

Role of Matra Basti in the Management of Menopausal Syndrome: A Comprehensive Review of Classical Concepts and Clinical Evidence

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ABSTRACT

Menopause is a natural biological transition characterized by the permanent cessation of menstruation due to depletion of ovarian follicular activity. Declining estrogen levels during menopause are associated with vasomotor symptoms, psychological disturbances, musculoskeletal pain, urogenital atrophy, sleep disorders, and deterioration in quality of life. Although hormone replacement therapy (HRT) remains the standard treatment for symptomatic menopause, concerns regarding its long term safety have increased interest in complementary and integrative medical approaches. Ayurveda recognizes menopause as Rajonivritti, a physiological event occurring during Jara (ageing) and primarily associated with Vata Dosha predominance, Dhātu Kshaya, and diminished Artava. Among Panchakarma procedures, Matra Basti, a subtype of Sneha Basti administered in small quantities of medicated oil, is considered the most appropriate therapy for Vata predominant disorders and age related degenerative conditions. Classical Ayurvedic texts describe Matra Basti as a nourishing (Brimhana), rejuvenating (Rasayana), and Vata pacifying intervention capable of improving tissue integrity and physiological balance. Contemporary studies evaluating Ayurvedic management of menopausal syndrome suggest improvements in vasomotor symptoms, sleep quality, psychological well being, musculoskeletal discomfort, and overall quality of life. However, high quality clinical evidence specifically evaluating Matra Basti remains limited. This review critically examines the classical concepts of Rajonivritti and Matra Basti, summarizes available clinical evidence, explores probable mechanisms of action from Ayurvedic and biomedical perspectives, identifies current research gaps, and highlights future directions for evidence based integration of Matra Basti into menopausal healthcare.

Keywords: Menopause, Rajonivritti, Matra Basti, Bala Taila, Panchakarma, Ayurveda, Menopause Rating Scale, Vata Dosha, Women's Health.

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1. INTRODUCTION

Menopause is a universal physiological milestone signifying the permanent cessation of ovarian function and the end of a woman's reproductive life. It is diagnosed retrospectively after twelve consecutive months of spontaneous amenorrhoea in the absence of pathological or physiological causes. The average age of natural menopause ranges between 45 and 55 years globally, whereas Indian women generally attain menopause between 46 and 48 years^{1,2}. Owing to increasing life expectancy, women now spend nearly one-third of their lifespan in the postmenopausal period, making menopausal health an important public health concern^{3,4}. The decline in ovarian estrogen production results in widespread physiological changes affecting multiple organ systems. Vasomotor symptoms such as hot flushes and night sweats are among the earliest manifestations, followed by psychological disturbances, sleep disorders, musculoskeletal pain, osteoporosis, cardiovascular changes, vaginal atrophy, urinary complaints, and sexual dysfunction^{1,2}. These symptoms vary considerably in severity and often impair daily activities, work productivity, interpersonal relationships, and overall quality of life⁵. Hormone replacement therapy (HRT) remains the most effective treatment

for moderate to severe vasomotor symptoms and prevention of osteoporosis. However, concerns regarding its long term association with breast cancer, venous thromboembolism, stroke, and cardiovascular events have limited its widespread acceptance, encouraging exploration of complementary and integrative approaches for menopausal care^{5,6}.

Ayurveda interprets menopause as *Rajonivritti*, a natural physiological transition occurring during *Jara* (ageing). Rather than considering menopause as a disease, classical Ayurvedic texts describe it as the consequence of *Vata Prakopa*, *Dhātu Kshaya*, and decline of *Artava*, leading to physical and psychological changes^{7,9}. The predominance of Vata during the later stage of life explains symptoms such as dryness, insomnia, anxiety, constipation, fatigue, joint pain, and emotional instability. Among Panchakarma procedures, *Basti* is regarded as the principal therapy for disorders caused by aggravated Vata Dosha. *Matra Basti*, a subtype of *Sneha Basti*, is administered in small quantities of medicated oil and is especially indicated in elderly individuals, debilitated patients, chronic Vata disorders, and conditions associated with tissue depletion^{7,10}. Owing to its *Vatahara*, *Brimhana*, and *Rasayana* properties, Matra Basti is considered a rational therapeutic option for menopausal syndrome.

