CLINICAL EVALUATION OF AYURVEDIC THERAPEUTIC INTERVENTIONS IN MULTIPLE SCLEROSIS: A RETROSPECTIVE OBSERVATIONAL STUDY

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Abstract

Background:

Multiple Sclerosis (MS) is a chronic autoimmune demyelinating disorder of the central nervous system. Despite advancements in modern immunotherapies, challenges such as adverse effects and incomplete remission persist. Ayurveda provides a holistic management approach focusing on *Doṣha (body humours)* balance, detoxification, and *Dhātu (body tissue)* rejuvenation.

Objectives:

To evaluate the clinical outcomes of Ayurvedic therapeutic interventions in patients with Multiple Sclerosis managed at Arya Vaidya Sala, Kottakkal, between 2020 and 2025.

Methods:

A retrospective observational analysis was conducted on 57 patients diagnosed with MS. Clinical records were reviewed for demographic data, *Prakṛti* (*body constitution*) assessment, symptom profile, internal medications, external therapies, and treatment outcomes. Symptom intensity was assessed using the Visual Analogue Scale (VAS), and overall clinical improvement was graded into predefined categories. Statistical analyses employed paired tests (t-test/Wilcoxon) with effect size estimation.

Results:

Females comprised 68% of the cohort, with most patients aged 30–50 years and predominantly exhibiting *Vāta-Kaphaja Prakṛti (Vāta-Kaphaja constitution)*. The most frequent symptoms were pain, weakness, and numbness. Common internal formulations included *Suvarnamukthadi Gulika*, *Guggulutiktakam Kashayam*, and *Ashwagandhadi Ghritam*; major external therapies included *Pizhichil (*Oil bath therapy), *Dhara (Pouring in a continuous stream)*, and *Vasthi (enema)*. VAS scores showed a significant reduction from 3.09 to 1.95 ($p = 0.0014$), and overall clinical improvement was statistically significant ($p < 0.001$). Females and patients aged 30–50 years demonstrated a greater response to therapy.

Conclusion:

Ayurvedic management incorporating *Snehana–Swedana* (Oleation-Sudation) based therapies and *Vātahara Rasāyana* (Vata-pacifying rejuvenative therapy) formulations demonstrated significant symptomatic improvement in patients with MS. The findings highlight the potential of Ayurveda as a complementary approach in managing neurodegenerative and autoimmune conditions, warranting validation through prospective controlled trials.

Keywords:

Multiple Sclerosis; *Vāta Vyādhi*; *Snehana–Swedana*; *Rasāyana*; *Suvarnamukthadi Gulika*; Neurodegenerative disorder; Neuromucular disorder;

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INTRODUCTION

Multiple sclerosis (MS) is a chronic, immune-mediated disorder of the central nervous system (CNS) characterized by inflammation, demyelination, and progressive neurodegeneration.[1] It remains a major cause of neurological disability among young adults, affecting approximately 2.8 million people globally. The disease commonly manifests between 20 and 40 years of age and shows a female predominance, with an estimated ratio of 3:1 [2]. In India, the prevalence has been increasing, with recent estimates suggesting around 7–8 cases per 100,000 population, comparable to global trends [3].

Current disease-modifying therapies target immune suppression or modulation to reduce relapse rates and slow progression. However, their use is often limited by incomplete remission, high cost, and adverse effects such as infections, cytopenias, and organ toxicity[4,5]. These limitations highlight the need for safer, integrative approaches that address both symptom control and neuroprotection.

In Ayurvedic medicine, the pathogenesis of MS may be conceptually correlated with *Vāta Vyādhi* involving *āvaraṇa* (functional obstruction) and *dhātu kṣaya* (tissue depletion), particularly affecting *Majjā Dhātu* (nervous tissue)[6,7]. Chronic *Vāta* aggravation is believed to impair neuromuscular function and lead to progressive weakness, sensory loss, and coordination deficits. Management strategies emphasize *Vāta-śamana* (pacification of Vāta doṣa), *Snehana–Swedana* (oleation and sudation), and *Rasāyana* (rejuvenation) therapies to restore neural function and vitality[8,9].

Several Ayurvedic formulations—such as *Suvarnamukthadi Gulika*, *Guggulutiktakam Kashayam*, *Ashwagandhadi Ghritam*, and *Dhanwantharam Tailam*—are traditionally indicated for neuromuscular disorders and *Vāta Vyādhi (Neuro muscular disorder)* [10,11]. Yet, systematic clinical evaluations of these therapies in Multiple Sclerosis are limited.

