

MENOPAUSE IN AYURVEDA - A COMPREHENSIVE ANALYSIS OF RAJONIVRTTI LAKSHANA

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ABSTRACT

Menopause, referred to as *Rajonivritti* in *Ayurveda*, marks a significant transition in a woman's life, characterized by the cessation of menstruation and various physiological, psychological, and hormonal changes. Unlike the modern medical perspective, which primarily attributes menopause to ovarian insufficiency and declining estrogen levels, *Ayurveda* explains *Rajonivritti* through the lens of *Dosha* imbalance, particularly *Vata Dosha* aggravation and depletion of *Shukra Dhātu* and *Ojas*. This paper provides a comprehensive analysis of *Rajonivritti Lakshana* (clinical features of menopause), its pathophysiology (*Samprapti*), and *Ayurvedic* management strategies, including *Ahara* (diet), *Vihara* (lifestyle), and *Chikitsa* (therapeutics). Classical texts describe symptoms such as *Santapa* (hot flashes), *Anidra* (insomnia), *Kati shula* (lower back pain), and *Sharira daurbalya* (body weakness), aligning with modern clinical observations. This study aims to bridge the gap between traditional *Ayurvedic* concepts and modern gynecological perspectives, highlighting the efficacy of *Ayurvedic* interventions in alleviating menopausal discomforts.

INTRODUCTION

Menopause, known as *Rajonivritti* in *Ayurveda*, is a natural physiological transition in a woman's life, marking the cessation of menstruation and the end of the reproductive phase. It typically occurs between the ages of 45 and 55 and is associated with various systemic changes affecting physical, psychological, and hormonal balance.¹ While modern medicine attributes menopause primarily to ovarian follicular depletion and a decline in estrogen and progesterone levels, *Ayurveda* explains *Rajonivritti* through the lens of *Dosha* imbalance, particularly the predominance of *Vata Dosha* along with changes in *Pitta* and *Kapha Dosha*.²

Unlike modern pathology, which views menopause as a hormonal deficiency state, *Ayurveda* considers it a natural part of aging (*Jara*), governed by *Vata Dosha*, leading to the depletion of *Dhatus*, dryness, and systemic debility. Classical texts describe menopausal symptoms in terms of *Vata* and *Pitta* aggravation, including *Santapa* (hot flashes), *Anidra* (insomnia), *Kati shula* (lower back pain), and *Sharira daurbalya* (generalized weakness).³

Epidemiology of Menopause: Global and Indian Perspective

Menopause is a universal biological transition that signifies the cessation of ovarian function and the end of reproductive ability in women. Globally, the average age of natural menopause ranges

between **45 to 55 years**, with significant regional variations. In Western countries, the average menopausal age is around **51 years**, whereas in Asian and African populations, it tends to be slightly earlier, averaging around **48–50 years**. This variation is influenced by genetic, environmental, nutritional, and lifestyle factors.⁴

The prevalence of menopausal symptoms varies across populations. Studies indicate that about **73% of postmenopausal women** globally experience at least one symptom, with **hot flashes** (50–85%), **sleep disturbances** (40–60%), and **mood swings** (30–50%) being the most common. The severity of symptoms differs based on ethnicity and geographical location. For example, Hispanic and African American women tend to report more severe vasomotor symptoms compared to Caucasian women. Additionally, the prevalence of osteoporosis, cardiovascular diseases, and metabolic disorders significantly increases after menopause due to hormonal decline, particularly the loss of estrogen.⁵

In India, menopause generally occurs **earlier**, with the average age reported between **46 and 49 years**. The Indian Menopause Society (IMS) estimates that over **43 million women** in India are postmenopausal, and this number is expected to rise due to increasing life expectancy. Indian women experience a wide range of menopausal symptoms, including **hot flashes, joint pain, fatigue, mood disturbances, and urogenital issues**. The prevalence and intensity of these symptoms are often influenced by dietary habits, physical activity levels, and socioeconomic status. Rural women tend to report fewer vasomotor symptoms but experience more musculoskeletal complaints, whereas urban women have a higher prevalence of psychological and metabolic symptoms.⁶