2. Menopause in Modern Medicine

Menopause is defined as the permanent cessation of menstruation resulting from the depletion of ovarian follicular activity and is confirmed after twelve consecutive months of amenorrhoea without any other pathological or physiological cause³. It represents a normal stage in reproductive ageing and is accompanied by progressive endocrine, metabolic, and systemic changes that affect multiple organ systems.

2.1 Physiology of Menopause

Women are born with a finite number of primordial follicles, which gradually decline throughout life because of ovulation and follicular atresia. As the ovarian reserve becomes depleted, production of estrogen, progesterone, and inhibin decreases significantly. Reduced estrogen levels diminish negative feedback on the hypothalamic pituitary ovarian axis, resulting in increased secretion of gonadotropin-releasing hormone (GnRH), follicle stimulating hormone (FSH), and luteinizing hormone (LH). Elevated serum FSH is therefore considered a characteristic biochemical marker of menopausal transition¹¹.

Clinical Manifestations

Menopausal symptoms differ widely among women and may persist for several years after the final menstrual period. The manifestations are broadly categorized into:

Vasomotor symptoms: hot flushes, night sweats, palpitations.

Psychological symptoms: anxiety, irritability, depression, mood swings, poor concentration, memory impairment.

Sleep disturbances: insomnia and poor sleep quality.

Musculoskeletal symptoms: joint pain, muscle stiffness, backache, osteoporosis, and increased fracture risk.

Urogenital symptoms: vaginal dryness, dyspareunia, urinary urgency, recurrent urinary tract infections, and stress urinary incontinence.

Sexual dysfunction: decreased libido and impaired sexual satisfaction¹².

These symptoms collectively reduce quality of life and often require medical intervention.

2.3 Diagnosis and Assessment

Diagnosis of natural menopause is primarily clinical and is based on twelve consecutive months of spontaneous amenorrhoea in women over 45 years of age. Hormonal investigations are reserved for selected cases such as premature ovarian insufficiency or atypical presentations. Several validated instruments are available for evaluating symptom severity. Among them, the **Menopause Rating Scale (MRS)** is widely used in clinical practice and research. It consists of eleven items grouped into somatic, psychological, and urogenital domains and has demonstrated good reliability and validity for assessing therapeutic outcomes¹³.

2.4 Current Management

Management of menopausal syndrome should be individualized according to symptom severity, patient preference, and associated comorbidities. Current therapeutic options include Hormone replacement therapy (HRT), Selective serotonin reuptake inhibitors (SSRIs), Serotonin norepinephrine reuptake inhibitors (SNRIs), Gabapentin, Clonidine, Calcium and vitamin D supplementation, Bisphosphonates, Lifestyle modification, Exercise, Cognitive behavioural therapy, Complementary and

integrative therapies¹⁴.

Ayurveda offers such a holistic perspective by interpreting menopause as *Rajonivritti*, a physiological consequence of ageing associated with *Vata predominance* and *Dhatu Kshaya*. This concept forms the theoretical basis for the use of therapies such as *Matra Basti*, which are discussed in subsequent sections.

3. Rajonivritti in Ayurveda

Ayurveda considers menopause a natural physiological transition rather than a pathological condition. The cessation of menstruation is described as *Rajonivritti*, which literally means the permanent cessation of *Raja* (*Artava* or menstrual blood). Although classical Ayurvedic texts do not describe menopause as a separate disease entity, its physiological basis and associated clinical manifestations can be understood through the concepts of *Jara* (ageing), *Vata Prakopa*, *Dhatu Kshaya*, and *decline in Artava*¹⁵⁻¹⁷.

The process of ageing is regarded as a *Swabhavika* (natural) phenomenon that leads to gradual deterioration of body tissues and physiological functions. During this stage, the dominance of *Vata Dosha* increases, while the nourishing capacity of *Rasa Dhatu* and subsequent *Dhatu*s progressively declines. Since *Artava* is considered an *Upadhatu* of *Rasa Dhatu*, its depletion ultimately results in the cessation of menstruation¹⁵. Among the classical Ayurvedic texts, *Sushruta Samhita* provides one of the earliest references to the age of natural menopause. Acharya Sushruta states:

"पञ्चाशद्वर्षेस्त्रीणारजोनिवर्तते।" (*Su.Sa. 3/11*)¹⁶

This statement indicates that menstruation naturally ceases around the age of fifty years, closely corresponding with the age of natural menopause recognized in contemporary medicine.

