotherapeutic approaches, such as cognitive-behavioral therapy, non-directive counseling, and psychodynamic approaches, have proven successful in reducing symptoms of postpartum depression (PPD) in mothers.[6]

13.2. Treatment targeting the mother–infant relationship - When it comes to treating the mother-infant relationship, there are therapies specifically designed to involve the infant in the intervention and address any disruptions in the mother-infant bond. Several approaches, sharing similar theoretical foundations, have shown improvement in infant functioning.These approaches include[6]

- Mother-infant psychodynamic psychotherapy (PPT)
- Watch, Wait, Wonder (WWW)
- Toddler-parent psychotherapy (TPP) and
- Mother-infant psychotherapy (M-ITG)

13.3. Home-based interventions - Home-based interventions take into consideration the ecological risk factors associated with poverty, such as accessibility and cost. One such intervention is infant massage, which has been found to have numerous benefits. It leads to increased infant regulation, improved infant temperament and sociability, decreased levels of infant stress hormones, and increased serotonin levels, indicating reduced infant stress and depression. Over time, infant massage also improves maternal-infant interactions and enhances depressed mothers' sensitivity to their infants' cues.[6]

XIV. TREATMENT

14.1. Nonpharmacologic Treatment

- ✓ Encouraging self-care practices.
- ✓ Strengthening practical and emotional social support systems.
- ✓ Minimizing the occurrence and impact of negative life events or stressors.
- ✓ Engaging in aerobic exercise.
- ✓ Ensuring an adequate amount of sleep for mothers.
- ✓ Exposing mothers to morning light.
- ✓ Providing peer support or nondirective counseling from a professional [11,12]
- ✓

Individual or group psychotherapy is an effective treatment for mild to moderate postpartum major depression. Psychotherapy can also be used in conjunction with medication for moderate to severe postpartum major depression. Interpersonal therapy and cognitive-behavioral therapy are the most commonly employed psychotherapy methods.

14.2. Pharmacologic Treatment

Selective serotonin reuptake inhibitors (SSRIs) have become the primary treatment for moderate to severe postpartum major depression due to their favorable side effect profiles and relative safety in cases of overdose compared to tricyclic antidepressants.[12]

When recommending pharmacological treatment, consideration must be given to infant exposure through lactation. Most antidepressants are not contraindicated during breastfeeding. Sertraline, an SSRI, exhibits minimal passage into breast milk and is thus preferred when initiating therapy. All SSRIs pass into breast milk at levels considered compatible with breastfeeding.

If SSRIs prove ineffective, women may be switched to other antidepressants, although there is less information available regarding their lactation exposure. Generally, serotonin norepinephrine reuptake inhibitors (SNRIs) and mirtazapine have minimal passage into breast milk, while bupropion should be avoided if possible due to reported cases of infant seizure.Tricyclic antidepressants have a greater passage into breast milk compared to SSRIs and are therefore avoided whenever possible. However, if tricyclics are used, nortriptyline is considered the safest option, while doxepin is contraindicated due to adverse events reported in exposed infants.

Adjunctive psychotropic medications, such as hypnotics, benzodiazepines, antipsychotics, or other augmentation agents, may also be employed to address insomnia or comorbid anxiety and enhance the response to antidepressant medication in the context of postpartum depression.[11]

14.3. Somatic Therapies

Psychological treatments are generally preferred over pharmacological interventions by most women experiencing postpartum depression. Concerns about medication, particularly during lactation, can be a barrier to receiving adequate treatment for those with moderate to severe symptoms of postpartum depression.

Electroconvulsive therapy (ECT) is a somatic therapy widely recognized as one of the most effective treatments in psychiatry. It may be used to treat severe postpartum depression, especially in cases of persistent suicidal thoughts or psychotic symptoms. However, ECT involves general anesthesia and can result in memory impairment, making it less ideal for the majority of women.

There is growing evidence supporting the efficacy and safety of focal brain stimulation therapies such as repetitive transcranial magnetic stimulation (rTMS) and transcranial direct current stimulation (tDCS).[11]

REFERENCES

[1] Heather L. Paladine et al. Postpartum care: An approach to the fourth trimester. American Family Physician. 2019; 100(8): 485-491.