The present study was designed to evaluate the clinical outcomes of Ayurvedic therapeutic interventions in patients with MS managed at Arya Vaidya Sala, Kottakkal. Through a retrospective observational analysis of hospital records, this study aims to assess the symptom patterns, therapeutic approaches, and clinical responses associated with Ayurvedic management of MS.

Materials and Methods

Study Design and Setting

This retrospective observational study was conducted at the Ayurvedic Hospital and Research Centre (AH&RC), Arya Vaidya Sala, Kottakkal, Kerala, India. The study aimed to evaluate the clinical outcomes of Ayurvedic therapeutic interventions administered to patients diagnosed with Multiple Sclerosis (MS) between May 2020 and May 2025.

Participants

Clinical records of 57 patients diagnosed with MS were retrieved from the institutional hospital database (JMJ software). Diagnosis was established based on suggestive clinical features, neurological examination findings, and supportive neuroimaging reports. Patients with other major neurological or systemic disorders were excluded. Demographic details, Ayurvedic diagnostic profiles, *Prakṛti* assessment, prescribed internal medications, external therapies, and progress notes were extracted for analysis.

Ayurvedic Diagnosis and Therapeutic Rationale

In Ayurvedic terms, MS was interpreted as a manifestation of *Vāta Vyādhi* involving *āvaraṇa* (obstruction) and *dhātu kṣaya* (tissue depletion), primarily affecting *Majjā Dhātu*. Treatment approaches emphasized *Vāta-śamana* (pacification of Vāta), *Snehana–Swedana* (oleation and sudation), *Pañcakarma* procedures such as *Vasti* and *Nasya*, and *Rasāyana* (rejuvenative) therapies.

Interventions

Patients received individualized Ayurvedic management consisting of internal medications and external therapies based on disease presentation and *Doṣha–Dhātu* involvement. Common internal medicines included *Suvarnamukthadi Gulika*, *Guggulutiktakam Kashayam*, *Dhanwantharam Kashayam*, *Ashwagandharishtam*, and *Ashwagandhadi Ghritam*.

External therapies comprised *Pizhichil*, *Dhara*, *Thailadhara (Oil puring)*, *Njavarakizhi* (medicated rice bolus fomentation), *Pichu* (Medicated oil pad application), *Upanāham* (Poultice therapy), and *Abhyanga* (therapeutic medicated oil massage), among others. Among *Pañcakarma* (detoxifying) procedures, *Kashaya Vasti (decoction enema)*, *Sneha Vasti (Oleation)*, and *Nasyam* (Nasal instillation therapy) with *Ksheerabala Taila* were predominantly employed. Treatment duration and intensity were individualized according to clinical status and physician discretion.

Outcome Measures

Two principal outcome measures were assessed:

1. **Primary Outcome:** Symptom intensity quantified using the Visual Analogue Scale (VAS, 0–10).
2. **Secondary Outcome:** Overall clinical improvement graded on an ordinal scale—No improvement = 0, Mild = 12.5, Moderate = 37.5, Good = 62.5, Excellent = 87.5—based on changes in major presenting complaints between admission and discharge.

Subgroup analyses were performed based

on sex (male/female) and age (< 30, 30–50, > 50 years).

Data Management and Statistical Analysis

Data were entered and analyzed using standard statistical software. Normality was assessed using the Shapiro–Wilk test. For normally distributed data, paired *t*-tests with Cohen's *d* effect size were applied; for non-normal data, Wilcoxon signed-rank tests with rank-biserial correlation (*r*) were used. Confidence intervals (95%) were calculated where applicable, and statistical significance was set at $p < 0.05$. Descriptive statistics summarized demographic patterns, *Prakṛti* distribution, symptom frequency, and treatment modalities.