Ayurveda interprets the symptoms associated with *Rajonivritti* through the principles of *Dosha predominance*. The increase in *Vata Dosha* during later life results in dryness *Rukshata*, degeneration, instability, and depletion, producing symptoms such as joint pain, insomnia, constipation, anxiety, irritability, fatigue, and vaginal dryness. Secondary involvement of *Pitta Dosha* may contribute to excessive sweating, burning sensation, emotional irritability, and vasomotor disturbances, whereas diminished *Kapha* may reduce tissue stability and lubrication¹⁷. The concept of *Dhatu Kshaya* further explains the multisystem manifestations of menopause. Progressive depletion of *Rasa*, *Asthi*, *Majja*, and *Artava* leads to reduced tissue nourishment, osteoporosis, muscle weakness, cognitive changes, and cessation of reproductive function. These observations closely parallel the consequences of estrogen deficiency described in modern medicine¹⁸⁻²⁰. Ayurvedic management of *Rajonivritti* therefore emphasizes restoring physiological balance rather than treating menopause as a disease. The therapeutic approach includes *Vata Shamana*, *Brimhana*, *Rasayana Chikitsa*, proper dietary regulation, lifestyle modification, Yoga, and Panchakarma therapies. Among these interventions, *Matra Basti* is regarded as particularly suitable because of its ability to pacify *Vata*, nourish depleted tissues, and promote healthy ageing¹⁷. Thus, *Rajonivritti* represents a natural stage in a woman's life characterized by age-related physiological changes. Understanding its Ayurvedic basis provides the theoretical foundation for selecting *Matra Basti* as a rational therapeutic intervention for menopausal syndrome.

4. Pathogenesis

The pathogenesis of menopausal syndrome involves complex

neuroendocrine, metabolic, and age-related changes. Modern medicine attributes these changes primarily to ovarian follicular depletion and estrogen deficiency, whereas Ayurveda explains them through *Jara*, *Dhatu Kshaya*, *Vata Prakopa*, *Agnimandya*, and *Srotodushti*. Although the explanatory models differ, both systems recognize menopause as a multisystem physiological transition (2,15,22).

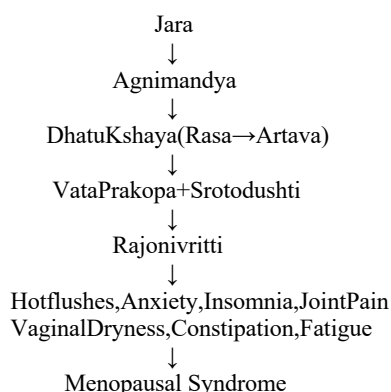
4.1 Modern Perspective

Women are born with a finite number of primordial follicles that progressively decline because of ovulation and follicular atresia. As ovarian reserve diminishes, production of estrogen, progesterone, and inhibin decreases significantly. Reduced estrogen disrupts the negative feedback mechanism of the hypothalamic–pituitary–ovarian axis, leading to increased secretion of follicle-stimulating hormone (FSH) and luteinizing hormone (LH). Estrogen receptors are distributed throughout the central nervous system, cardiovascular system, bones, skin, urinary tract, and reproductive organs. Consequently, estrogen deficiency produces widespread physiological changes including vasomotor instability, osteoporosis, mood disorders, sleep disturbances, cognitive decline, vaginal atrophy, urinary symptoms, and metabolic alterations.

4.2 Ayurvedic Perspective (Samprapti)

From the Ayurvedic perspective, the pathogenesis begins with *Jara*, during which digestive and tissue metabolic activities (*Agni*) gradually decline. Reduced metabolic efficiency impairs sequential nourishment of the seven *Dhatu*, resulting in *Dhatu Kshaya*. Progressive depletion of *Rasa Dhatu* eventually affects *Artava*, leading to the permanent cessation of menstruation. Simultaneously, *Vata Dosha* becomes physiologically predominant during old age. The intrinsic qualities of *Vata*—*Ruksha* (dry), *Laghu* (light), *Chala* (mobile), *Khara* (rough), and *Sukshma* (subtle)—promote degeneration and functional instability throughout the body. These changes manifest clinically as dryness of the skin and vagina, constipation, insomnia, anxiety, musculoskeletal pain, fatigue, and reduced physical strength^{18,21}. Age-related impairment of *Srotas* further contributes to disease progression. Dysfunction of *Rasavaha Srotas* reduces tissue nourishment, *Artavavaha Srotas* results in cessation of menstruation, and *Asthivaha Srotas* involvement contributes to osteoporosis and joint disorders. Thus, menopausal syndrome is understood as the cumulative effect of *Vata Prakopa*, *Dhatu Kshaya*, and *Srotodushti*^{17,20}.