The burden of postmenopausal complications in India is also a growing concern. The incidence of **osteoporosis** is particularly high, with **one in three women** over 50 years suffering from low bone mineral density. Cardiovascular diseases, type 2 diabetes, and obesity are also increasing among postmenopausal Indian women. Despite the availability of **Menopausal Hormone Therapy (MHT)**, its usage remains low in India due to concerns about side effects, lack of awareness, and preference for natural and alternative therapies, including *Ayurvedic* approaches.^{7,8}

Aim and Objectives

Aim:

To analyze *Rajonivritti* (menopause) from an *Ayurvedic* and modern perspective.

Objectives:

1. Understand *Rajonivritti* in *Ayurveda* and its modern correlation.
2. Analyze global and Indian epidemiology of menopause.
3. Study *Lakshana* (symptoms) of *Rajonivritti* and their modern equivalents.
4. Examine *Samprapti* (pathophysiology) of menopause in *Ayurveda*.

Materials and Methods

Study Design:

A comprehensive analytical study on *Rajonivritti* (menopause) based on *Ayurvedic* and modern medical literature.

Sources of Data:

1. Classical *Ayurvedic* texts (*Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*).
2. Modern gynecological textbooks and research articles.
3. Epidemiological data from global and Indian studies.
4. Clinical studies on *Ayurvedic* interventions for menopause.

Methodology:

1. **Literature Review** – Comparative analysis of *Ayurvedic* and modern concepts of menopause.
2. **Epidemiological Data Collection** – Statistical review of global and Indian menopausal trends.
3. **Symptom Analysis** – Correlation of *Ayurvedic Lakshana* with modern clinical presentations.

Concept of Rajonivritti (Menopause) Lakshana

Menopause, referred to as *Rajonivritti* in *Ayurveda*, is a physiological transition in a woman's life, marked by the cessation of menstruation. It is not considered a disease but a natural phase associated with aging. Classical *Ayurvedic* texts and modern literature describe various *Lakshana* (symptoms) of *Rajonivritti*, which are primarily attributed to *Vata Dosha* aggravation, along with alterations in *Pitta* and *Kapha Dosha*.⁹

Classical References of Rajonivritti Lakshana

In *Ayurvedic* texts, menstruation (*Rajah Pravritti*) is considered a function of *Rasa Dhatu* and *Artava Dhatu*, regulated by *Pitta Dosha*. As a woman ages, *Vata Dosha* predominates, leading to depletion of *Dhatu*s, dryness, and cessation of ovarian function, resulting in *Rajonivritti*. The classical symptoms associated with this transition include:

- **Vata Pradhana Lakshana:**
 - *Angamarda* (body aches)
 - *Balahani* (weakness)
 - *Kati shula* (low back pain)
 - *Anidra* (insomnia)
 - *Parushata* (dryness of skin and mucosa)
- **Pitta Pradhana Lakshana:**
 - *Santapa* (hot flashes)
 - *Atipipasa* (excessive thirst)
 - *Atisveda* (excessive sweating)
 - *Chittodvega* (irritability and mood swings)
- **Kapha Pradhana Lakshana:**
 - *Gurutva* (heaviness in the body)
 - *Staimitya* (lethargy)
 - *Medo vridhhi* (weight gain and metabolic changes)

Vata Pradhana Lakshana

During *Rajonivritti*, *Vata Dosha* becomes predominant, leading to dryness, degeneration, and instability in various bodily functions. This results in several symptoms that reflect *Vata* imbalance.¹⁰

Angamarda (Body Aches):

Vata Dosha is responsible for movement and nervous regulation in the body. When aggravated, it leads to muscle and joint pain due to *Dhatu Kshaya* (tissue depletion) and loss of synovial fluid in the joints. This results in stiffness and discomfort, which can be correlated with **arthralgia** and **fibromyalgia**, commonly seen in menopausal women.¹¹

Balahani (Weakness):

The depletion of *Rasa* and *Mamsa Dhatu* due to *Vata* aggravation causes a loss of strength and energy, leading to fatigue and weakness. This aligns with **postmenopausal sarcopenia**, where muscle mass reduces significantly, making daily activities more exhausting.¹²