Results

Demographic and Clinical Characteristics

A total of 57 patients diagnosed with Multiple Sclerosis (MS) were included in the study. Among them, 39 (68%) were females, and 18 (32%) were males, indicating a female predominance consistent with global epidemiological patterns (Figure 1). The age of patients ranged from 10 to 70 years. The largest proportion (n = 23; 40%) fell in the 40–50 year group, followed by 16 patients (28%) aged 30–40 years. Only three patients each were in the 10–20 year and 20–30 year ranges (Figure 2). Out of the total cohort, 36 patients were from India and 21 from abroad, reflecting both national and international representation (Figure 3). *Prakṛti* analysis revealed a predominance of *Vāta–Kaphaja Prakṛti* (n = 33), followed by *Vāta–Pittaja* (n = 16), *Pitta–Kaphaja* (n = 8), and Vātaja (n = 2) types (Figure 4). This supports the Ayurvedic view of *Vāta-prādhāna* dominance in MS. The most frequently reported symptoms were pain in multiple joints (52%), difficulty in walking (34%), and weakness (25%), followed by sensory impairment (18%), stiffness (17%), numbness (15%), and blurred vision (8%) (Figure 5).

Figure 1. Distribution of participants by gender.

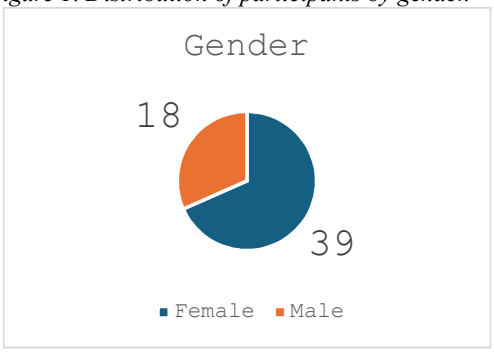


Figure 2. Age-wise distribution of participants.

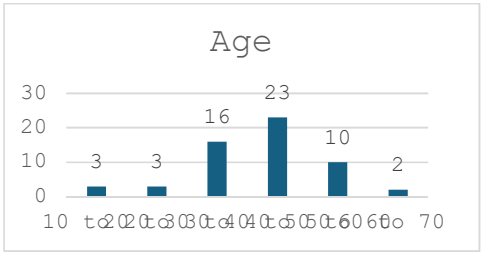


Figure 3. Geographic distribution of participants.

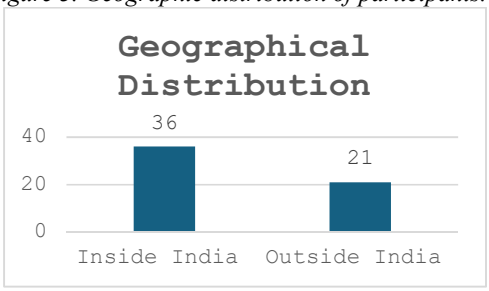


Figure 4. Distribution of Prakriti types among participants.

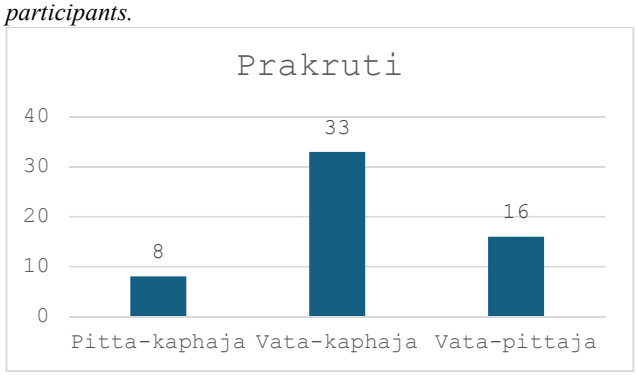
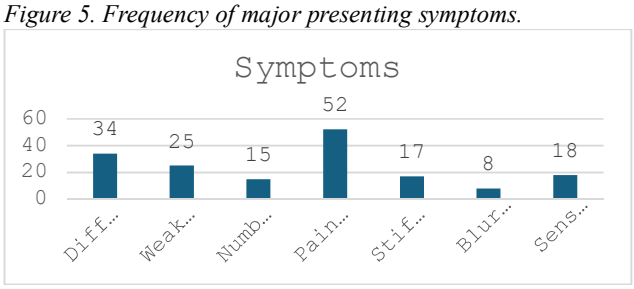


Figure 5. Frequency of major presenting symptoms.



Therapeutic Interventions

Patients were treated with a combination of internal medicines and external therapies based on individualized Ayurvedic assessment. The list of internal medicines used is summarized in Table 1, and external medications and procedures are detailed in Table 2. *Pizhichil* was the most frequently employed therapy (77%), followed by *Dhara* (72%), *Thailadhara* (68%), *Njavarakizhi* (60%), and *Abhyanga* (37%). These were complemented by supportive treatments such as Pichu and *Upanāham* (Figure 6). Among *Pañcakarma* procedures, Kashaya Vasti was performed in 31 patients, *Sneha Vasti* in 27, and *Nasyam* in 20, using appropriate medicated oils and decoctions (Table 3).

