



# An Integrative Conceptual Study Of Premenstrual Syndrome Through Modern And Ayurvedic Perspective

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**Abstract:** Premenstrual Syndrome (PMS) is a complex condition affecting women of reproductive age, characterized by a spectrum of psychological, behavioral, and somatic symptoms during the luteal phase of the menstrual cycle, which subside with menstruation. PMS associates with hormonal fluctuations, neurotransmitter imbalance, nutritional deficiencies, and psychosocial stressors according to modern medicine. Conventional management relies on pharmacological and behavioral strategies. Premenstrual Syndrome (PMS) is understood in Ayurveda as a manifestation of *Rituvyatita Kalaja Pitta-Vata Vriddhi*, where the aggravation of *Vata* plays a central role in disturbing the balance of other *Doshas*. *Vata*, in association with *Pitta* and *Kapha*, vitiates *Manodoshas* and *Rasadhatu*, leading to both physical and psychological symptoms. Improper diet and lifestyle (*Mithya Ahara*, *Vihara*) are identified as common causative factors. Imbalance in *Pitta dosha* specifically contributes to symptoms such as irritability, mood swings, digestive disturbances, and skin issues. Ayurveda emphasizes individualized management strategies based on *Prakriti* (one's constitution) and *Vikriti* (current dosha imbalance). By integrating the mind-body connection, Ayurveda offers a holistic approach that enhances both emotional well-being and physical health. The study highlights the importance of recognizing dosha influences in PMS, particularly the role of *Pitta*, and advocates for further research into Ayurveda's potential in improving women's health and quality of life.

**Keywords** - Premenstrual Syndrome, *Rituvyatita Kalaja Pitta-Vata Vriddhi*, *Manodoshas*, *Rasadhatu*, *Prakriti*, *Vikriti*, *Ayurveda*, holistic approach.

## I. INTRODUCTION

Premenstrual Syndrome (PMS) is characterized by a collection of symptoms occurring before menstruation. It is recognized by the WHO under "diseases of the genitourinary tract." Also known as Premenstrual Tension (PMT) or Premenstrual Stress, PMS is a psych neuroendocrine disorder with an unknown cause, typically observed just before menstruation.<sup>1</sup>

The global prevalence of premenstrual syndrome is estimated at 47.8%<sup>2</sup>, while the most severe form of PMS - premenstrual dysphoric disorder (PMDD) affects 3-8% of women of reproductive age.<sup>3</sup> PMDD, recognized as a severe form of PMS, is diagnosed when symptoms persist for at least two menstrual cycles. In the 1980s, criteria for PMDD were established and later incorporated into the DSM-5, classifying it as a psychiatric disorder. Common in various age groups, it's particularly prevalent in women aged 30 to 45, especially those of childbearing age.<sup>4</sup> In India premenstrual syndrome is highly prevalent among working

women, at 48%, with the most common symptom being anger/irritability. Education status, sexual activity, and occupation have a significant association with PMS.<sup>5</sup>

PMS manifests as a constellation of emotional, behavioral, and somatic symptoms such as irritability, depression, fatigue, mastalgia, and abdominal bloating. The etiology remains multifactorial, with contributions from ovarian hormone fluctuations, altered serotonin and GABA neurotransmission, nutritional imbalances, and lifestyle factors.<sup>6,7</sup>

Ayurveda, provides a unique lens for understanding PMS through the concept of *dosha* imbalance, particularly *Vata* and *Pitta*, along with disturbances in *manasika bhavas* (psychological states). Classical texts describe conditions like *Artava Vyapad* and *Avasthika Vyadhis*, which share symptomatological overlap with PMS. This review integrates modern evidence with Ayurvedic insights to present a comprehensive management approach.

