

Role of Ayurveda and Yoga as a Preventive Measure and Non-Pharmacological Intervention in Perimenopausal Syndrome - A Review

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ABSTRACT

Ageing is a complex and inevitable process in a woman's life, which ultimately leads to various age-related diseases. It involves multiple biological changes in a woman's body, for which they are forced to adapt mentally be it from the moment she was born to adolescence in order to be prepared for motherhood or ultimately the transition to menopause. Perimenopause is the transition stage between reversible changes in the ovaries, hormonal and reproductive functioning. It usually begins with menstrual cycle irregularity and extends to a year after permanent cessation of menstruation i.e., menopause. Due to changing lifestyle, food habits the age is decreasing, also estrogen levels drop as a result of which perimenopausal symptoms occur early. There is manifestation of varied physical, and psychological signs and symptoms. Ayurveda mentions Rajonivrutti as a natural physiological process which affects all women universally. It usually occurs as part of the aging process and is the period of transition from pitta predominant middle age to vata predominant old age and leads to kshaya of all dhatus. Rajonivrutti janya lakshana is a group of symptoms produced by degenerative changes in the body. In the modern medicine system, Perimenopausal symptoms are managed by HRT (Hormone Replacement Therapy) which results in multiple complications in the long term. Ayurvedic treatment for perimenopause involves correcting hormonal imbalance in the form of non-hormonal drug therapy and non-pharmacological measures by adopting a proper diet and regimen, rasayana, panchakarma therapy, and yoga. All these changes

developed in the perimenopausal and menopausal phases can be prevented.

KEYWORDS- Dhatukshaya, Hormonal imbalance, Menopausal Transition, Perimenopause, Rajonivrutti

I. INTRODUCTION

Women go through several periods in their reproductive lives, with menarche and menopause being benchmarks. Menarche is occurring at an earlier age due to changes in lifestyle. As a result of depleted ovarian reserve, more women achieve menopause earlier and experience climacteric symptoms.^[1] Menopause is not an illness, but rather a normal part of a woman's life. The word Menopause comes from the Greek word menos (month) and pause's (cessation) and represents a watershed in the reproductive life of women.^[2] While the menopause can sometimes be a sudden event, for most women there is a gradual change in menstrual pattern preceding the menopause as ovarian activity fluctuates, which may be accompanied by troublesome symptoms this said to be perimenopause. In Ayurveda, care of females in every phase of her life has been given importance. Ageing is an unavoidable process which involves transition from one stage of life into others. This causes tremendous physiological changes in a woman's body. Rajonivrutti is an inevitable manifestation of the ageing process in women.^[3] Taking this into consideration the epochs of women life are classified with special reference to menstruation,^[4]

Table No.1

● Bala Avastha	from birth up to 16 years of age
● Rajaswala Avastha	between 16-50 years of age
● Vridha Avastha	Above 50 years of age

Rajaswala Avastha comprises two subdivisions- Taruni (16 years -32 years) and Atirudha (32-50) years of age. Perimenopause comes in the early stage of rajonivrutti which can be correlated with Atirudha Avastha^[5]. Perimenopause refers to the period preceding menopause. Perimenopause is a long-term transition, this period is characterized by symptoms comparable to menopause, during this time women

enter menopause, it marks the transition from the reproductive to the non-reproductive state, the perimenopause being the specific event within that phase^[6] Estrogen deficiency is the cause of perimenopausal symptoms, during perimenopause estrogen levels drop dramatically, resulting in a variety of physical and psychological symptoms.^[7] These symptoms relate to vasomotor, psychological, sexual and urogenital symptoms.^[8]

Table No.2 Perimenopausal Symptoms

● Vasomotor symptoms	hot flushes, night sweats, palpitations, headache, insomnia, disorientation, weight gain, menstrual irregularities
● Psychological symptoms	anxiety, depression, mood swings, irritability and dementia.
● Urogenital symptoms	urinary incontinence (stress and urge) vaginal dryness and prolapsed uterus.
● Sexual symptoms-	loss of libido