Table 1. Internal Ayurvedic formulations administered to patients with Multiple Sclerosis.

Internal Medicine(Frequency)						
Sl. No	***Kashaya m/Kwatham***	***Gulika/ capsule***	***Arishtam***	***Ghritham / leham***	***Choornam***	***Special Medicine***
1	*Gulgulutiktam Kashayam (12)*	*Suvarnamukthadi Gulika(32)*	*Aswaghandharishtam(11)*	*Aswagandhadi Ghritham(2)*	*Aswagandha Choornam (17)*	*Sakthi Modakam (7)*
2	*Dhanwantharam Kashayam (4)*	*Kshirabala 101 capsule (25)*	*Dasamoolarishtam(6)*	*Brihachagaladi Ghritam(2)*	*Kurunthottypodi(4)*	*Aswaghandha Pal Kashayam(3)*
3	*Indhukantham Kashayam (6)*	*Gorochanadi Gulika (11)*		*Gulgulutiktam Ghritam(7)*		
4	*Vidaryadi Kashayam (4)*	*Swarnabhasmam Capsule (2)*		*Ajaswagandhadi Leham (2)*		
5	*Valiyarasnadi kashayam (4)*	*Makaradhwaja Capsule (11)*				
6		*Siddha Makaradhwaja* Capsule *(7)*				
7		*Samsamni vati(2)*				
8		*Bala tailam* soft gel capsule *(6)*				

Table 2: - Table 2. External medications used

External Medicine (Frequency)		
Sl. No	Body	Head
1	*Balaswagandhadi Tailam/ Kuzhampu(33)*	*Ksheerabala Tailam (20)*
2	*Dhanwantharam Tailam/Kuzhampu (12)*	*Thriphaladi Tailam (4)*
3	*Karpasasthyadi Tailam (14)*	*Eladi Tailm/ Kera Tailam(6)*

Figure 6: Frequency of therapeutic procedures administered.

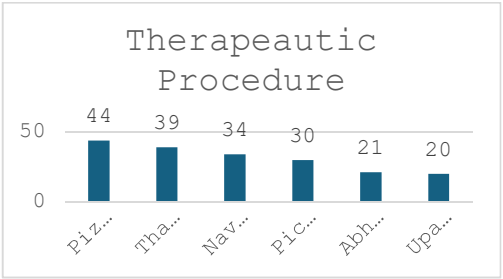


Table: 3 - Panchakarma procedures with frequency

Sl. No	**Panchakarma Procedure**	**Medicine used**	**Frequency**
1	Nasyam	Ksheerabala (7), (21)	20
2	Kashaya Vasthi	Indhukatham, Rajayapanam, Ksheera Vasthi, Balaguluchyadi,Dwi panchamooladi, Dhanwantharam Kashaya Vasthi	31
3	Sneha Vasthi	Sathahwadi Vasthi, Dhanwantharam Mezhukupakam	27

Primary Outcome – Symptom Intensity (VAS)

The mean Visual Analogue Scale (VAS) score for symptom intensity decreased significantly from 3.09 ± 3.08 at baseline to 1.95 ± 1.83 at discharge ($p = 0.001$; Wilcoxon signed-rank test), indicating a

meaningful reduction in symptom severity. The effect size (r = 0.89) represented a large clinical effect. Subgroup analyses demonstrated significant improvements in females (p = 0.001) and in patients aged 30–50 years (p = 0.001) and > 50 years (p = 0.02), while changes in the < 30-year group were not significant (p = 9.09). These findings are illustrated in Figures 8–9 and detailed in Tables 4–7.

Table 4. Statistical summary of VAS and complaint score changes

Outcome	N	Summary	Test Used	p-value	Effect Size
VAS (paired)	48	3.09 (3.08) → 1.95 (1.83)	Wilcoxon signed-rank	0.001	Rank-biserial r: -0.89

Table 5. Effect size and statistical analysis of VAS score changes by gender

Grouping	Subgroup	Effect Size Type	Effect Size	95% CI Low	95% CI High	n	Test Used	p
Sex	M	Cohen's d	0.541	-0.2848	2.6648	11	Paired t-test	0.10
Sex	F	Rank-biserial r	-0.903			32	Wilcoxon signed-rank	**0.0001**

Table 6. Effect size and statistical comparison of treatment outcomes across different age groups

Grouping	Subgroup	Effect Size Type	Effect Size	95% CI Low	95% CI High	n	Test Used	**p**
Age Band	>50	Cohen's d	0.889	0.18	2.486	9	Paired t-test	**0.02**
Age Band	30–50	Rank-biserial r	-0.961			29	Wilcoxon signed-rank	**0.0001**
Age Band	<30	Cohen's d	-0.06	-4.3555	3.9555	5	Paired t-test	0.9

Figure: 7 Violin plot of VAS change by age band.

