

# Journal of **Ayurveda and Integrated Medical Sciences**

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An International Journal for Researches in Ayurveda and Allied Sciences



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# **Ayurveda and Integrated Medical Sciences**

**CASE REPORT** 

January 2023

# Ayurvedic management of Premenstrual Syndrome - A Case Study

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## ABSTRACT

Reproductive health is a condition in which the reproductive process is accomplished in a state of complete physical, mental and social well-being and is not merely the absence of disease or disorders of the reproductive process. Most women experiences mood and behavioral changes apart from physical discomfort associated with the menstrual cycle. Although there are both ups and downs associated with the cycle, it is the more problematic part of the cycle that are characterized, as premenstrual syndrome. Premenstrual syndrome is a psycho neuro endocrine disorder of unknown etiology, often noticed just prior to menstruation. There is cyclic appearance of a large number of symptoms during the last 7-10 days of the menstrual cycle. It is important for two reasons, firstly because the symptoms of PMS are responsible for socioeconomic loss and secondly because of associated legal and women's rights issues that have arisen in conjunction with personal accountability during the premenstrual period. An estimated 3% to 5% of ovulating women appear to suffer from symptoms so marked that they qualify for a diagnosis of premenstrual dysphoric disorder. A 15-year-old female patient reported to OPD with the complaints of head ache, irritability, depression, extreme mood swings, lack of concentration, physically injuring herself, bloating 7-8 days prior to menstruation and it resolves with the onset of menstruation. After proper physical and mental status examination, based on history, presenting symptoms and diagnostic criteria the case was diagnosed as Premenstrual Syndrome. So, the protocol for treatment planned was internal administration of Kalyanaka Kashayam, Drakshadi Kashayam, Thalam with Ksheerabala for 3 months along with proper Rajaswalacharya. Yoga Asanas and Pranayamas were also

Key words: Premenstrual Syndrome, Kalyanaka Kashayam, Drakshadi Kashayam, Thalam, Ksheerabala, Rajaswalacharya, Yoga Asanas, Pranayama

### **INTRODUCTION**

In the constitution of the World Health Organization, health is defined as a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity. This definition, idealistic as it may look, is nowhere as relevant and applicable as in the area of reproductive health. In the context of this positive definition, reproductive health

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Submission Date: 16/11/2022 Accepted Date: 23/12/2022

Access this article online **Quick Response Code** 

Website: www.jaims.in

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is a condition in which the reproductive process is accomplished in a state of complete physical, mental and social well-being and is not merely the absence of disease or disorders of the reproductive process. Prevalence of psychiatric disorders in women are more than in men. Most women report mood and behavioral changes apart from physical symptoms associated with the menstrual cycle. Although there are both ups and downs associated with the cycle, it is the more problematic part of the cycle that are characterized, as premenstrual syndrome. Premenstrual syndrome (PMS) also described as premenstrual tension (PMT) is a psycho neuro endocrine disorder of unknown etiology, often noticed just prior to menstruation. There is cyclic appearance of a large number of symptoms during the last 7-10 days of the menstrual cycle.[1]

### It should fulfil the following criteria (ACOG)

Not related to any organic lesion.

- Regularly occurs during the luteal phase of each ovulatory menstrual cycle.
- Symptoms must be severe enough to disturb the life style of the woman or she requires medical help.
- Symptom-free period during rest of the cycle.

When these symptoms disrupt daily functioning, they are grouped under the name premenstrual dysphoric disorder (PMDD).

### **Symptomatology of PMS and PMDD**

Pain	Head ache, breast pain, abdominal cramps, muscle stiffness, back ache, generalized body ache	
Water Retention	Abdominal bloating, breast tenderness, swelling of extremities, weight gain	
Neuro Psychiatric Symptoms	Irritability, Depression, Mood swings, Forgetfulness, Restlessness, Increased appetite, Tearfulness, Anxiety, Tension, Confusion, Headache, Anger	
Behavioral Symptoms	Fatigue, Dyspareunia, Tiredness, Insomnia	

### **Pathophysiology**

The exact cause is not known but the following hypotheses are postulated

- Alteration in the level of estrogen and progesterone starting from the mid luteal phase. Either there is altered estrogen: progesterone ratio or diminished progesterone level.
- 2. Neuroendocrine factors
  - Serotonin is an important neurotransmitter in the CNS. During the luteal phase, decreased synthesis of serotonin is observed in women suffering from PMS
  - Endorphins: The symptom complex of PMS is thought to be due to the withdrawal of endorphins (neurotransmitters) from CNS during the luteal phase.
  - y-aminobutyric acid (GABA) suppresses the anxiety levels in the brain. Medications that are GABA agonist, are effective.