Figure 1. Ayurvedic Samprapti of Menopausal Syndrome



5. Concept of Matra Basti and Classical References

5.1 Concept of Matra Basti

Among the Panchakarma procedures described in Ayurveda, *Basti Karma* occupies a unique position because of its profound therapeutic effect on *Vata Dosha*, which is considered the principal regulator of all physiological activities. Acharya Charaka describes *Basti* as "*Ardha Chikitsa*" owing to its extensive applicability in the management of *Vata* disorders²³. Unlike the modern concept of an enema, *Basti* is regarded as a systemic therapeutic intervention capable of restoring *Dosha* equilibrium, nourishing body tissues, and promoting physiological homeostasis.

Matra Basti is a subtype of *Sneha Basti*, in which a small quantity of medicated oil or ghee is administered through the rectal route. Because of its mild nature, it does not produce purgation and can be administered regularly without strict dietary restrictions or elaborate preparatory procedures. Classical texts describe *Matra Basti* as *Nitya Sevaniya* (suitable for daily administration), particularly in elderly individuals, debilitated patients, women, and persons suffering from chronic *Vata* disorders²⁴. Menopause is characterized by progressive *Vata predominance* and *Dhatu Kshaya*, making *Matra Basti* a rational therapeutic modality. The administration of medicated oil through the rectal route is believed to pacify *Apana Vata*, improve tissue nourishment, restore lubrication (*Snehana*), and support healthy ageing (*Rasayana*). Unlike evacuative forms of *Basti*, *Matra Basti* emphasizes nourishment and functional restoration rather than elimination.

5.2 Therapeutic Properties of Matra Basti

Classical Ayurvedic literature attributes multiple pharmacological and physiological actions to *Matra Basti*, making it particularly useful in age-related degenerative disorders.

Vata Shamana

The principal action of *Matra Basti* is pacification of aggravated *Vata Dosha*. Since *Vata* governs movement, neurological functions, excretion, and reproductive physiology, its normalization helps alleviate symptoms such as pain, insomnia, constipation, anxiety, and musculoskeletal stiffness commonly observed during menopause²⁴.

Brimhana (Nourishment)

Sneha administered through *Matra Basti* nourishes depleted body tissues and promotes tissue regeneration. This action is especially important during menopause, where progressive *Dhatu Kshaya* contributes to fatigue, muscle weakness, osteoporosis, and reduced physical endurance.

Rasayana (Rejuvenation)

Matra Basti is also regarded as a rejuvenative therapy that supports healthy ageing by improving vitality, immunity, and tissue resilience. Its *Rasayana* action is particularly relevant in menopausal women, who undergo systemic physiological changes associated with ageing²⁵.

Bala and *Ojovardhana*

Regular administration of medicated oil enhances *Bala* (strength) and supports *Ojas*, thereby improving both physical and psychological well-being. These actions contribute to better quality of life during the postmenopausal period.

5.3 Classical References Supporting Matra Basti

The therapeutic importance of *Basti* is extensively described in the *Brihatrayi* and other classical Ayurvedic texts.

Charaka Samhita

Acharya Charaka emphasizes the supremacy of Basti in the management of Vata disorders.

अर्धवाएतच्चिकित्सायाःयद्वस्तिः।(Ch.Si (1/39)

This statement indicates that Basti constitutes half of all therapeutic measures because of its ability to influence the principal Dosha governing bodily functions.

Charaka further recommends Sneha Basti in conditions associated with:

Vata disorders ,Dhatu Kshaya ,Daurbalya (general debility) ,Chronic illness ,Advanced age Neuromuscular weakness .These indications closely correspond with the clinical profile of menopausal syndrome.

Sushruta Samhita

Acharya Sushruta describes Basti as the most effective therapy for diseases caused by aggravated Vata and elaborates its indications, contraindications, procedural aspects, and therapeutic benefits²⁴. The text recommends Sneha-based therapies for conditions characterized by pain, dryness, stiffness, degeneration, and weakness, all of which are frequently encountered during menopause.