## Modern Perspective of PMS

### Etiology

The exact etiology of PMS remains multifactorial and not fully elucidated. However, several hypotheses have been proposed involving hormonal, neurochemical, genetic, and psychosocial factors:

1. **Hormonal fluctuations:** Cyclical changes in estrogen and progesterone levels during the luteal phase are believed to influence the central nervous system, leading to mood and behavioral symptoms.<sup>8</sup>
2. **Neurotransmitter dysregulation:** Serotonin, gamma-aminobutyric acid (GABA), and endorphin pathways have been implicated in PMS. A reduction in serotonin activity, in particular, is associated with depressive and anxious symptoms.<sup>9</sup>
3. **Genetic predisposition:** Family and twin studies suggest a hereditary component, where women with a first-degree relative with PMS have a higher likelihood of developing the condition themselves.<sup>10</sup>
4. **Lifestyle and psychosocial factors:** High stress levels, poor dietary habits, lack of physical activity, and underlying psychiatric disorders may exacerbate PMS symptoms.<sup>6</sup>

### Pathophysiology

The pathophysiology of PMS is closely tied to the interplay between hormonal changes and neurotransmitter response in the brain. Estrogen and progesterone modulate the synthesis and function of serotonin and GABA, which regulate mood and cognition. During the luteal phase, declining levels of estrogen and progesterone may reduce serotonin availability, triggering mood disturbances.<sup>9</sup>

Additionally, increased sensitivity to progesterone metabolites, such as allopregnanolone, which act on GABA receptors, may alter emotional reactivity and contribute to symptoms such as anxiety, irritability, and insomnia.<sup>11</sup> Some women appear to have an abnormal neurobiological response to normal hormonal changes, rather than abnormal hormone levels themselves.<sup>2</sup> Inflammatory markers and oxidative stress have also been investigated, suggesting a potential immune component to PMS.<sup>12</sup>

### Clinical Features<sup>2</sup>:

PMS is characterized by a group of symptoms that typically emerge 5–10 days before menstruation and resolve within a few days of its onset. Common clinical features include:

- **Physical symptoms:** Mastalgia (Breast tenderness), bloating, headache, fatigue, joint or muscle pain, changes in appetite, Pelvic pain, Backache, Nausea, Diarrhoea, Palpitations, Sweating
- **Emotional and behavioral symptoms:** Mood swings, irritability, anxiety, sleep disturbances, poor concentration, anger, depressed mood, crying and tearfulness, lack of concentration, confusion, forgetfulness, restlessness, loneliness, decreased self-esteem

The severity of symptoms varies widely. In its most extreme form, Premenstrual Dysphoric Disorder (PMDD), symptoms are severe enough to impair occupational and social functioning and meet DSM-5 diagnostic criteria.<sup>13</sup>

## Management

Management of PMS involves a multifaceted approach tailored to symptom severity and individual response:

### 1. Lifestyle Modifications:

- Regular aerobic exercise has been shown to reduce both physical and emotional symptoms.<sup>14</sup>
- A balanced diet rich in complex carbohydrates, calcium, and magnesium, along with reduced intake of caffeine, salt, and alcohol, is beneficial.
- Stress management techniques such as yoga, mindfulness, and cognitive behavioural therapy (CBT) are helpful adjuncts.<sup>6</sup>

### 2. Pharmacologic Interventions:

- Selective Serotonin Reuptake Inhibitors (SSRIs) are considered first-line treatment for moderate to severe PMS and PMDD.<sup>9</sup>
- Combined oral contraceptives (COCs) help stabilize hormonal fluctuations and are effective in symptom control.<sup>15</sup>
- Nonsteroidal anti-inflammatory drugs (NSAIDs) are used to manage physical discomfort like cramps and headaches.