- 3. Psychological and psychosocial factors may be involved to produce behavioral changes.
- 4. Others: Variety of factors have been mentioned to explain the symptom complex of PMS. These are thyrotrophin releasing hormone (TRH), prolactin, renin, aldosterone, prostaglandins, and others. Unfortunately, nothing is conclusive.

### **Clinical Features**

### **Classic description includes**

- Increasing breast tenderness, abdominal bloating, head ache, sleeplessness, fatigue, emotional lability, mood swings and depression, irritability, fluid retention and weight gain beginning 7-14 days prior to menses.
- As menstruation approaches, psychological abnormalities like irritability and hostility increase.
- The dominant symptom in different groups varies from anxiety, to depression, to fluid retention, bloating, head ache and breast pain, to increased appetite and craving for sweet food.

### **Treatment**

As the etiology is multifactorial and too often obscure, various drugs are used either on speculation or empirically with varying degrees of success. Life style modification and cognitive behavior therapy are important steps.

### **General**

### Nonpharmacological

- a) Assurance, Yoga, Stress management, Diet manipulation.
- b) Avoidance of salt, caffeine and alcohol specially in second half of cycle improves the symptoms.

### **Nonhormonal**

Tranquilizers or antidepressant drugs, Pyridoxine, Diuretics in the second half of the cycle - a week reduces fluid retention, anxiolytic agents, Selective Serotonin Reuptake Inhibitors (SSRI) and Nor adrenaline Reuptake Inhibitors (SNRI) are found to be very effective.

**Hormones:** Hormonal preparations like OCP, Levonorgestrel intrauterine system (IUS), danazol, GnRH analogues are also used.

### **Oophorectomy**

In established cases of PMS with recurrence of symptoms and approaching to menopause, hysterectomy with bilateral oophorectomy is a last resort.

### **CASE REPORT**

A female patient of 15 year-old student from high socio economic status visited OPD of Government Ayurveda hospital Mavelikkara, with her mother. Patient looks very ill and depressed. Her mother explained about the situation her daughter was going through. She had the complaints of head ache, irritability, depression, extreme mood swings, lack of concentration, physically injuring herself, bloating 7-8 days prior to menstruation and it resolves with the onset of menstruation for the past one year. She had a bite mark on her hand, which she had self-inflicted during the pre-menstrual phase of last menstrual period.

### **Menstrual history**

Patient attained menarche at the age of 12 years. Initial 2 year cycles since menarche was irregular. Regular menstrual cycle of 28 days for the past one year. Duration of menstrual bleeding was 4 days with moderate amount of blood loss with mild clots.

**Treatment History:** Not significant

**Surgical history:** Not significant

Family history: Not significant

### **Personal History**

Appetite: Poor

Bowel: Normal

Micturition: Normal

Sleep: disturbed

### **General examination**

Built: Lean

Nourishment: Moderate

Pulse: 75 / min

BP: 120/80 mm of Hg

Temperature: 97.6° F

Respiratory Rate: 18/ minute

Height: 5'4"

Weight: 45kg

### **Mental Status Examination**

Physical appearance : Normal

Eye contact : Avoidant

Mood : Depressed

Speech : Minimal responses, quiet

Thoughts : Self harm

Cognition : Reduced attention and concentration

### **Diagnosis**

Pre menstrual syndrome

### Ayurvedic understanding of the disease

While analyzing the symptomatology of PMS, it can be considered as a Rithu Vyatheetha Kala Vyadhi. This phase is dominated by Pitta. At the end of Rithukala Pitta starts increasing, at the same time Kapha goes on decreasing. During the latter period Vata comes into action, increases to Vata Prakopa and thus Rajasrava Kala starts. Because of Mithya Ahara Vihara, Pradushta Artava, Beeja Dosha and Daiva leads to Tridosha Dushti along with Agnimandya. Parinama is the main function of Pitta and if proper functioning of Pitta is not taking place, there will be accumulation of impurities causing blockage of Artava Vaha Srotas, during the latter period there will be Vata Prakopa Lakshanas and Kapha Sama leading to physiological and psychological symptoms of PMS. Tridosha Dushti causing Agni Mandya resulting in Ama, leads to Srothorodha and Srothodushti of Rasa, Raktha, Mamsa, Asthi and Artava Vaha Srotas. This along with increased stress impairs Manas causes PMS especially in Rajasa, Tamasa individuals and having Heena Satwa.