Ashtanga Hridaya

Acharya Vagbhata provides a detailed description of Matra Basti and states that it can be administered safely on a daily basis because of its nourishing nature and minimal adverse effects²⁵. He specifically recommends Matra Basti for Elderly individuals ,Women ,Children Debilitated patients ,Persons exhausted by physical exertion ,Individuals with chronic Vata disorders. These recommendations closely align with the therapeutic requirements of menopausal women.

5.5 Relevance of Matra Basti in Menopausal Syndrome

The clinical manifestations of menopausal syndrome including hot flushes, insomnia, anxiety, vaginal dryness, constipation, fatigue, musculoskeletal pain, and reduced quality of life can largely be explained through *Vata Prakopa* and *Dhatu Kshaya*. Matra Basti addresses these pathological mechanisms by Pacifying *Apana Vata* ,Nourishing depleted Dhatus ,Improving lubrication of tissues ,Enhancing musculoskeletal strength ,Supporting healthy ageing ,Improving bowel function ,Promoting psychological well-being Restoring physiological homeostasis .Unlike therapies that primarily target individual symptoms, Matra Basti acts on the underlying Ayurvedic pathogenesis, making it a holistic intervention for menopausal syndrome. Its gentle nature, ease of administration, and suitability for long-term use further support its application in postmenopausal women.

5.6 Clinical Evidence

The increasing prevalence of menopausal syndrome and concerns regarding the long-term safety of hormone replacement therapy (HRT) have stimulated interest in complementary and integrative therapeutic approaches. Ayurveda offers a comprehensive management strategy that combines herbal medicines, Panchakarma procedures, dietary regulation, lifestyle modification, and Rasayana therapy. Among these modalities, *Matra Basti* has gained considerable attention because of its potential to address the fundamental Ayurvedic pathogenesis of menopause, namely *Vata Prakopa* and *Dhatu Kshaya* ²⁹.

6.1 Evidence for Ayurvedic Interventions in Menopausal Syndrome

Clinical studies evaluating Ayurvedic management of menopausal syndrome have demonstrated improvements in vasomotor symptoms, psychological disturbances, musculoskeletal discomfort, sleep quality, and overall quality of life. Most investigations have employed herbal formulations such as *Ashwagandha*, *Shatavari*, *Ashokarishta*, and *Praval Pishti*, either alone or in combination with lifestyle modifications and Panchakarma procedures reported significant improvement in somatic and psychological symptoms without major adverse effects, suggesting that Ayurvedic interventions may provide a safe and holistic therapeutic option .Similarly, observational studies have demonstrated beneficial effects of individualized Ayurvedic management on hot flushes, insomnia, anxiety, fatigue, vaginal dryness, and musculoskeletal pain. These studies emphasize correction of Dosha imbalance and improvement of quality of life rather than symptomatic suppression alone ²⁹

Clinical Evidence Related to Matra Basti

Basti Karma is regarded in Ayurveda as the principal treatment for disorders caused by aggravated Vata Dosha. Because menopausal syndrome is predominantly interpreted as a Vata-dominant condition associated with tissue depletion, Matra Basti has been increasingly incorporated into clinical practice. Published clinical reports indicate that Matra Basti may reduce Joint pain and stiffness ,Low backache ,Generalized body pain ,Constipation ,Sleep disturbances,Anxiety ,Fatigue ,Vaginal dryness ,Overall symptom severity .These therapeutic benefits are attributed to the combined Vatahara, Brimhana, and Rasayana actions of medicated Sneha administered through the rectal route .

Table 2. Summary of Selected Clinical Studies on Ayurvedic Management of Menopausal Syndrome

Author	Study Design	Intervention	Major Findings
Modi et al.	Clinical trial	Ashokarishta + Ashwagandha + Praval Pishti	Significant improvement in psychological and somatic symptoms.
Yadav et al.	Review	Rajonivritti studies	Beneficial role of Vata-pacifying and Rasayana therapies.
Various institutional studies	Observational	Panchakarma + herbal medicines	Improvement in quality of life, sleep, pain, and vasomotor symptoms.

7. Mechanism of Action

The therapeutic efficacy of *Matra Basti* in menopausal syndrome can be explained through both Ayurvedic principles and contemporary biomedical concepts. Ayurveda attributes its effects primarily to *Vata Shamana*, *Brimhana*, *Rasayana*, and *Dhatu Poshana*, whereas modern science proposes mechanisms involving rectal drug absorption, autonomic nervous system modulation, anti-inflammatory activity, and regulation of the gut–

brain axis .