Long-term symptoms include the skeletal and cardiovascular systems are both adversely affected. The first indicator of menopause is usually a change in menstruation pattern. The menstrual cycle is likely to become less predictable during perimenopause. In Ayurveda rajonivrutti is not considered a sickness condition. Rajonivrittikala is referenced by practically all Acharyas, and the age of rajonivrutti as around fifty years.^[9] During menopause, the body is transitioning from yuvavastha to vridhavastha (Jaravastha) due to vata aggravation followed by other doshic factors, imbalance of tridoshas and dhatukshayaas. Perimenopause causes physical and psychological problems that disrupt women's daily lives. As a serious issue, it necessitates a therapy that is both effective and safe. In modern science, Hormone Replacement Therapy (HRT) is the only option for combating this health hazard, but it has a broader range of secondary health complications such as vaginal bleeding, breast cancer, endometrial cancer, gallbladder diseases, thromboembolic heart disease and stroke etc.^[10] Considering the limitation of HRT, the present need is to explore other options for the management of perimenopausal symptoms in the

form of non-hormonal drug therapy and non-pharmacological measures. It involves preventive measures & therapeutics intervention, correcting hormonal imbalance by adopting a proper diet and regimen, rasayana, & panchakarma therapy, and yoga. They are efficient and effective and play a significant role in calming the rajonivrutti lakshanas.

II. AIM AND OBJECTIVES

- 1} To study the Perimenopausal Syndrome mentioned in Ayurveda and modern science.
- 2} To study non hormonal drugs & non-pharmacological measures by focusing on lifestyle modification according to various Ayurvedic classics concerned with Perimenopause.

III. METHODS AND MATERIALS

All the relevant texts of Ayurveda, contemporary science and information available on the web were reviewed related to Menopausal & Perimenopausal Syndrome.

IV. DISCUSSION

Perimenopause is a part of the climate in which the menstrual cycle becomes irregular. Even though menopause is a normal process that occurs in every woman's life, along with reduction of ovarian follicles, the follicles become resistant to pituitary gonadotropins bringing about a change in her health and wellbeing. As a result, effective follicles' genesis is impaired and estradiol production is diminished.^[11] Rajonivritti as a sick condition is not addressed individually in Ayurvedic traditional literature; yet, Rajonivritti Kala is mentioned by practically all Acharyas without any discussion; however, few direct references to it are known. According to Sushruta Samhita^[12] Ashtanga Sangraha^[13] Bhavaprakash^[14] fifty years is mentioned as the age of Rajonivritti. The reason may be that the Rajah is an Updhatu of Rasa Dhatu and the function of all Dhatus is better in Yuvavastha, which reduces during the Praudha Awastha. Acharya Charaka and Sushruta mentioned the effect of ageing on Dhatus as Kshiyamana which means there is decrease in the quality and quantity of the dhatus so the kshiyamana of the Rasa Dhatu ultimately hras of the updhatu i.e. artava and resulting into rajonivritti. The majority of rajonivritti lakshanas are caused by vatavridhhi, kapha & pitta kshaya, caused by exacerbated Vata, vitiation of manovahasrotas, and dhatukshaya, all of which appear as a result of ageing.

Nidana - The specific reasons for Rajonivritti are not described in the Ayurvedic texts. But the most probable reasons for it to occurs are^[15]

- o Swabhava,
- o Vayu
- o Jarapakvasharira due to kala
- o Dhatukshaya
- o Effect of dosh

I. Doshaja Lakshanas in Rajonivritti^[17]

Table No.3

Vataja	Pittaja	Kaphaja
· Shira Shula	· Daha	· Hriddravatva
· BalaKshaya	· Ushananubhuti	· Bhrama
· Vibandha	· Ratrisweda	
· Atopa	· Trisha	
· Anidra	· Mutradaha	
· Bhrama	· Yoni Daha	
· Katishula	· Glani	
· Sandhi Vedana		
· Hasta-Pada Supti		
· Angamarda		

o Abhigat

TYPES: Ayurvedic science has divided all diseases into 4 major Types- Agantuja, Sharira, Manasa and Swabhavika.^[16]