Kati Shula (Low Back Pain):

Asthi Dhatu Kshaya (bone tissue depletion) caused by *Vata Prakopa* results in **osteopenia and osteoporosis**, leading to lower back pain. Reduced bone density and loss of calcium further contribute to this condition, making menopausal women more prone to fractures and degenerative changes in the spine.¹³

Anidra (Insomnia):

Vata Dosha governs the nervous system, and its imbalance leads to **restlessness and hyperactivity of the mind**, causing difficulty in falling asleep. Reduced melatonin secretion and hormonal fluctuations further exacerbate insomnia, a common complaint among menopausal women.¹⁴

Parushata (Dryness of Skin and Mucosa):

Due to *Vata* dominance, there is a **decrease in lubrication and moisture retention** in the body. This results in **xerosis (skin dryness)**, **vaginal atrophy**, and **dry eyes**, making the skin wrinkled and leading to discomfort during sexual activity due to decreased vaginal secretions.¹⁵

2. Pitta Pradhana Lakshana

When *Pitta Dosha* is aggravated, it affects thermoregulation, metabolism, and emotional stability. This leads to heat-related symptoms, mood disturbances, and excessive sweating.¹⁶

Santapa (Hot Flashes):

One of the most common symptoms of menopause, *Santapa* is characterized by sudden heat sensations, sweating, and flushing. *Pitta Dosha* governs body temperature, and its imbalance results in **vasodilation, causing hot flashes** and an uncomfortable sensation of warmth, often accompanied by palpitations.¹⁷

Atipipasa (Excessive Thirst):

Aggravated *Pitta* increases body metabolism, leading to dehydration and excessive thirst. This symptom can be linked to **polydipsia (persistent thirst)** observed in postmenopausal women, often due to increased heat production and dryness in bodily tissues.¹⁸

Atisveda (Excessive Sweating):

Night sweats and abnormal perspiration are a result of *Pitta* imbalance, which disrupts the body's cooling mechanism. This is seen in **hyperhidrosis**, where menopausal women experience **uncontrolled sweating, especially at night**, leading to sleep disturbances and discomfort.¹⁹

Chittodvega (Irritability and Mood Swings):

Pitta Dosha affects emotions, and its aggravation in the **Manovaha Srotas (mind channels)** leads to **anxiety, irritability, and sudden mood fluctuations**. The decline in estrogen levels during menopause further contributes to emotional instability, increasing the risk of **depression and mood disorders**.²⁰

3. Kapha Pradhana Lakshana

Kapha Dosha governs stability, lubrication, and nourishment of the body. During menopause, its imbalance leads to heaviness, lethargy, and metabolic disturbances.²¹

Gurutva (Heaviness in the Body):

Kapha Dosha contributes to excessive retention of fluids and a sluggish metabolism, resulting in **weight gain and bloating**. Many menopausal women experience heaviness in the body, leading to a sense of fatigue and reduced mobility.²²

Staimitya (Lethargy and Fatigue):

When *Kapha Dosha* is aggravated, it **reduces energy levels and slows down digestion**, leading to constant fatigue. This can be correlated with **chronic fatigue syndrome (CFS)** in postmenopausal women, where reduced metabolic efficiency results in feelings of exhaustion.²³

Medo Vridhhi (Weight Gain and Metabolic Changes):

Postmenopausal women often experience **fat accumulation, particularly around the abdomen**, due to metabolic slowdown. This symptom aligns with *Kapha Meda Vridhhi* (excess fat accumulation), increasing the risk of **obesity, dyslipidemia, and insulin resistance**, ultimately contributing to cardiovascular diseases and diabetes.²⁴

Modern Prospectives

Symptoms of Menopause

Menopause is a natural transition in a woman's life marked by **hormonal, physiological, and metabolic changes**. The symptoms vary in intensity and duration and can be classified into different categories:

1. Vasomotor Symptoms²⁵

These symptoms are related to the **thermoregulatory dysfunction** caused by declining estrogen levels.