[2] Mengstu Melkamu Asaye, Haymanot Alem Muche, Eyerusalem Desta Zelalem, "Prevalence and Predictors of Postpartum Depression: Northwest Ethiopia", Psychiatry Journal, vol. 2020, Article ID 9565678, 9 pages, 2020.

[3] Stewart DE, Vigod SN. Postpartum Depression: Pathophysiology, Treatment, and Emerging Therapeutics. Annu Rev Med. 2019 Jan 27;70:183-196.

[4] Horowitz JA, Goodman JH. Identifying and treating postpartum depression. J Obstet Gynecol Neonatal Nurs. 2005 Mar-Apr;34(2):264-73.

[5] Moses-Kolko EL, Roth EK. Antepartum and postpartum depression: healthy mom, healthy baby. J Am Med Womens Assoc (1972). 2004 Summer;59(3):181-91.

[6] Judith Fox. Post-Partum depression: A comprehensive approach to evaluation and treatment. Mental Health in family medicine. Research Gate. 2010. 7: 249-57.

[7] "Understanding Postpartum Depression: Causes, Symptoms, and Treatment" by Mayo Clinic Link: https://www.mayoclinic.org/diseases-conditions/postpartum-depression/symptoms-causes/syc-20376617.

[8] Angarath I.van der Zee-Van den Berg et al. Postpartum depression and anxiety: A community-based study on risk factors before, during and after pregnancy. Journal of Affective Disorders. 2021 May. Vol 286:158-165.

[9] Guintivano J, Manuck T, Meltzer-Brody S. Predictors of Postpartum Depression: A Comprehensive Review of the Last Decade of Evidence. Clin Obstet Gynecol. 2018 Sep;61(3):591-603.

[10] Perfetti J, Clark R, Fillmore CM. Postpartum depression: identification, screening, and treatment. WMJ. 2004;103(6):56-63.

[11] Donna E. Stewart et al. Postpartum Depression: Pathophysiology, Treatment, and Emerging Therapeutics. Annual Review of Medicine. 2019. Vol. 70: 183-196.

[12] Kathryn P. Hirst et al. Postpartum major Depression. American Family Physician. 2010; 82(8):926-933.

[13] Ortigosa et al.,Postpartum Depression, analysis of risk factors and nursing intervention. Literature Review.2022.vol 5. 19-29.

[14] Dubey A, Chatterjee K, Chauhan VS, Sharma R, Dangi A, Adhvaryu A. Risk factors of postpartum depression. Ind Psychiatry J. 2021 Oct;30(Suppl 1):S127-S131.

[15] Adeyemo EO, Oluwole EO, Kanma-Okafor OJ, Izuka OM, Odeyemi KA. Prevalence and predictors of postpartum depression among postnatal women in Lagos, Nigeria. Afr Health Sci. 2020 Dec;20(4):1943-1954.

[16] Walther VN. Postpartum depression: a review for perinatal social workers. Soc Work Health Care. 1997;24(3-4):99-111.

[17] Beck, Cheryl Tatano. Predictor of Postpartum Depression- An Update. Nursing Research. 2001 september. 50(5):P 275-285.

[18] Gaynes BN, Gavin N, Meltzer-Brody S, Lohr KN, Swinson T, Gartlehner G, Brody S, Miller WC. Perinatal depression: prevalence, screening accuracy, and screening outcomes. Evid Rep Technol Assess (Summ). 2005 Feb;(119):1-8.

[19] Kroska EB, Stowe ZN. Postpartum Depression: Identification and Treatment in the Clinic Setting. Obstet Gynecol Clin North Am. 2020 Sep;47(3):409-419.

[20] Logsdon MC, Wisner KL, Pinto-Foltz MD. The impact of postpartum depression on mothering. J Obstet Gynecol Neonatal Nurs. 2006 Sep-Oct;35(5):652-8.

[21] Thurtle V. Post-natal depression: the relevance of sociological approaches. J Adv Nurs. 1995 Sep;22(3):416-24.

[22] Michelle G. Carro et al. Postpartum Depression and child development: An investigation of mothers and fathers as sourece of risk and resilience. Development and Psychology. 1993. 5(4), 567-579.