



Review Article

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BIOPSYCHOSOCIAL DETERMINANTS OF POSTPARTUM DEPRESSION: AN INTEGRATIVE HOMOEOPATHIC REVIEW

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Abstract

Postpartum depression (PPD) is a common, serious mood disorder arising within one year of childbirth that adversely affects mothers, infants, and families. Its prevalence is estimated at roughly 10–20% globally, with onset typically in the first few months of postpartum. The etiology is multifactorial, involving rapid hormonal withdrawal (e.g. estrogen, progesterone) after delivery, dysregulated neurosteroid (allopregnanolone) and GABA-A signaling, hypothalamic–pituitary–adrenal (HPA) axis changes, and psychosocial stressors. Clinically, PPD can impair mother–infant bonding and increase maternal suicide risk. Management combines psychotherapy and pharmacotherapy (e.g. SSRIs or the neurosteroid brexanolone). Homoeopathically, PPD is approached constitutionally remedies are selected based on the individual emotional approach. This review integrates current biomedical knowledge with classical homoeopathic understanding, highlighting diagnosis, conventional care, and homoeopathic case-taking and remedy selection for PPD.

Keywords: Postpartum depression; Homoeopathy; Reproductive hormones; Neurosteroids; GABA; Maternal mental health; Perinatal mood disorder.

Aim

To evaluate the biopsychosocial determinants of postpartum depression (PPD) and to analyze the role of an integrative management approach combining conventional psychiatric care and individualized homoeopathic treatment in improving maternal mental health during the postpartum period.

Objectives

1. To assess prevalence and clinical features of postpartum depression.
2. To identify biological, psychological, and social determinants of postpartum depression.
3. To screen postpartum women using EPDS.
4. To evaluate individualized homoeopathic treatment in postpartum depression.
5. To assess improvement in symptoms, bonding, and quality of life after integrative care.
6. To promote early detection and multidisciplinary management of postpartum depression.

Review of Literature

Introduction

Postpartum depression (PPD) is a debilitating mood disorder emerging in the first year after childbirth. It is a leading complication of the perinatal period and can manifest as intense sadness, anxiety, sleep disturbance, and impaired functioning ⁽¹⁾.

Epidemiologically, PPD affects roughly 10–20% of new mothers worldwide. Left untreated, PPD can disrupt mother–infant bonding, strain family relationships, and even contribute to maternal suicide. Despite its prevalence, many cases go unrecognized due to stigma and lack of screening. From a homoeopathic standpoint, the postpartum period is recognized as a time of profound physiological and emotional transition ⁽²⁾. Homoeopathy emphasizes treating the whole person – considering the mother’s emotional state, physical health, and social context – rather than a one-size-fits-all remedy ⁽³⁾. The present article reviews PPD’s epidemiology, pathophysiology, risk factors, and management, and examines how classical homoeopathic principles and remedies may be applied in this context.

Epidemiology and Prevalence:

PPD is among the most common psychiatric conditions of the peripartum period⁽⁴⁾. Prevalence estimates vary by region and study, reflecting cultural and methodological differences. Globally, 6.5–20% of postpartum individuals experience PPD. ⁽⁵⁾ For example, meta-analytic data report rates as high as ~21.4% in China versus ~8.6% in the United States ⁽⁶⁾. On average, symptoms tend to begin around three to four months after delivery. Overall, it has been estimated that roughly one in seven perinatal women meet criteria for major depression in pregnancy or the first postpartum year ⁽⁷⁾. Although postpartum “blues” (milder mood swings in the first days after birth) are common (~30–40% incidence), PPD is distinguished by more persistent and severe symptoms lasting weeks to months ⁽⁵⁾. Awareness of PPD’s high prevalence underscores the importance of routine screening (e.g. with the Edinburgh Postnatal Depression Scale) in maternity care.⁽⁴⁾

Etiology and Pathophysiology:

The pathogenesis of PPD is complex and not fully understood ⁽⁴⁾. Reproductive hormone dynamics are central ⁽⁸⁾ during pregnancy, estrogen and progesterone levels increase dramatically (10–50 fold) and then plunge abruptly after childbirth ⁽⁵⁾. This sudden hormonal withdrawal can trigger neuroendocrine dysregulation in susceptible women ⁽⁸⁾. The hypothalamic–pituitary–adrenal (HPA) axis is also perturbed; cortisol levels rise significantly in late pregnancy and remain elevated for weeks postpartum, and dysregulation of stress response has been implicated in PPD ⁽⁴⁾. Concurrently, neurotransmitter systems are affected. In particular, GABAergic signaling – the brain’s chief inhibitory system – may become imbalanced ⁽⁴⁾. The neuroactive steroid allopregnanolone (a metabolite of progesterone) normally enhances GABA_A receptor function, but its levels fall precipitously after delivery. This withdrawal of GABAergic modulation is thought to contribute to mood destabilization ⁽⁸⁾. Preclinical and clinical evidence supports this: exogenous allopregnanolone (brexanolone) can reverse PPD-like behaviors in animal models and has shown rapid efficacy in humans. Other biological factors – including genetic vulnerability, immune changes, thyroid or vitamin deficiencies, and metabolic alterations – likely intersect with hormonal shifts to precipitate PPD. In sum, PPD appears to result from the convergence of endocrine (reproductive hormone) changes, neurosteroid withdrawal, neurotransmitter dysregulation, and psychosocial stressors ⁽⁹⁾.