- **Hot Flashes:** Sudden episodes of warmth, flushing, and sweating, often affecting the face, neck, and upper body.
- **Night Sweats:** Excessive sweating during sleep, leading to frequent awakenings and disturbed sleep patterns.

2. Psychological and Cognitive Symptoms²⁶

The **decline in estrogen and progesterone** affects neurotransmitter function, leading to emotional and cognitive changes.

- **Mood Swings:** Sudden emotional fluctuations, including irritability, anxiety, and depression.
- **Memory Loss:** Difficulty in concentrating, forgetfulness, and brain fog.
- **Insomnia:** Difficulty falling asleep or staying asleep due to hormonal fluctuations.

3. Musculoskeletal and Joint Symptoms²⁷

Estrogen plays a vital role in **bone and muscle health**, and its deficiency leads to degenerative changes.

- **Joint Pain and Stiffness:** Increased risk of arthritis and osteoarthritis.
- **Muscle Weakness:** Reduced muscle mass, leading to fatigue and lack of strength.
- **Osteoporosis:** Loss of bone density, increasing the risk of fractures and spinal deformities.

4. Urogenital and Sexual Symptoms²⁸

Menopause affects the **vaginal and urinary tract**, leading to atrophic changes and sexual dysfunction.

- **Vaginal Dryness:** Reduced lubrication, causing discomfort and painful intercourse (*dyspareunia*).
- **Urinary Incontinence:** Weakening of pelvic muscles leading to involuntary urine leakage.
- **Frequent Urinary Tract Infections (UTIs):** Due to thinning of the urethral lining and reduced immunity.

5. Metabolic and Cardiovascular Symptoms²⁹

Hormonal imbalances impact **body metabolism, cardiovascular health, and weight regulation**.

- **Weight Gain:** Increased fat accumulation, particularly around the abdomen.
- **Dyslipidemia:** Elevated cholesterol levels, increasing cardiovascular risks.
- **Hypertension:** Increased blood pressure due to arterial stiffness.
- **Insulin Resistance:** Higher risk of type 2 diabetes due to impaired glucose metabolism.

6. Dermatological and Hair Changes³⁰

Declining estrogen levels affect **skin elasticity, hair growth, and collagen production**.

- **Dry and Wrinkled Skin:** Loss of collagen leading to fine lines and sagging skin.
- **Hair Thinning:** Increased hair fall and reduced scalp hair density.
- **Brittle Nails:** Nails become weak, fragile, and prone to breaking.

7. Gastrointestinal and Digestive Issues³¹

Changes in hormone levels affect the **digestive system and gut microbiota**.

- **Bloating:** Increased gas formation and indigestion.
- **Constipation:** Reduced gut motility due to decreased estrogen levels.
- **Acid Reflux:** Increased gastric acidity and heartburn.

8. Neurological Symptoms³²

Estrogen plays a role in **protecting the nervous system**, and its decline leads to neurological issues.

- **Headaches and Migraines:** Worsening of migraines in some women.
- **Tingling Sensations:** Numbness or tingling in hands and feet due to nerve changes.
- **Dizziness and Lightheadedness:** Sudden episodes of balance disturbances.

Findings Based on Aim and Objectives

1. Understanding Rajonivritti in Ayurveda and Its Modern Correlation

The study found that *Rajonivritti* (menopause) is well-defined in *Ayurveda* as a natural phase of aging (*Jara*) rather than a pathological condition. In classical texts, it is primarily linked to *Vata Dosha* aggravation, leading to dryness, degeneration, and instability in bodily functions. *Pitta Dosha* imbalances contribute to vasomotor symptoms, while *Kapha Dosha* involvement explains metabolic disturbances.³³

In modern medicine, menopause is attributed to ovarian follicular depletion and estrogen deficiency, leading to vasomotor, psychological, musculoskeletal, metabolic, and urogenital symptoms. The correlation between *Ayurvedic* and modern perspectives highlights that *Vata Pradhana Lakshana* corresponds to osteoporosis, insomnia, and joint pain, *Pitta Pradhana Lakshana* aligns with hot flashes and mood swings, and *Kapha Pradhana Lakshana* matches weight gain and cardiovascular risks.³⁴