7.1 Ayurvedic Mechanism

According to Ayurveda, **Pakwashaya (large intestine)** is the principal seat of **Vata Dosha**. Administration of medicated Sneha through the rectal route directly influences **Apana Vata**, restoring its normal physiological function. Since Apana Vata governs reproductive function, excretion, and pelvic physiology, its normalization helps alleviate many menopausal symptoms including constipation, vaginal dryness, fatigue, insomnia, and musculoskeletal pain .

The nourishing (**Brimhana**) action of medicated oil improves **Dhatu Poshana**, whereas its **Rasayana** effect promotes healthy ageing and tissue rejuvenation. Consequently, Matra Basti acts not merely as a symptomatic therapy but also addresses the underlying Ayurvedic pathogenesis of menopausal syndrome.

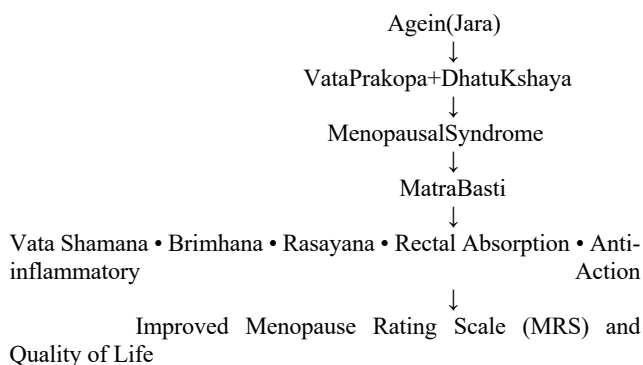
7.2 Biomedical Perspective

The rectal mucosa possesses an extensive vascular network capable of absorbing lipid-soluble compounds into the systemic circulation. Because a substantial proportion of rectally administered drugs bypass hepatic first-pass metabolism, medicated oils may achieve effective systemic bioavailability .

Emerging evidence also highlights the role of the gut brain axis in regulating mood, sleep, autonomic function, and neuroendocrine responses. Modulation of intestinal physiology through rectal administration may influence these pathways, providing a possible explanation for improvements in psychological symptoms observed after Matra Basti therapy .

7.3 Proposed Integrative Mechanism

The therapeutic effects of Matra Basti may therefore be explained through an integrative model in which Vata Shamana, Dhatu Poshana, rectal drug absorption, autonomic modulation, antioxidant activity, and healthy ageing collectively contribute to symptomatic improvement.



8. Research Gaps and Future Directions

Although Ayurveda has been extensively practiced for the management of menopausal symptoms, the scientific evidence supporting specific therapeutic interventions, particularly Matra Basti, remains limited. Existing literature suggests promising clinical benefits; however, methodological limitations restrict the strength of the available evidence. Addressing these shortcomings is essential for the wider acceptance of Ayurvedic interventions in evidence-based menopausal healthcare.

One of the major research gaps is the scarcity of well-designed randomized controlled trials (RCTs) evaluating Matra Basti in menopausal syndrome. Most published studies are observational, pilot trials, institutional dissertations, or involve small sample

sizes, thereby limiting statistical power and generalizability. Large multicentre clinical trials with adequate sample sizes are required to establish robust evidence regarding efficacy and safety.

Another important limitation is the lack of standardized treatment protocols. Considerable variation exists in the type of medicated oils, dosage, duration of therapy, frequency of administration, and associated oral medications. Such heterogeneity makes comparison among studies difficult and prevents the development of evidence-based clinical guidelines. Standardization of Matra Basti protocols is therefore necessary for future research.

The use of validated outcome measures also remains inconsistent. Although subjective improvement in menopausal symptoms has been reported, only a limited number of studies have utilized internationally accepted assessment tools such as the Menopause Rating Scale (MRS), Menopause-Specific Quality of Life Questionnaire (MENQOL), or the Greene Climacteric Scale. Future clinical studies should employ standardized and validated outcome measures to improve comparability and scientific credibility.

Another important area requiring investigation is the mechanism of action of Matra Basti. Classical Ayurvedic literature explains its therapeutic effects through Vata Shamana, Brimhana, Rasayana, and Dhatu Poshana, whereas modern scientific evidence regarding pharmacokinetics, rectal drug absorption, autonomic nervous system modulation, neuroendocrine regulation, inflammatory pathways, and gut-brain axis interactions remains limited. Translational research integrating Ayurvedic concepts with contemporary biomedical sciences would enhance the scientific understanding and global acceptance of this therapy.