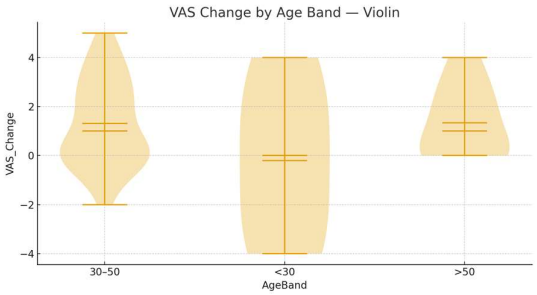
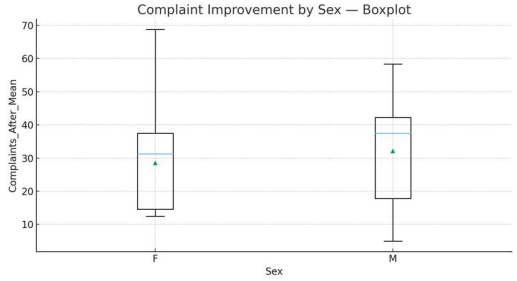


Figure: 8 Boxplot of complaints improvement by sex



Secondary Outcome – Overall Complaint Improvement

Overall clinical improvement, based on the composite complaint grading scale, showed statistically significant enhancement across all subgroups. Most patients (n = 35; 61%) demonstrated moderate improvement (25–50%), while 11 patients (19%) showed good improvement (50–75%) and only one patient (2%) showed no change (Figure 7). The mean post-treatment score was 29.70 ± 14.49, with a Wilcoxon test vs 0 yielding $p \approx 4.3 \times 10^{-11}$ ($|r| = 1.00$), confirming a robust overall improvement. Complaint-based improvement by age band is summarized in Table 8.

Figure 9. Distribution of treatment outcomes across improvement grades.

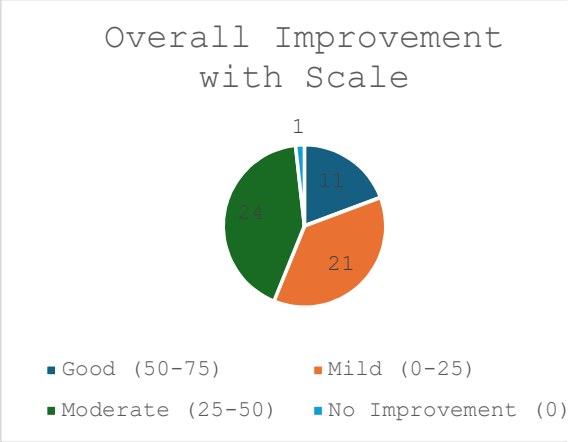


Table 7. Complaint-based improvement scores by age band.

Grouping	Subgroup	Effect Size Type	Effect Size	95% CI Low	95% CI High	n	Test Used		p
Age Band	>50	Rank-biserial r	-1.0			11	Wilcoxon signed-rank vs 0		0.001
Age Band	30–50	Rank-biserial r	-1.0			32	Wilcoxon signed-rank vs 0		9.09
Age Band	<30	Cohen's d	1.452	3.343	42.823	5	One-sample t-test vs 0		0.03

Summary of Findings

- Significant reduction in symptom intensity (VAS) across the cohort.
- Greatest improvements observed among females and patients aged 30–50 years.
- Most patients demonstrated moderate to good overall improvement.
- Combined *Pizhichil–Dhara–Vasti* therapy produced the most favourable outcomes.

These results suggest that integrative Ayurvedic management emphasizing *Vāta-śamana (vata pacifying)*, *Snehana–Swedana*, and *Rasāyana* therapies may be effective in alleviating symptoms and improving function in patients with Multiple Sclerosis.