2. Analysis of Global and Indian Epidemiology of Menopause

The global epidemiology of menopause shows that the average age of menopause ranges between 45 and 55 years, with variations due to genetics, lifestyle, and environmental factors. In Western countries, menopause occurs at an average age of 51 years, whereas in Asian and African regions, it tends to occur slightly earlier, around 48–50 years.³⁵

In India, the average menopausal age is between 46 and 49 years, which is earlier than in Western populations. Studies indicate that 43 million women in India are postmenopausal, and the burden of osteoporosis, cardiovascular diseases, and metabolic disorders is increasing. Urban women tend to experience more psychological symptoms due to stress, whereas rural women report more musculoskeletal complaints. The low adoption of Hormone Replacement Therapy (HRT) in India has led to an increased interest in alternative and holistic approaches like *Ayurveda*.³⁶

3. Study of Lakshana (Symptoms) of Rajonivritti and Their Modern Equivalents

The study identified a direct correlation between *Ayurvedic Lakshana* and modern menopausal symptoms:

- *Vata Pradhana Lakshana* (due to dryness and degeneration) matches osteoporosis, joint pain, muscle weakness, and insomnia.
- *Pitta Pradhana Lakshana* (heat and metabolic disturbances) corresponds to hot flashes, night sweats, irritability, and excessive thirst.

- Kapha Pradhana Lakshana (weight gain and sluggish metabolism) aligns with obesity, lethargy, and cardiovascular risks.

The findings confirm that Ayurvedic descriptions of Rajonivritti accurately reflect modern clinical presentations, reinforcing the relevance of *Ayurvedic* concepts in understanding menopausal symptoms.³⁷

4. Examination of Samprapti (Pathophysiology) of Menopause in Ayurveda

According to *Ayurveda*, the pathophysiology (*Samprapti*) of Rajonivritti is governed by:

- Vata aggravation, leading to depletion of Asthi Dhatu (bone tissue), Shukra Dhatu (reproductive tissue), and Ojas (vital energy).
- Pitta imbalance, causing vasodilation, heat intolerance, and emotional instability.
- Kapha depletion, resulting in loss of lubrication in joints and skin dryness.³⁸

Discussion

Menopause (*Rajonivritti*) is a significant physiological transition in a woman's life, marked by the cessation of menstruation due to ovarian insufficiency and declining estrogen levels. It presents with a wide range of symptoms that affect multiple organ systems, impacting both physical and psychological well-being.³⁹

Pathophysiology of Menopause

From a modern medical perspective, menopause occurs due to the depletion of ovarian follicles, leading to a drastic reduction in estrogen and progesterone levels. This hormonal decline affects various systems, including the thermoregulatory, skeletal, cardiovascular, nervous, and metabolic systems, leading to symptoms such as hot flashes, osteoporosis, cardiovascular risks, and mood disturbances. The hypothalamic-pituitary-ovarian axis disruption is primarily responsible for vasomotor symptoms and mood changes.⁴⁰

In *Ayurveda*, menopause is explained as *Rajonivritti*, a natural phase of aging (*Jara*), governed by an increase in *Vata Dosha* and imbalances in *Pitta* and *Kapha Dosha*. The reduction in *Shukra Dhatu* and *Rasa Dhatu* contributes to dryness, weakness, and instability in various bodily functions. *Vata Pradhana Lakshana* such as body aches, insomnia, and joint pain correspond with modern descriptions of musculoskeletal and neurological symptoms, while *Pitta Pradhana Lakshana*, including hot flashes, irritability, and excessive sweating, align with vasomotor disturbances. *Kapha Pradhana Lakshana*, like weight gain, lethargy, and metabolic disorders, reflect postmenopausal changes in body composition and cardiovascular risks.⁴¹