PMS symptoms can be considered under three headings in Ayurveda

- 1. Vatika Lakshanas: symptoms like head ache, anxiety
- 2. Paittika Lakshanas: Anger, irritability, sleeplessness, decreased concentration
- 3. *Kaphaja Lakshanas*: leads to depression, increased sleep, bloatedness, dullness, swelling etc.

### **Treatment Protocol**

- 1. Drakshadi Kashayam 60ml morning before food
- 2. Kalyanakam Kashayam 60 ml evening before food
- 3. *Thalam* with *Ksheerabala* along with *Rasnadi Choornam* daily for 10 minutes

Duration: 3 months

### Pathya and Apathya

- Advised to follow Rajaswala Charya during menstruation
- 2. Advised to include *Yava* with milk, *Raktha Sali* rice with ghee and milk during bleeding days
- 3. Avoidance of increased intake of *Amla, Lavana Pradhana* and *Ushna, Teekshna Vidahi Ahara*
- 4. Paschimottanasana, Savasana, Badha Konasana, Suptha Badhakonasana, Nadi Shudhi Pranayama are advised.

### **OBSERVATION AND RESULT**

During the first session, patient and her mother were given an awareness about the disease and the above said treatment was given for one month, with the help of Yoga instructor, Yoga and Pranayama were taught, and asked to come after the next cycle.

After the first month of treatment there is marked improvement noticed regarding mood related symptoms like extreme mood swings and depression. Other symptoms like head ache, bloating was completely absent. Regarding depression, before treatment there was depressed feeling almost all the time during premenstrual phase. But after one month of treatment, only once during her next premenstrual

phase she told her mother that she feels bad. Before treatment, there was a tendency to physically hurt herself in the form of bite on her body during premenstrual phase. But after one month of treatment itself no such tendency noticed.

After the third cycle all her symptoms were completely relieved. Advised to stop medicines and continue *Yogasanas* and *Pranayama* and follow proper *Rajswalacharya*.

Signs and Symptoms	Before Treatment	After First Month	After 3 months
Head ache	Present	Absent	Absent
Bloating	Present	Absent	Absent
Depression	Present	Reduced (only once she told her mother that she feels bad)	Absent
Irritability	Present	Absent	Absent
Extreme mood swings	Present	Reduced	Absent
Lack of concentration	Present	Absent	Absent
Physically injuring herself	Present (bite mark on her hand)	Absent	Absent

### **DISCUSSION**

Even though several causative factors neuroendocrine factors, alterations in estrogen progesterone, psychological and psychosocial factors are explained behind the patho physiology of PMS, exact cause is not known. As the etiology is multifactorial and too often obscure, various drugs are used either on speculation or empirically with varying degrees of success. There are several psychological, nervous system related symptoms behavioral, experienced by PMS people. So, the modern the disease also includes management of antidepressants, anxiolytic agents, SSRI etc.

Kalyanakam Kashayam<sup>[2]</sup> is administered here for the correction of *Dosha Dushti* due to disturbances in the *Manasikabhavas*. It is a time tested and clinically proven polyherbal formulation which is widely and effectively used by Ayurvedic scholars. *Haritaki, Sarivadaya*, *Ela*, have *Deepana*, and *Amadosha Nashana* properties so that it regulates *Jatharagni, Dhatvagni* and *Bhutagni* which corrects metabolism at cellular level, results in proper formation of *Dhatus* and *Upadhatus* and *Srotoshodhana* by removing *Ama*. *Haritaki, Amalaki, Vibhitaki, Visala, Danti* has *Sara Guna* and *Virechak* action so that they regulate *Doshas* by *Samshodhana Karma*. Thus, *Samshodhana Karma* clears the *Srotas* and regulates function of *Tridosha*.

Majority of the drugs of this Yoga are scientifically proved in many mental conditions or conditions of the brain like, Emblica officinalis in insanity, Cedrus deodara (Roxb. ex D.Don) G.Don as anxiolytic, neuroleptic and anticonvulsant, (Prunus cerasus L.) modulate cerebral blood flow, Curcuma longa L in depression, Pseudarthria viscida major neuroprotective, Valeriana wallichii as antidepressant, improves sleep and neuro-protective, Rubia cordifolia as having anti-stress and nootropic action, Punica granatum as antidepressant and having anti-anxiety effect, Embelia ribes having antidepressant like activity, Elettaria cardamomum having antidepressant and anti-Anxiety effect, Jasminum sambac having anti-stress effect and Santalum album is sedative and neuro protective. Out of the 28 ingredients anti-oxidant property has been scientifically proven in most of the patients.[3]

There are ingredients having *Deepana*, *Medya* and *Rasayana* property. *Phala Sruthi* of the *Yoga* itself mentioned that, it is beneficial in personality disorders, curing insanity, epilepsy, delusion, those having poor intelligentia, stammering speech, who desire good memory, who have poor digestive power. It bestows strength, auspiciousness, long life, complexion, fortune and nourishment. Here the patient is having *Avara Satwa* and her major complaints related with this disease are mainly psychiatric complaints like irritability, depression, extreme mood swings, lack of concentration, physically injuring herself etc.

