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Case Report

Premenstrual Dysphoric Disorder versus Premenstrual Exacerbation of Psychiatric Disorders: Diagnostic and Therapeutic Implications for Gynecological and Perinatal Practice

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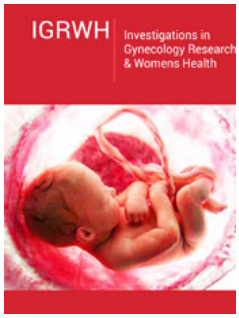

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Abstract

Background: Premenstrual mood symptoms are frequently encountered in gynecological practice. However, severe affective presentations may correspond either to Premenstrual Dysphoric Disorder (PMDD) or to Premenstrual Exacerbation (PME) of an established psychiatric disorder. Failure to distinguish these entities may result in inappropriate hormonal modification or insufficient psychiatric management.

Objective: To review current evidence on epidemiology, pathophysiology, clinical differentiation, and treatment of PMDD and PME, emphasizing practical implications for gynecological and perinatal care.

Methods: Narrative review of recent systematic reviews, meta-analyses, and clinical guidelines addressing menstrual cycle-related mood disorders and reproductive psychopharmacology.

Results: PMDD is defined by affective, cognitive, and somatic symptoms confined to the luteal phase, with full remission in the follicular phase. Prospectively confirmed prevalence ranges from 1.6% to 3.2%. PME refers to cyclical worsening of pre-existing psychiatric disorders, including major depressive disorder, bipolar disorder, anxiety disorders, obsessive-compulsive disorder, psychotic disorders, and borderline personality disorder, without complete intermenstrual remission. PMDD involves abnormal central nervous system sensitivity to physiological ovarian steroid fluctuations, particularly progesterone-derived allopregnanolone. PME reflects hormone-triggered amplification of symptoms in biologically vulnerable neural systems. Therapeutic strategies differ substantially: intermittent Selective Serotonin Reuptake Inhibitors (SSRIs) and drospirenone-containing combined oral contraceptives are first-line for PMDD, whereas PME requires optimization of baseline psychiatric treatment, with hormonal strategies considered adjunctive.

Conclusion: Accurate differentiation between PMDD and PME is essential in gynecological and perinatal practice. Incorporating systematic menstrual assessment into routine evaluation improves diagnostic precision, reduces psychiatric morbidity and suicide risk, and supports preventive strategies in reproductive mental health.

Keywords: Premenstrual dysphoric disorder; Premenstrual exacerbation; Menstrual cycle; Reproductive psychiatry; Perinatal mental health; Women's mental health

Introduction

The menstrual cycle is a core component of reproductive physiology and a clinically relevant modulator of mental health. In daily gynecological practice, premenstrual complaints are common; However, severe mood symptoms are often under-recognized or attributed solely to hormonal imbalance without psychiatric evaluation. For obstetricians and gynecologists, distinguishing Premenstrual Dysphoric Disorder (PMDD) from Premenstrual Exacerbation (PME) of a pre-existing psychiatric disorder is critical. These entities differ in pathophysiology,

prognosis, and treatment response. Misclassification may lead to unnecessary discontinuation of effective psychiatric medication, repeated contraceptive changes without clinical improvement, or inadequate stabilization before pregnancy. This review translates current evidence into clinically applicable guidance for gynecological and perinatal practice.

Epidemiology

Mild premenstrual symptoms affect up to 80-90% of menstruating individuals [1]. Global prevalence of premenstrual syndrome ranges between 20% and 47%, depending on diagnostic criteria. A recent meta-analysis reported a pooled prevalence of prospectively confirmed PMDD of approximately 1.6% [2]. Higher rates (7-8%) are observed when retrospective or provisional criteria are applied. PME is particularly prevalent among women with psychiatric disorders. Prospective data indicate significant cyclical worsening in mood, anxiety, bipolar, and psychotic disorders [3]. Comorbidity between PMDD/PMS and mood disorders may reach 47%, and up to 29% of women with bipolar disorder meet criteria for PMDD [4]. Perimenstrual periods have been associated with increased psychiatric hospitalization and suicidal behavior, reinforcing the need for structured menstrual assessment in women presenting to gynecological care.

Clinical Differentiation

Premenstrual Dysphoric Disorder (PMDD)

According to DSM-5-TR [5], PMDD requires:

a) At least five symptoms in the final week before menses

b) At least one core affective symptom (marked irritability, affective lability, depressed mood, or anxiety)

c) Clinically significant functional impairment

d) Full remission in the early follicular phase

e) Prospective documentation over at least two consecutive cycles

PMDD is defined by cyclical symptom expression with symptom-free intervals.

Premenstrual Exacerbation (PME)

PME describes premenstrual worsening of an established psychiatric disorder without complete symptom resolution outside the luteal phase.

Key diagnostic indicator: Persistent baseline symptoms across the cycle with predictable premenstrual intensification. PME commonly occurs in major depressive disorder, bipolar disorder, obsessive-compulsive disorder, generalized anxiety disorder, panic disorder, schizophrenia, and borderline personality disorder. Prospective daily symptom charting is essential to avoid diagnostic overlap.

Pathophysiology

Women with PMDD do not demonstrate abnormal hormone levels. Rather, they exhibit altered neurobiological sensitivity to physiological fluctuations in estradiol and progesterone [6]. Allopregnanolone, a progesterone metabolite that modulates GABA-A receptors, appears central to symptom generation. In susceptible individuals, dynamic changes in allopregnanolone levels may produce paradoxical anxiety and irritability, suggesting dysregulated inhibitory modulation [7]. In PME, ovarian hormone fluctuations amplify symptom intensity within pre-existing dysregulated neural systems rather than creating a distinct cyclical disorder [8].