Discussion

The present retrospective observational study analysed the demographic, clinical, and therapeutic characteristics of patients diagnosed with MS who underwent Ayurvedic management at AH&RC, Kottakkal, over a five-year period. The findings of this study provide valuable insights into the clinical trends and treatment outcomes observed in real-world Ayurvedic practice.

A higher prevalence of female patients was noted in this study, with 39 out of 57 participants being women, which is consistent with global epidemiological data suggesting a female predominance in MS[12,13]. The majority of patients belonged to the middle-aged category, particularly between 30 and 50 years, aligning with existing literature that identifies MS as a disease of early to middle adulthood[14]. The representation of international patients (21) highlights the growing interest in Ayurvedic management for chronic neurodegenerative disorders across diverse populations.

The predominance of *Vata-Kaphaja Prakriti* among the study participants is noteworthy. From an Ayurvedic standpoint, the pathogenesis of MS can be correlated with *Vata Vyadhi*, as Vata dosha governs neurological functions, including movement (*gati*) and perception (*jñāna*)[1]. The chronicity and progressive nature of MS can be understood as the outcome of Vata aggravation leading to *Avarana* (obstruction) and *Dhātu Kṣhaya* (tissue depletion), primarily involving *Majjā Dhātu (*Bone marrow tissue*)* and *Snāyu* (nervous structures)[15,16]. The predominance of *Vata-Kaphaja Prakriti* may suggest a greater susceptibility in individuals with inherent Vata dominance, where Kapha contributes to rigidity and demyelination processes.

Clinically, the most common symptoms observed were pain in multiple joints, difficulty in walking, weakness, and loss of sensations, reflecting the predominant motor and sensory impairments typical of MS[17]. These manifestations correspond to *vāta* affecting *Snāyu* and *Mamsa Dhātu (muscular tissue)*, leading to impaired mobility and neuromuscular dysfunction[18]. Stiffness reported by several patients further supports the role of Vata vitiation with Kapha association.

The internal medications selected in this regimen address these therapeutic goals through synergistic

actions. *Guggulutiktam Kashayam* is *Pitta-vatahara*, *Amapachaka*, and *Sroto-shodhaka,* which aids in the elimination of inflammatory toxins and corrects deranged *Agni*[19]. *Suvarnamukthadi Gulika*, containing *Suvarna bhasma* and *Muktha*, serves as a *Medhya Rasayana* (Nootropics rejuvenative) that supports neuronal regeneration and cognitive function.

Aswagandharishtam and *Aswagandhadi Ghritham* are *Balya-Rasayana* formulations that rejuvenate *Majja dhatu*, enhance Ojas (Vital energy), and reduce fatigue and neuromuscular weakness[20]. *Sakthi Modakam* complements these by improving vigour and vitality. Modern studies on Withania somnifera confirm its neuroprotective, anti-inflammatory, and antioxidant properties, promoting myelin repair and neuronal survival[21].

Dhanwantaram Tailam, Balaswagandhadi Tailam is widely used in *Vata Vyadhi* for its *Snāyu-Mamsa-Balya* effects[22]. The frequent use of these formulations reflects the therapeutic emphasis on *Vata* pacification and *Majjā Dhātu* Poshana (nourishment of the nervous tissue).

Among external therapies, *Pizhichil* and *Thailadhara* were the most frequently administered. These therapies provide *Snehana* (oleation) and *Svedana* (sudation), which are essential in *Vata Vyadhi Chikitsa*[23]. They enhance neuromuscular relaxation, improve circulation, and support functional recovery. *Njavarakizhi*, being *Brimhana (Nourishing therapy)* and *Rasāyana* in nature, aids in strengthening muscles and tissues[24]. The selection and frequency of these procedures demonstrate a comprehensive approach aimed at balancing Vata while promoting tissue repair and vitality.

In the present study, Kashaya Vasthi, Sneha Vasthi, and Nasyam were the principal Panchakarma procedures administered for the management of MS. All the therapeutic interventions predominantly utilized *Vatasamana* formulations, aligning with the Ayurvedic understanding of MS as a Vata-pradhana Vyadhi characterized by degeneration, weakness, and loss of coordination.

Among these procedures, *Ksheera Vasthi* (milk enema therapy) was most frequently employed, reflecting its therapeutic importance in nourishing and strengthening the *Dhatus* while pacifying aggravated *Vata*. Classical Ayurvedic texts describe *Ksheera Vasthi* as *Brimhana (Nourishing therapy)*, Balya (strength-promoting), and *Vatahara* (Vata-pacifying) in nature, thereby offering significant benefits in chronic neuromuscular and neurodegenerative conditions[25,26]. The combination of Kashaya and Sneha Vasthi further complements these effects by facilitating both *Shodhana* (elimination of vitiated Doshas) and *Snehana* (nourishment and lubrication), contributing to improved neuromuscular coordination and systemic equilibrium.