### 3. Complementary and Alternative Therapies:

- Calcium supplementation (1,000–1,200 mg/day) has been shown to significantly reduce PMS symptoms.<sup>14</sup>
- Herbal remedies such as Vitex agnus-castus (chasteberry) and evening primrose oil have been used with varying success.<sup>16</sup>

## Ayurvedic Perspective of PMS

In Ayurveda, PMS can be correlated with Premenstrual syndrome can be probably correlated with *Rituvyatita Kalaja Pitta Vata Vriddhi*, which are attributed to aggravated *Vata* and *Pitta doshas*, and influenced by *rajas guna*. The symptoms reflect imbalance in *sharirika* (bodily) and *manasika* (psychological) doshas.

Premenstrual Syndrome (PMS) encompasses a spectrum of physical, emotional, and behavioral symptoms that cyclically manifest during the luteal phase of the menstrual cycle and resolve with the onset of menstruation. While modern medicine often approaches PMS through hormonal and neurochemical frameworks, Ayurveda, the ancient Indian system of medicine, offers a holistic understanding of PMS grounded in the principles of *Tridosha* (*Vata*, *Pitta*, *Kapha*), *Agni*, *Dhatu*s, and *Srotas*.

### Samprapti (Pathogenesis) of PMS in Ayurveda

In Ayurveda, the menstrual cycle is governed by *Apana Vata*, a subtype of *Vata Dosha* responsible for regulation of menstruation. In premenstrual phase which is *Rituvyatita kala*, there is dominance of *Pitta dosha* with *Vata dosha sanchaya*. Due to *nidana sevana* (*Mithya ahara* and *vihara*) there is *Prakopa* of *Apana Vata* and *Pitta*, which disrupt the normal rhythm of menstruation, contributing to symptoms of PMS.<sup>17</sup>

### Role of Agni and Ama in PMS

Impaired *Agni* (digestive fire) results in the formation of *Ama* (toxic metabolic byproducts), which obstructs the *Artavavaha Srotas* (channels carrying menstrual flow), leading to premenstrual symptoms. *Ama* acts as a toxin that affects both the *Sharirika* (physical) and *Manasika* (psychological) aspects of health.<sup>18</sup>

### Psychoneuroendocrine Interface in Ayurveda

Ayurveda recognizes the deep connection between *Manas* (mind) and *Sharira* (body). Emotional symptoms of PMS such as mood swings, irritability, and depression are understood through the lens of *Rajas* and *Tamas*—*manas gunas* that, when aggravated, contribute to psychological imbalances. Vitiating of *Sadhaka Pitta* and *Prana Vata* further explains mood-related symptoms during PMS.<sup>19</sup>

## Ayurvedic Management of PMS

The Ayurvedic management of PMS is rooted in:

1. *Shodhana Chikitsa* (Detoxification therapies): *Panchakarma* procedures like *Virechana* (therapeutic purgation) and *Basti* (medicated enema) help eliminate aggravated *Doshas*, particularly *Pitta* and *Vata*, and purify the reproductive channels. *Nasya* (for psychosomatic balance) also can be given.
2. *Shamana Chikitsa* (Pacification therapies)<sup>20</sup>: Some Drugs that can be used in Ayurveda are *Yastimadhu churna*, *Gokshura churna*, *Dadimastaka churna*, *Brahmi*, *Ashwagandha*, *Jatamamsi* and *Guduchi* to cope with emotional symptoms, *Shatavari* and *Kumari* are the best to deal with a *Pitta* imbalance.

Some *Yoga* can also be prescribed along with medicines like *Ushtrasana*, *Gomukhasana*, *Bhujangasana* and *Pavanamuktasana*. *Pranayamas* like *Nadi Shodhana* and *Anulomaviloma* are also helpful in *Vata* imbalance, *Naukasana* and *Dhanurasana* yoga postures and *Sheetali pranayama* can be use in *Pitta* imbalance. *Suryanamaskaras* and spinal twists *Bastrika* and *Kapalbhati* in *Kapha* imbalance.