Risk Factors and Comorbidities:

Numerous risk factors predispose to PPD. Prior personal or family history of depression or anxiety is a strong predictor ⁽⁴⁾. Obstetric and medical factors also contribute: high-risk pregnancies, preterm delivery, cesarean section and complications such as gestational diabetes have all been linked to greater PPD incidence ⁽⁵⁾. Hormonal events like premature placental separation or extreme fatigue can precipitate symptoms ⁽¹⁰⁾. Psychosocial factors are likewise critical. Women with low social support, marital conflict, or recent stressful life events (e.g. trauma, loss, abuse) face much higher PPD risk ⁽⁴⁾. For instance, lack of spousal or family support is consistently associated with depression onset after birth ⁽⁵⁾. Additional contributing factors may include financial hardship, unplanned pregnancy, and young maternal age. Many of these risks coexist; for example, poverty may limit support and increase stress ⁽⁴⁾. Comorbid mental health issues (such as pre-existing mood or anxiety disorders) and physical conditions (e.g. anemia, thyroid disease) further elevate vulnerability ⁽⁷⁾

In clinical practice, a comprehensive history should screen for these factors, as their presence should heighten vigilance for PPD.

Diagnostic Criteria and Screening Tools:

Clinically, PPD is not diagnosed differently from other major depressions except for timing. The DSM-5 uses a “peripartum onset” specifier to denote depression that begins during pregnancy or within 4 weeks of delivery ⁽⁷⁾ However, many experts extend the postpartum window to 12 months ⁽¹¹⁾ In practice, diagnostic criteria mirror those for major depressive disorder: at least five of nine symptoms (including depressed mood or loss of interest) present for ≥ 2 weeks, causing significant distress or impairment.⁽⁷⁾ Common symptoms include pervasive sadness, guilt or worthlessness, sleep/appetite disturbance, fatigue, anxiety, and in severe cases suicidal ideation or thoughts of harm to the baby. ⁽⁸⁾ Importantly, mood changes should exceed typical “blues” by their severity and duration.⁽⁴⁾ Because PPD can be subtle or masked by the demands of newborn care, systematic screening is recommended.⁽¹¹⁾ Standard tools like the Edinburgh Postnatal Depression Scale (EPDS) or the Patient Health Questionnaire (PHQ-9) have been validated for this purpose.⁽¹²⁾ Routine screening at postpartum check-ups helps identify at-risk mothers.⁽¹¹⁾ A score above the EPDS

threshold (often $\geq 12-13$) prompts clinical follow-up. Ultimately, diagnosis relies on clinical evaluation, but screening tools increase case-finding for timely intervention ⁽⁷⁾.

Biological Mechanisms: Neurosteroids and GABA

A growing body of research highlights neurosteroids – particularly allopregnanolone – and the GABAergic system in PPD pathophysiology. Allopregnanolone is a metabolite of progesterone that is a potent modulator of GABA_A receptors. During pregnancy, allopregnanolone levels rise substantially, promoting anxiolysis and neuronal inhibition. After birth, the abrupt fall in allopregnanolone may leave vulnerable women with deficient GABAergic tone. This hypothesis is supported by animal studies: mice engineered to lack normal GABA_A function develop depression- and anxiety-like behavior after delivery, which can be reversed by allopregnanolone administration. Clinically, this mechanism is underscored by brexanolone, the first FDA-approved drug specifically for PPD (an IV allopregnanolone formulation). Brexanolone infusion over ~60 hours produces rapid symptom relief in many PPD patients. Apart from GABA, other neurosteroid pathways (e.g. cortisol and HPA axis, serotonergic modulation by estrogen) also influence mood postpartum. Thus, the “neurosteroid withdrawal” model links reproductive endocrinology with neurotransmitter dysfunction in PPD.⁽⁹⁾

Psychosocial and Environmental Influences:

Beyond biology, psychosocial factors play an essential role in PPD. Lack of emotional and instrumental support (from partners, family, community) is a well-established precipitant. For example, women reporting low perceived social support or marital conflict have significantly higher rates of PPD ⁽⁴⁾. Stressful events around the time of delivery (e.g. a difficult childbirth, loss of employment, or illness in the infant) can trigger or worsen depression ⁽⁵⁾. Socioeconomic adversity (poverty, housing instability) imposes chronic stress that may culminate in PPD ⁽⁸⁾. Societal factors like maternal leave policies and cultural expectations about motherhood also influence risk ⁽¹³⁾. Furthermore, stigma and fear of judgment often prevent women from disclosing distress. The COVID-19 pandemic has brought this into sharp relief, as isolation and anxiety have surged ⁽¹⁴⁾. Protective factors, conversely, include positive relationships, community resources, and mental health literacy. In sum, the psychosocial context – including support networks, life stress, and cultural milieu – can significantly modulate whether a biologically vulnerable mother develops PPD.

Addressing these factors (through counselling, support groups, etc.) is thus a critical component of care ⁽¹⁵⁾.

Conventional Treatment Approaches:

Management of PPD follows standard depression treatment paradigms, with special consideration for the perinatal context. Psychotherapy is a mainstay, particularly for mild-to-moderate depression ⁽¹⁶⁾ Evidence-based modalities include cognitive-behavioral therapy (CBT), interpersonal therapy (IPT), and dialectical behavior therapy, often in individual or group formats ⁽¹⁷⁾ Supportive interventions (parenting education, peer support groups) are also beneficial ⁽¹⁵⁾ Pharmacotherapy is indicated for moderate-to-severe cases or when psychosocial treatment alone is insufficient. Selective serotonin reuptake inhibitors (SSRIs, e.g. sertraline) are commonly used, as they have good safety profiles in breastfeeding ⁽⁹⁾ Other antidepressants (SNRIs, TCAs) may be considered ⁽¹⁶⁾ It is important to discuss risks/benefits of medication with the mother, given concerns about infant exposure; most guidelines affirm that treatment of maternal depression outweighs potential neonatal risks ⁽¹¹⁾ Novel agents have emerged: brexanolone (allopregnanolone analog) is an FDA-approved IV infusion specific for PPD, offering rapid relief but requiring monitored administration. Zuranolone (an oral neurosteroid) and other GABA-modulating compounds are under study. For severe, treatment-resistant PPD – especially with psychotic features – electroconvulsive therapy (ECT) remains an effective option. Throughout, coordination with obstetricians and pediatricians ensures that both mother and baby's welfare are protected. Overall, a combination of psychotherapy, social support, and carefully chosen medications is the foundation of conventional PPD care ⁽⁹⁾

Homoeopathic Interpretation and Management

In homoeopathic practice, PPD is treated on a constitutional and holistic basis ⁽¹⁷⁾. The homeopathic approach emphasizes understanding the mother's totality of symptoms – emotional, mental, and physical – in the context of her personality and environment ⁽²⁾. Rather than a standard formula for “postpartum depression,” remedies are selected to match the individual's symptom profile ⁽³⁾. A thorough case history explores mood changes related to childbirth, fears (for herself or her baby), sleep and appetite, sensitivity, and the patient narrative of her condition ⁽²⁾. Adjunctive factors (such as fatigue from lack of

sleep or nutritional deficiencies) are addressed through lifestyle advice ⁽¹⁷⁾. Homoeopathy also recognizes the interplay of mind and body: for example, emotional grief or anger may manifest alongside hormonal and metabolic shifts in the postpartum state ⁽²⁾.

Homoeopathic Materia Medica ^(18,19,20, 21)

1. Actaea racemosa / Cimicifuga

Keynote:

“Puerperal mania; thinks she is going crazy; tries to injure herself.”

Sensation as if a black cloud has settled over her, everything is dark and confused; incessant talking; hysterical.

2. Pulsatilla nigricans

Keynote:

“Puerperal insanity in a woman who was mild, gentle and tearful, later sad and taciturn, and then she sits in her chair all day answering nothing or merely nodding her head.”

3. Liliun tigrinum

Keynote:

Profound depression of spirits; can hardly avoid weeping.

Fears insanity; anxiety about disease; consolation aggravates.

Close connection of uterine prolapse / uterine congestion with mental symptoms.

4. Sepia

Keynotes:

Melancholy, indifference to loved ones, especially husband and child.

Irritable, wants to be alone, aversion to family, better from vigorous exercise.

Marked uterine and pelvic symptoms; “dragging down” feeling.

5. Platina

Keynote:

Listed under “Inflammation of the womb, hysteria, sterility, melancholy... lochia, puerperal mania”.