Diagnostic assessment in Gynecological and Perinatal Settings

Routine menstrual history should be incorporated into mental health screening within gynecological care.

Recommended tools include:

a) Daily Record of Severity of Problems (DRSP)

b) Premenstrual Symptoms Screening Tool (PSST)

c) Structured Clinical Interview for DSM-5 (SCID-5)

Prospective monitoring across at least two cycles remains the gold standard for differentiating PMDD from PME.

In perinatal contexts, identifying cyclical vulnerability informs:

a) Contraceptive counseling

b) Preconception planning

c) Psychotropic continuation decisions

d) Postpartum relapse prevention

Treatment Implications

PMDD

Selective Serotonin Reuptake Inhibitors (SSRIs) are first-line therapy and act rapidly in PMDD. Effective regimens include:

a) Intermittent luteal-phase dosing

b) Semi-intermittent dosing

c) Continuous dosing

Fluoxetine, sertraline, paroxetine, and escitalopram show consistent efficacy [9,10]. Combined oral contraceptives containing drospirenone (24/4 regimen) reduce both emotional and somatic symptoms [11,12]. Refractory cases may require GnRH agonists. Neurosteroid-targeted therapies remain under investigation.

PME

Management prioritizes optimization of the underlying psychiatric disorder:

a) Mood stabilizers for bipolar disorder

b) Antipsychotics for psychotic disorders

c) Disorder-specific pharmacotherapy for anxiety and obsessive-compulsive disorders

Intermittent SSRI treatment alone is generally insufficient. Hormonal interventions may be considered adjunctively in selected cases. These therapeutic principles can be illustrated through clinical case applications.

Clinical Case Applications

To enhance clinical applicability, the following brief case vignettes illustrate the diagnostic differentiation between PMDD and PME and their respective treatment implications.

Case 1: Premenstrual Dysphoric Disorder (PMDD)

A 29-year-old woman with no prior psychiatric history presents with recurrent episodes of marked irritability, emotional lability, and anxiety occurring consistently during the week prior to menses. She reports complete symptom resolution within a few days after menstruation begins. Prospective daily charting using the Daily Record of Severity of Problems (DRSP) confirms a clear luteal phase pattern with symptom-free follicular intervals.

Diagnostic implication: Findings are consistent with PMDD.

Treatment approach: Intermittent luteal-phase dosing of a Selective Serotonin Reuptake Inhibitor (SSRI) (e.g., fluoxetine or sertraline) is initiated, given their rapid onset of action in PMDD. Combined oral contraceptives containing drospirenone may also be considered.

Case 2: Premenstrual Exacerbation (PME) of major depressive disorder

A 35-year-old woman with a history of major depressive disorder under partial remission reports worsening depressive symptoms, including low mood, fatigue, and hopelessness in the premenstrual phase. However, she continues to experience residual symptoms throughout the entire menstrual cycle. Prospective monitoring reveals cyclical worsening without full intermenstrual remission.

Diagnostic implication: PME of major depressive disorder.

Treatment approach: Optimization of baseline antidepressant therapy (e.g., dose adjustment or switching within SSRIs or SNRIs such as sertraline, escitalopram, or venlafaxine) is prioritized. Intermittent SSRI strategies alone are generally insufficient. Hormonal interventions may be considered adjunctively.

Case 3: PME in bipolar disorder

A 32-year-old woman with bipolar II disorder reports increased irritability, insomnia, and mood instability premenstrually, with persistent subthreshold symptoms across the cycle. She is currently treated with a subtherapeutic dose of a mood stabilizer.

Diagnostic implication: PME in bipolar disorder, with risk of mood destabilization.

Treatment approach: Primary management involves optimization of mood stabilizer therapy (e.g., lithium, lamotrigine, or quetiapine). Antidepressant monotherapy is avoided due to risk of mood switching. Hormonal strategies may be considered only after adequate psychiatric stabilization.

These cases highlight that the presence or absence of intermenstrual remission represents the key distinguishing feature, directly guiding treatment decisions. Incorporating prospective symptom tracking into routine care improves diagnostic accuracy and prevents inappropriate therapeutic strategies. Treatment examples are illustrative and should be individualized according to clinical context and patient characteristics.

Clinical Implications for Gynecologists and Obstetric Providers

a) Severe premenstrual mood symptoms warrant prospective evaluation before modifying contraception.

b) Complete intermenstrual remission strongly supports PMDD.

c) Persistent baseline symptoms indicate PME and require psychiatric optimization.

d) Drospirenone-containing contraceptives may benefit PMDD but are insufficient as monotherapy in PME.

e) Women with bipolar disorder and cyclical worsening require mood stabilization before contraceptive adjustment.

f) Perimenstrual phases may represent increased suicide risk windows and justify closer monitoring.

g) Preconception stabilization reduces perinatal relapse risk.

Conclusion

PMDD and PME represent distinct menstrual-related mood conditions with different neurobiological mechanisms and therapeutic approaches. Accurate differentiation in gynecological settings is essential to avoid misdirected treatment and to improve reproductive mental health outcomes. Incorporating menstrual cycle assessment as a routine clinical parameter supports interdisciplinary collaboration between gynecology and psychiatry and informs preventive strategies across reproductive transitions. The inclusion of case-based clinical reasoning may further facilitate the translation of these concepts into clinical practice, contributing to more precise and individualized clinical care.

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