Swabhavik Vyadhi: Concentrating on "Swabhavik "type, it is described that this type includes all those conditions, which are naturally occurring. Acharya Sushruta has mentioned a group of naturally occurring diseases under the heading of Swabhavabalapravritta includes Kshudha (Hunger), Pipasa (Thirst), Nidra(Sleep), Jara(Aging) and Mrityu. Rajonivritti (menopause) is a naturally occurring condition in every woman as that of Jaravastha (elder age).

Rajonivritti is also classified into two types: 1) Kalaja Rajonivritti 2) Akalaja Rajonivritti

1) **Kalaja Rajonivritti-** Rajonivritti is called kalaja rajonivritti if it happens at the expected age (i.e., about 50 years of age). The timely rajonivritti, according to Acharya Sushruta, comes only when the precautionary measures of healthcare are practiced.

2) **Akalaja Rajonivritti-** Akalaja rajonivritti happens when rajonivritti occurs before or after its expected age (i.e., around 50 years). It occurs as a result of a lack of protective health-care measures.

Sign and Symptoms (Rajonivritti anubandh lakshan) - Perimenopausal symptoms (Rajonivritti) is a group of symptoms produced by degenerative changes in the body. Degenerative changes are explained in Ayurveda as doshaj & dhatukshaya lakshana.

Symptoms of rajonivritti can be grouped under following Ayurvedic parameters.

I.] **Doshaja Lakshanas.**

II.] **Dhatukshayaja Lakshanas.**

III.] **Manasika Lakshanas.**

Table No.4 **Dhatu Kshaya lakshana in Rajonivrutti** ^[18]

Rasa dhatu	Hriddapeeda, kampa,, Trishna
Rakta dhatu	Twak rukshata, Sira shaithilya
Mamsa dhatu	Shushkata, Toda, Rukshata, Glani, Sandhi Sphutana, Sandhi Vedana, DhamaniShaithilya.
Meda dhatu	Pleeha vriddhi, Shosha, Krushata .
Asthi dhatu	Asthishula, Dantanakhabhanga, Raukshya Sandhi-shaithilya.
Majja dhatu	Alpashukrta, Parva bheda, Asthinistoda (bone pain), Asthi shunytva
Shukra dhatu	Ashakti maithuna, Chiradprasek, Yonivedana, Daurbalya.

Table No.5

Manasik Lakshanas in Rajonivrutti ^[19]
Krodha, Shoka, Bhaya, Dwesha, Smrutihras, Utsahani, Chinta

Ayurvedic Approaches in Perimenopausal Syndrome- Most of the Perimenopause symptoms are due to the vata-aggravation followed by other doshaj & dhatushayaj factors. Concept of Ayurvedic Medicine is prevention is better than cure. If perimenopausal women follow the Dinacharya, Ritucharya, Rasayana, Panchakarma & lifestyle principles mentioned in Ayurvedic classics. It is better to balance the aggravated or under playing factors, so that the intensity of the perimenopausal symptoms will be far less or even can be negligible.

Dinacharya- (Daily regimen)- Following dinacharya according to the rules leads to balance in tridoshas and dhatu, which directly affects the biological clock and Circadian rhythms of the body. It also aids in dhatu-Paka & dhatu poshan and in the formation of oja, and can help to prevent perimenopausal syndrome.^[20]

1)Brahma Muhurta Utthishet (Waking up early in the morning)- Early morning waking up stimulates melatonin. Which synthesis and secretion are partly modulated by estrogen and progesterone. ^[21] Melatonin concentration fluctuations, possibly related to the menopausal transition, may be linked to climacteric mood, sleep, anxiety, and vasomotor symptoms perimenopausal women wake up early in the morning this symptom can be prevented due to proper formation of melatonin hormones. ^[22]

2)Malotsarga Vidhi- Evacuation regulates the gut microflora & is directly associated with physical and mental state of the body..