3. *Medhya Rasayanas*: *Brahmi* (*Bacopa monnieri*) and *Mandukaparni* (*Centella asiatica*) are used to enhance mental stability and reduce anxiety and mood swings.
4. *Ahara* and *Vihara* (Diet and Lifestyle): Emphasis is placed on regular meals, warm and unctuous foods, avoidance of excessive stimulation, regular sleep, yoga, and meditation. Inclusion of *yava* and milk in diet is helpful.

### Symptom-Hetu Correlation in PMS (Ayurvedic View)<sup>21</sup>

Symptom	Probable Hetu / Dosha Involvement
Cramps/abdominal pain	<i>Vata</i> vitiation due to irregular diet, <i>vataprakopaka ahara</i>
Headache/irritability	<i>Pitta</i> aggravation from spicy food, stress, sleep loss
Insomnia/anxiety	<i>Vata</i> aggravation due to stress and <i>Rajas guna</i>
Breast tenderness	<i>Kapha</i> and <i>Pitta</i> imbalance

### Integrative Management

An integrative approach combining modern and Ayurvedic principles provides a comprehensive strategy for PMS. While pharmacological agents offer symptomatic relief, Ayurvedic interventions aim at correcting underlying *dosha* imbalance, improving resilience, and preventing recurrence. Lifestyle modifications rooted in Ayurveda—such as dietary regulation, *yoga*, meditation, and *Rasayana* therapy—complement modern evidence-based practices. Such a multidimensional approach ensures both symptomatic relief and long-term well-being.<sup>21,23</sup>

### Discussion

Premenstrual Syndrome (PMS) is a multifactorial disorder resulting from complex interactions among hormonal, neurochemical, and psychosocial factors. It is primarily linked to cyclical changes in estrogen and progesterone levels and their influence on serotonergic and GABAergic pathways, leading to mood, behavioral, and physical symptoms<sup>1,2</sup> Although pharmacological treatments such as SSRIs, oral contraceptives, and NSAIDs provide symptomatic relief, they are often associated with side effects and symptom recurrence upon discontinuation<sup>3</sup>

Ayurveda explains PMS as a manifestation of *Vata-Pitta* vitiation during the *Rituvyatita Kala* (premenstrual phase), with involvement of *Rajas* and *Manasika Bhavas* (mental attributes) contributing to emotional disturbances<sup>4,5</sup>. The aggravation of *Apana Vata* and *Pitta* impairs *Artavavaha Srotas*, resulting in both somatic and psychological symptoms. *Ama* formation due to impaired *Agni* further obstructs normal physiology, producing premenstrual discomfort<sup>6</sup> Herbs such as *Shatavari*, *Ashoka*, *Guduchi*, and *Brahmi* help pacify aggravated *doshas* and act as *Rasayana* agents promoting hormonal and emotional balance<sup>6</sup>. *Panchakarma* therapies like *Basti* and *Virechana* assist in *dosha* elimination, while lifestyle modifications including *yoga*, *Pranayama*, and adherence to *Dinacharya* stabilize neuroendocrine functions<sup>8</sup>. An integrative approach combining modern evidence-based therapies with Ayurvedic preventive and restorative measures ensures comprehensive management. This synergy addresses both physiological and



psychosomatic dimensions of PMS, aligning with the holistic principles of women's health care advocated in Ayurveda<sup>9</sup>. Integrating modern pharmacological strategies with Ayurvedic preventive care provides a dual advantage: addressing acute symptoms while also strengthening long-term psychosomatic health. This integration aligns with global trends emphasizing holistic and sustainable healthcare.<sup>22,23</sup>

## Conclusion

Premenstrual Syndrome is a multifactorial condition impacting women's physical, emotional, and social well-being. Modern medical science highlights hormonal and neurochemical mechanisms, while Ayurveda interprets PMS through dosha imbalance and lifestyle factors. By combining modern evidence-based treatments with Ayurvedic lifestyle, herbal, and Panchakarma therapies, a holistic model of management can be achieved. Such an integrative strategy not only ensures symptomatic relief but also improves long-term health outcomes and quality of life.

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