It is well documented that antioxidants can remove the reactive oxygen species (ROS) and reactive nitrogen species (RNS) through scavenging radicals and suppressing the OS pathway, which further protect against neuronal damage caused oxidative or nitrosative stress sources in the brain, hopefully resulting in remission of depression or anxiety symptom. Thus, the anti-oxidant property of most of the ingredients also will be contributing to the action of the formulation in psychiatric illnesses.<sup>[4]</sup>

Alterations in the level of estrogen progesterone is considered behind pathology of PMS. *Kalyanakam Kashayam* corrects the HPO axis there by balancing the level of estrogen and progesterone. So, because of all these reasons *Kalyanakam Kashayam* was the best choice here.

Even though *Drakshadi Kashayam* is indicated in *Jwara Prakarana*,<sup>[5]</sup> this *Yoga* is found to be beneficial in disorders of *Manovaha Srothas* like *Murcha*, *Bhrama* etc. It helps in reducing the level of stress hormones in the body there by calms body and mind. It helps to reduce anxiety by promoting relaxation. It helps in improving sleep quality. *Drakshadi Kashaya* helps in subsiding the aggravated *Vata* and *Pitta*, corrects the *Agni* and acts on *Rasavaha Srotas* and *Manovaha Srotas*.

Thalam is also advised to the patient as it helps in improving mental health by nourishing the brain cells. Thalam is particularly important in the context of ailments due to the fast-paced lifestyle of modern era which increase stress, anxiety and insomnia etc. The drug selected here was Ksheerabala, which is having neuro protective action and ingredients are having anti-oxidant properties. [6]

At each stage of a woman's life, her body undergoes physical and psychological changes.

The practice of *Yoga* can be modified and adapted to suit her changing needs in each phase, helping her to achieve peace of mind and bodily poise. In childhood, the practice of Yoga is a playful one where new rhythmic and challenging movements are enjoyed. At adolescence, young girls undergo many changes in body and mind. This period of sudden change is an

ideal time to begin the practice of *Yoga Asanas* and *Pranayama*, both of which can help to maintain a healthy and regular menstrual cycle. The practice can be tailored to concentrate on poses that help to strengthen emotional stability, regulate mood swings, and avoid menstrual disorders. *Yoga* is also beneficial during this period of growth as it helps to develop muscular strength, avoid obesity, assist the development of the reproductive organs, and balance hormones.

Yoga has beneficial effects on physical and mental health problems through down regulation of hypothalamo pituitary adrenal axis and the sympathetic nervous system. [7] Yoga helps in increasing flow of vital energy to the reproductive organs and establishes a balance among hormones regulating menstruation. So, here advised some Asanas and Pranayamas which are proved in relieving premenstrual tension like Paschimottanasana, Savasana, Badha Konasana, Suptha Badhakonasana, Nadi Shudhi Pranayama.[8]

### **CONCLUSION**

PMS is important for two reasons, firstly because the symptoms of PMS are responsible for socioeconomic loss and secondly because of associated legal and women's rights issues that have arisen in conjunction with personal accountability during the premenstrual period. So, its management is very important. The symptom complex of PMS is a mixture of behavioral, neuro psychiatric, and physical symptoms. So, its management is very complex and difficult. In this case psychological and behavioral symptoms was more than physical symptoms. So, the drugs which are having Agnideepana properties, which corrects Ama Dosha thereby removing Srothorodha, which can act on Manovaha Srothas there by correcting Manasika Vikaras, which can correct HPO axis thereby balancing level of hormones were selected for the treatment. Drug selected for *Thalam* was having neuro protective and anti-oxidant properties. This along with Yogasanas, Pranayama and proper Rajaswalacharya helped the patient to recover from the symptoms which were bothering her day-to-day activities.

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**How to cite this article:** Anisha A. Ayurvedic management of Premenstrual Syndrome - A Case Study. J Ayurveda Integr Med Sci 2023;01:207-212.

**Source of Support:** Nil, **Conflict of Interest:** None declared.