3)Ushapana- Drinking 2-3 glasses of copper-enriched water in the morning boosts metabolism

and aids in fat cell breakdown. Drinking water first thing in the morning helps to treat constipation by stimulating peristalsis. Peristalsis ensures that nutrients from food consumed several times a day are properly absorbed, which aids in the formation of rasa dhatu. If rasa dhatu is properly formed, it leads to the formation of further dhatus. It also has the ability to balance all three doshas and aid in the relief of perimenopausal symptoms.^[23]

4)Nasya – Nasa is the thermoregulation center of the brain so sneha given though nasya reach to shirogat marma and helps to regulated body temperature by which it could be able to pacify the hot flush, excessive sweating, also help to alleviate the symptoms related to vataj, kaphaj & manasik like irritability, depression, mood swings, anxiety etc. ^[24]

(5) Abhyanga- Due to less formation of estrogen in perimenopausal women irregularity of menses and associated pain occurs, by practicing abhyanga on abdomen relaxation of uterine muscles and reduces stiffness and relief from pain. Massage increases metabolism and also its work to relieve degeneration. Shiroabyang can increase biochemical substances such as serotonin which is a neuro-transmitter that plays a role in calming symptoms like insomnia, mood swings. ^[25]

(6) Vyayama - It helps for the balancing kapha dosha, meda dhatu, asthi dhatu & reduces the risk of osteoporosis in perimenopausal women, by practicing any kind of exercise muscle contraction and relaxation occurs, it increases muscle strength & help to reduce metabolic disorders, like obesity. It improves digestive power and assimilation power of the intestine.

(7) Udwartana - Udwartana has been shown to reduce psychophysical parameters such as weight, BMI, and serum cholesterol values, as well as other scales like as stress inventory, quality of life, and sleep.^[26]

Ritucharya- These guidelines aid as prescription for aahar, vihar, pathya and apathy along with anupan and lifestyle changes throughout the year, including detox treatment, help us keep pure mind, & body. In Perimenopausal women following the regimen prescribed under each and every ritu the symptoms related to perimenopause will be reduced. As adaptation of aahar, vihar, pathya & apathy according to the changes leads to derangement of homeostasis & causes various lifestyle disorders.^[27]

Rasayana Therapy-Rasayana is a therapeutic measure which promotes longevity, prevents ageing, and provides positive health and mental abilities providing optimal nourishment to the rasadi dhatus & influences the dhatus, agnis, and strotas of the body.^[28]

(I)Achara rasayana: Following of dincharya, ritucharya & ratricharya, avoidance of drinks like alcohol, bringing about positive changes in mindset, character and activities, adoption of qualities, strength, truthfulness, charitable nature, forgiveness, service mind, and absence of greed.

(II)Aahar Rasayana- Regular consumption of ghrta, kshira, and other kapha vardhak ahara helps build musculoskeletal tissues and delay menopause (rajonivritti). Guda, tila, jeerak, and soybeans are good sources of phytoestrogen that help combat poor ovarian function.

(III)Aushadha Rasayana- In menopausal syndrome Ayurvedic medications include vatapitashamak rasayana, hrudya, ojovardhaka, vatanulomak, deepaniya, medhya, balya, and brimhana. Many rasayana herbs, including as triphala, ashwagandha, shatavari, bala, jatamansi, and shuddha guggula, might boost the immune system and relieve perimenopausal symptoms.

(IV). Medhya Rasayana- Acharya Charaka has described four medhya rasayana namely shankhapushpi, mandukaparni, guduchi and yashtimadhu, it helps to influence and boost intellect or cognitive power, thereby acting as a nervous tonic. i.e Which specially influences Medha and promotes mental competence, helps to reduce manasik lakshanas.