Long-term safety data are also insufficient. Most studies have relatively short follow-up periods and provide limited information regarding recurrence of symptoms, sustained therapeutic benefits, patient compliance, or adverse events. Future investigations should include extended follow-up and comprehensive safety monitoring to establish the long-term effectiveness of Matra Basti in menopausal women.

In addition, comparative effectiveness studies evaluating Matra Basti against conventional therapies, other Panchakarma procedures, herbal formulations, and integrative treatment protocols are limited. Such studies would help define the relative therapeutic value of Matra Basti and facilitate its incorporation into evidence-based integrative healthcare.

Future research should also explore individualized treatment strategies based on Prakriti, severity of menopausal symptoms, stage of menopause, associated metabolic disorders, and psychosocial factors. Incorporating objective biochemical markers, hormonal profiles, inflammatory biomarkers, oxidative stress indicators, and bone mineral density assessments alongside patient-reported outcome measures would provide a more comprehensive evaluation of therapeutic efficacy. By employing a comparative clinical design, standardized interventions, and validated outcome measures, the study is expected to contribute meaningful evidence towards the development of standardized Ayurvedic management protocols for menopausal syndrome.

Table 3. Research Gaps and Future Directions

Identified Research Gap	Future Recommendation
Limited randomized controlled trials	Conduct multicentre RCTs with adequate sample sizes
Small sample sizes	Increase statistical power through larger participant recruitment
Lack of standardized Matra Basti protocols	Develop uniform treatment guidelines regarding dose, duration, and frequency
Limited use of validated outcome measures	Use MRS, MENQOL, Greene Climacteric Scale, and quality-of-life instruments
Insufficient mechanistic studies	Investigate pharmacokinetics, gut-brain axis, inflammatory markers, and neuroendocrine pathways
Limited long-term follow-up	Include extended follow-up to assess sustained efficacy and recurrence
Inadequate safety reporting	Establish standardized adverse event monitoring and patient compliance assessment
Lack of comparative studies	Compare Matra Basti with conventional therapies and other Ayurvedic interventions

9. Conclusion

Menopause is a natural physiological transition characterized by the cessation of ovarian function and accompanied by multiple vasomotor, psychological, musculoskeletal, urogenital, and metabolic changes that significantly influence women's quality of life. While modern medicine primarily attributes these manifestations to estrogen deficiency, Ayurveda interprets menopause as Rajonivritti, a physiological consequence of Jara (ageing) associated with Vata Prakopa, Dhatu Kshaya, and decline of Artava. Although the conceptual frameworks differ, both systems recognize menopause as a multisystem process requiring comprehensive and individualized management.

Among the various Ayurvedic therapeutic modalities, Matra Basti occupies a distinctive position because of its ability to pacify Vata Dosha, nourish depleted tissues (Brimhana), provide rejuvenation (Rasayana), and restore physiological homeostasis. Classical Ayurvedic literature consistently recommends Matra Basti for conditions characterized by ageing, tissue depletion, neuromuscular weakness, and chronic Vata disorders, thereby providing a strong theoretical rationale for its application in menopausal syndrome.

The available scientific literature indicates that Ayurvedic interventions may improve vasomotor symptoms, psychological well-being, sleep quality, musculoskeletal discomfort, and overall quality of life. Existing studies are often constrained by small sample sizes, methodological heterogeneity, short follow-up periods, and lack of standardized treatment protocols, highlighting the need for more rigorous clinical investigations. From an integrative perspective, the therapeutic action of Matra Basti may involve multiple mechanisms, including Vata Shamana, Dhatu Poshana, Snehana, and Rasayana, together with possible

biomedical effects such as rectal drug absorption, autonomic nervous system modulation, antioxidant activity, and regulation of the gut-brain axis. Although these mechanisms are biologically plausible, further experimental and translational studies are necessary to establish the precise pathways involved.

In conclusion, Matra Basti represents a promising, holistic, and patient-centred Ayurvedic intervention for the management of menopausal syndrome. By addressing the underlying principles of Vata predominance and Dhatu depletion, it offers a therapeutic approach that extends beyond symptomatic relief and aligns with the principles of healthy ageing. Future multicentre randomized controlled trials, standardized intervention protocols, mechanistic studies, and long-term follow-up are essential to strengthen the evidence base and facilitate the integration of Matra Basti into contemporary evidence-based women's healthcare.

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