Proud, haughty, looks down on others; alternates between exaltation and deep depression.

6. Veratrum album

Keynotes:

“Certain form of puerperal insanity”: extreme excitement, loquacity, extravagant affection or lasciviousness, kissing everyone.

Religious delusions; sudden alternation between collapse and excitement.

7. Thyroidinum

Keynote:

Acts as galactagogue in deficient milk; reference to puerperal insanity with menstrual/lactation disturbance.

8. Actaea spicata

Keynote:

“Puerperal mania; thinks she is going crazy. Great depression with dreams of impending evil.”

9. Natrum muriaticum

Keynotes:

Silent grief, wants to cry alone, consolation aggravates.

Dwells on past hurts, can't “get over” a difficult labour or delivery.

10. Anacardium orientale

Keynotes:

Discouraged, despair about the birth, blames everyone for her experience. Feels disconnected from herself and baby (“nothing is real”).

No confidence in ability to care for child; suspicious of help offered.

11. Kali phosphoricum

Keynotes:

Mental and nervous exhaustion from over-work, worry, prolonged illness.

Sleepless, anxious, irritable, weepy from sheer nerve-fatigue.

12. Ignatia

It is the first remedy to think of when post-partum depression begins after emotional shock or disappointment, especially when the mother is trying to “hold herself together”.

Key Mental Features

Silent grief after childbirth

“Sufferings are silent” (Kent).

She avoids crying in front of others; cries when alone.

She keeps replaying events (labour trauma, complications, negative hospital experience).

Suppressed emotions – everything bottled up

Swallow emotions to appear strong.

Consolation aggravates – becomes more upset when supported.

Sudden alternations (classic Ignatia contradictions)

Laughing one moment, crying the next (“changeable mood”).

Irritable, then repentant.

Wants to be alone, yet feels lonely.

13. Natrum muriaticum – introverted depression, holds on to distress of difficult labour.

14. Aletris farinosa – great uterine weakness, anaemia, profound tiredness, “worn-out” feeling.

15. Asarum europaeum – extreme nervous sensitivity, hypersensitive to noise and stimuli.

16. Bovista – awkward, clumsy, “never gets through anything right”; can feel socially embarrassed and depressed.

17. Collinsonia canadensis – pelvic congestion, haemorrhoids, constipation with low mood.

18. Conium maculatum – indurated glands, suppressed sexual emotion; gloomy, depressed.

19. Ferrum phosphoricum – anaemic, tired, low-grade depression and weakness.

20. Kali carbonicum – anxiety, especially around 2–3 a.m., weakness in back and knees, postpartum debility.
21. Lac vaccinum coagulatum – emotional instability in nursing mothers, identity issues.
22. Magnesia carbonica – tearful, oversensitive, gloomy.
23. Phosphorus – oversensitive, fearful, weepy; easily exhausted.
24. Arsenicum album – great anxiety about health and the baby, fear of death, restlessness.
25. Kreosotum – offensive lochia, irritability, depression.

Homoeopathic management also integrates supportive care ⁽²²⁾. Addressing sleep hygiene, gentle exercise, and nutrition can enhance resilience ⁽²⁾. Counselling or group therapy may be recommended alongside remedy treatment. Importantly, collaboration with conventional care providers is advised: homoeopathy can complement (but not replace) therapies like psychotherapy or medication when needed ⁽²⁾. In summary, the homoeopathic strategy for PPD involves constitutional remedy selection guided by classical rubrics, accompanied by general lifestyle and emotional support. ⁽²⁾

Conclusion

Postpartum depression is a prevalent, multifactorial disorder with significant consequences for mothers and families. An integrated understanding – encompassing hormonal, neurochemical, and psychosocial dimensions – is essential for effective care. Conventional treatment offers evidence-based benefits through psychotherapy and pharmacotherapy (including novel neurosteroid agents) ⁽¹¹⁾. Homoeopathy, with its emphasis on individualized constitutional care, provides an additional perspective that some patients may find appealing ⁽²⁾. Tailored homoeopathic remedies can address specific emotional symptom patterns in PPD⁽²³⁾, potentially alleviating distress in coordination with other supports. However, rigorous clinical research on homoeopathic efficacy for PPD remains limited, and more well-designed trials are needed ⁽²²⁾. Clinicians are encouraged to maintain an integrative stance: screening for PPD, referring for conventional therapy as indicated, and considering homoeopathic options when aligned with patient preferences ⁽¹¹⁾. Ultimately, a collaborative, multidisciplinary approach – in which homeopaths, medical doctors, and mental health professionals work together – holds promise for improving outcomes in postpartum mental health ⁽¹⁵⁾

Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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