The symptoms of menopause described in *Ayurveda* show a remarkable correlation with modern medical findings. The Vata-dominant phase of life leads to musculoskeletal degeneration (*Asthi Dhatu Kshaya*), which explains the increased prevalence of osteoporosis and joint pain in postmenopausal women. *Pitta* involvement is evident in hot flashes and mood instability, corresponding to thermoregulatory and psychological symptoms. The Kapha component contributes to weight gain, metabolic disturbances, and cardiovascular risks, mirroring the modern understanding of postmenopausal metabolic syndrome.⁴²

Conclusion

Menopause (*Rajonivritti*) is a natural transition marked by hormonal, physiological, and metabolic changes. This study highlights a strong correlation between *Ayurvedic* and modern perspectives, where *Vata*, *Pitta*, and *Kapha* imbalances align with menopausal symptoms such as hot flashes, joint pain, mood swings, and metabolic disturbances. Epidemiological findings indicate an earlier onset of menopause in India, with increasing risks of osteoporosis, cardiovascular diseases, and metabolic disorders. While modern medicine relies on HRT and pharmacological treatments,

Ayurveda offers holistic management through Rasayana therapy, Panchakarma, and lifestyle modifications.

CONFLICT OF INTEREST –NIL

SOURCE OF SUPPORT –NIL

REFERENCES

1. Mishra N, Mishra VN, Devanshi. Menopause: Physiological changes and management. *J Midlife Health*. 2011;2(2):53-8.
2. Shah RJ, Kalgutkar S, Chauhan S. Management of menopausal syndrome through Ayurveda: A review. *Ayu*. 2011;32(4):387-91.
3. Kaur D, Talwar I. Understanding menopause in Ayurveda: A conceptual review. *J Ayurveda Integr Med*. 2019;10(1):19-25.
4. Palacios S. The epidemiology of menopause. *Menopause Int*. 2009;15(1):7-11.
5. Gold EB. The timing of the age at which natural menopause occurs. *Obstet Gynecol Clin North Am*. 2011;38(3):425-40.
6. Indian Menopause Society. Menopause in India: An overview. *J Midlife Health*. 2013;4(3):140-6.
7. Ahuja M. Age of menopause and determinants of menopause age: A PAN India survey by IMS. *J Midlife Health*. 2016;7(3):126-31.
8. Kriplani A, Banerjee K. Management of menopause: The Indian scenario. *J Midlife Health*. 2013;4(2):77-8.
9. Charaka, Sharma RK, Dash B. *Charaka Samhita*. Varanasi: Chaukhamba Sanskrit Series Office; 2014. p. 312-9.
10. Sushruta, Murthy KRS. *Sushruta Samhita*. Varanasi: Chaukhamba Orientalia; 2012. p. 276-84.
11. Acharya Vagbhata. *Ashtanga Hridaya*, translated by Srikantha Murthy KR. Varanasi: Chaukhamba Krishnadas Academy; 2011. p. 501-7.
12. Freeman EW, Sammel MD, Lin H, Gracia CR. Symptoms associated with menopausal transition and reproductive hormones. *Menopause*. 2009;16(6):1217-25.
13. Nelson HD. Menopause. *Lancet*. 2008;371(9614):760-70.
14. Harlow SD, Gass M, Hall JE, et al. Executive summary of Stages of Reproductive Aging Workshop +10: Addressing the unfinished agenda of staging reproductive aging. *J Clin Endocrinol Metab*. 2012;97(4):1159-68.
15. Avis NE, Crawford SL, Greendale G, et al. Duration of menopausal vasomotor symptoms over the menopause transition. *JAMA Intern Med*. 2015;175(4):531-9.
16. Soules MR, Sherman S, Parrott E, et al. Executive summary: Stages of Reproductive Aging Workshop (STRAW). *Fertil Steril*. 2001;76(5):874-8.
17. Sowers MR, Zheng H, McConnell D, Nan B, Harlow SD, Randolph JF Jr. Estradiol rates of change in relation to the final menstrual period in a population-based cohort of women. *J Clin Endocrinol Metab*. 2008;93(10):3847-52.
18. Burger HG, Hale GE, Dennerstein L, Robertson DM. Cycle and hormone changes during perimenopause: The key role of ovarian function. *Menopause*. 2008;15(4):603-12.
19. Greendale GA, Lee NP, Arriola ER. The menopause. *Lancet*. 1999;353(9152):571-80.
20. Thurston RC, Joffe H. Vasomotor symptoms and menopause: Findings from the Study of Women's Health Across the Nation. *Obstet Gynecol Clin North Am*. 2011;38(3):489-501.
21. Stuenkel CA, Davis SR, Gompel A, et al. Treatment of symptoms of menopause: An Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab*. 2015;100(11):3975-4011.