Panchakarma therapy -Panchkarma chikitsa are physical therapies that thoroughly cleanse and

purify the physical and mental impurities from the body and mind. It helps to loosen, liquefy and remove the vitiated doshas from their abnormal sites in peripheral tissues via their natural pathway of elimination. Symptoms such as frequent hot flush, sleep disturbance, and moderate to severe mood swings, etc. Ayurveda describes that these symptoms are usually due to the build-up of wastes and toxins, referred to as aama, in the body's tissues. In this case, panchakarma may be needed to clear the body channels and get relief. Panchakarma are-snehana, sweden, shirodhara, mriduvirechana, Basti- it helps to treat the imbalanced tridoshas. Panchakarma therapy is often recommended in the early perimenopause stage to keep doshas in balance. Hence the symptoms of perimenopause caused due to vitiated doshas get relieved.^[29]

Yoga and Meditation- Yoga has the ability to improve one's physical, mental, and emotional wellbeing. Yoga has been used as a therapeutic practice to improve health and control and treat ailments. Yoga is among the most commonly used complementary therapies for menopausal symptoms.^[30] The eight limbs of Yoga are – Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana, and Samadhi. Out of these Asana, Pranayama and Dhyana can be effectively used in menopausal females.^[31] Current evidence indicates that women will benefit from yoga therapy during menopausal transition in terms of decreased risk of cardiovascular disease, insulin resistance & loss of bone mineral density as well as improved psychological well-being, sleep patterns & emotional modulation.

Asanas: Asanas have the capacity to rejuvenate and bring the entire system into a state of balance. In different studies, the postures chosen are based on the effectiveness in relieving menopausal symptoms. The following asanas are beneficial in peri-menopausal women.^[32]

- 1]Halasana,
- 2]Sarvangasana,
- 3]Ardhamatsendrasana,
- 4]Vipritkarni,
- 5]Padmasna,
- 6]Shavasana,
- 7]Gomukhasan
- 8] Vajrasana,
- 9]Surya Namaskar.

Pranayama: Practice of pranayama develops a steady mind, strong willpower and sound judgment. Pranayama strengthens the lungs, improves their function .1. Anulom vilom pranayam minimizes stress, 2. Sitkari & Sheetali pranayama is extremely cooling and can be used during hot flushes and pacifying pitta dosha. Bhrumari Pranayama, Ujjayi pranayama will be useful to reduce perimenopausal symptoms.^[33]

Meditation (Dhyana): Meditation is the process through which consciousness examines and acts on itself, Yoga nidra is said to be as yogic sleep is a meditative process. This restful process relaxes the mind and body. Along with dhyana on swadhisthana (Sacral) Chakra for the swadhisthana chakra, imagine an orange color shade around the lower abdomen. While meditating, reciting the seed sound "Vam" frequently helps to revitalize the swadhisthana chakra state.^[34] Meditation has been found to be associated with increased plasma melatonin level and improved sleep quality, anxiety, & depression.

V. CONCLUSION-

Perimenopause is a hormonal imbalance phase characterized by a cluster of physical and psychological changes in the body. Rajonivritti occurs due to the ageing process suggesting aggravation of vatadosha, maintaining doshic balance from an early age will also minimize the symptoms of perimenopause. Sometimes the perimenopausal symptoms are so vigorous that they can affect routine life and require treatment. Hormone Replacement Therapy (HRT) is one and only alternative for this health hazard, but it has a wider range of secondary health complications. Concept of Ayurvedic medicine is "Swasthya swastya rakshanam and aturasya vikara prashamanamcha", so before attaining menopause i.e., perimenopausal stage itself starts following dincharya, ritucharya, rasayana & panchakarma therapy, yoga, & meditation, it helps to reduce the rajonivritti lakshanas. This Regimen, when followed as per the rules, leads to balance in tridosha and also plays a significant role in the time of perimenopause. Rasayana therapy(rejuvenation) is not only preventing the aging changes, but it brings in youth fullness to a person. Panchakarma therapy is often recommended in the early perimenopause stage to keep doshas in a balanced state. Yoga does have the potential to provide physical, mental and emotional health. Thus, it can be concluded that Ayurvedic management of

perimenopausal syndrome is very much effective with no inconvenient side effects, it is cost effective and increases longevity.

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