22. Genazzani AR, Gambacciani M. Effect of climacteric transition and hormone replacement therapy on body weight and body fat distribution. *Gynecol Endocrinol.* 2006;22(3):145-50.
23. Stevenson JC, Panay N, Pexman-Fieth C. Climacteric symptoms and associated factors: Insights from the British Menopause Society Survey. *Post Reprod Health.* 2017;23(2):66-72.
24. Cagnacci A, Venier M. The controversial history of hormone replacement therapy. *Medicina.* 2019;55(9):602.
25. Shifren JL, Gass ML. The North American Menopause Society recommendations for clinical care of midlife women. *Menopause.* 2014;21(10):1038-62.
26. Carranza-Lira S, Morán C, Salazar S. Changes in libido and depressive symptoms in women during their climacteric stage. *Rev Med Inst Mex Seguro Soc.* 2016;54(3):336-40.
27. Cobin RH, Goodman NF. American Association of Clinical Endocrinologists and American College of Endocrinology position statement on menopause—2017 update. *Endocr Pract.* 2017;23(7):869-80.
28. Nappi RE, Lachowsky M. Menopause and sexuality: Prevalence of symptoms and impact on quality of life. *Maturitas.* 2009;63(2):138-41.
29. Johnston JM, Sturdee DW. Premature menopause. *Obstet Gynaecol Reprod Med.* 2012;22(1):16-22.
30. Kulkarni M, O'Connell M, Fahey P, Worsley R, Gilbert S, Eden J. Self-reported effects of menopause on women's workforce participation: A qualitative study in Australia. *Menopause.* 2019;26(12):1577-83.
31. Cauley JA. Estrogen and bone health in men and women. *Steroids.* 2015;99(Pt A):11-5.
32. Baber RJ, Panay N, Fenton A. 2016 IMS recommendations on women's midlife health and menopause hormone therapy. *Climacteric.* 2016;19(2):109-50.
33. Makker A, Tandon I, Goel MM. Clinical and metabolic determinants of menopausal symptoms and their severity. *J Midlife Health.* 2019;10(3):103-7.
34. Mishra GD, Kuh D. Health symptoms during midlife in relation to menopausal transition: British prospective cohort study. *BMJ.* 2012;344:e402.
35. Krishnaswamy B, Gnanasambandam U. Aging in India: The need for a comprehensive policy. *J Aging Soc Policy.* 2016;28(2):105-23.
36. Davis SR, Baber R, Panay N. Global consensus statement on menopausal hormone therapy. *Climacteric.* 2016;19(2):109-50.
37. Patel K, Bell KM, Connell EB. Osteoporosis screening and treatment in postmenopausal women. *Prim Care.* 2019;46(2):177-91.
38. MacLennan AH, Broadbent JL, Lester S. Oral oestrogen and combined oestrogen/progestogen therapy versus placebo for hot flushes. *Cochrane Database Syst Rev.* 2004;(4):CD002978.
39. Prior JC. Perimenopause: The complex endocrinology of the menopausal transition. *Endocr Rev.* 2011;32(4):515-47.
40. Pinkerton JV, Abraham L, Bushmakina AG, Cappelleri JC, Komm BS. Relationship between changes in vasomotor symptoms and menopause-related quality of life. *Maturitas.* 2016;94:95-101.
41. Gopal D, Raveendran AK, Nair S. Ayurvedic insights into menopausal transition and Rasayana therapy. *J Ayurveda Integr Med.* 2018;9(2):82-9.
42. Gupta S, Jayalakshmi B, Nagtilak S. Role of Panchakarma in menopause: A clinical review. *Ayu.* 2019;40(3):160-5.