The use of *Nasyam* with *Ksheerabala Taila* supports management of *Urdhwajatrugata Vata* (neuro-muscular disorder above neck) conditions, such as tremors, facial palsy, and sensory impairment, by enhancing cerebral perfusion and neural nourishment. Modern studies have also demonstrated that Panchakarma interventions, particularly Vasthi therapy with medicated milk and oils, exhibit neuroprotective and anti-inflammatory effects through modulation of oxidative stress and cytokine balance[27].

Overall, the predominance of Vasthi procedures in the present study highlights the Ayurvedic therapeutic emphasis on Vata pacification through a synergistic combination of cleansing and rejuvenative measures, thereby aiming to restore neuromuscular function and delay disease progression in MS.

The statistically significant reduction in VAS scores and improvement in composite complaint grading ($p < 0.001$) confirm the therapeutic potential of Ayurvedic management. The large effect sizes observed indicate clinical relevance beyond statistical chance. Improvement was more pronounced among females and middle-aged adults, possibly reflecting better treatment adherence and hormonal modulation of inflammatory pathways [28].

In terms of outcomes, most patients showed moderate to good improvement, indicating a favourable response to the Ayurvedic treatment protocol. This suggests that Ayurvedic management may provide symptomatic relief and functional improvement even in chronic progressive conditions like MS [29].

Overall, the study reinforces the relevance of Ayurvedic principles in addressing neurodegenerative and autoimmune conditions. The findings also highlight the potential for Ayurveda to contribute complementary strategies in the management of MS through Vata pacification, *Avarana* clearance, and *Dhātu Poshana*. Further studies with larger sample sizes and objective biomarkers could help substantiate these clinical observations and elucidate the molecular mechanisms underlying Ayurvedic interventions in MS[30,31].

This retrospective study underscores the potential of Ayurvedic management in addressing the complex pathophysiology of MS. The integrative use of *Snehana–Swedana*–based therapies, combined with *Rasāyana* and *Vātahara* formulations such as *Suvarnamukthādi Gulika* and *Kṣīrabala* (101), *Balatailam*, *Aswaghandhadi ghritham* etc. demonstrated statistically and clinically significant improvements in pain, weakness, and neurosensory symptoms. The predominance of *Vāta-Kaphaja Prakṛti* among responders further reinforces Ayurveda's conceptual clarity in linking individual constitution with disease susceptibility and therapeutic response.

In essence, this study reaffirms the timeless Ayurvedic tenet that restoring *Vāta* balance and nourishing *Majjā Dhātu* form the cornerstone of neuro-rejuvenation. With systematic validation and scientific integration, Ayurveda may offer a safe, holistic, and biologically plausible adjunct in the multidisciplinary management of Multiple Sclerosis.

Limitations

Although retrospective, this study provides valuable clinical data supporting the role of Ayurveda in MS. Limitations include non-uniform treatment durations. Nonetheless, the observed improvements underscore Ayurveda's potential in symptom management and quality-of-life enhancement. Future research should integrate neuroimaging, biochemical, and genomic correlates to validate mechanistic insights.

Future recommendations

Prospective randomized controlled trials with neuroimaging, inflammatory, and genomic correlates.

Conclusion

This retrospective observational study suggests that individualized Ayurvedic therapeutic interventions may provide significant clinical benefits in the management of Multiple Sclerosis (MS). A statistically significant reduction in symptom intensity was observed, with mean VAS pain scores decreasing from 3.09 ± 3.08 to 1.95 ± 1.83 ($p = 0.001$), along with moderate to good overall improvement in most patients. Female patients and individuals aged 30–50 years showed particularly favourable outcomes. Commonly employed therapies such as *Pizhichil, Dhara, Vasti, and Rasāyana* formulations appeared to contribute to improvements in pain, weakness, gait disturbances, and sensory symptoms.

These findings support the Ayurvedic understanding of MS as a *Vāta Vyādhi* involving *Majjā Dhātu* and highlight the potential role of *Vāta-śamana* and neuro-rejuvenative therapies in improving functional well-being and quality of life. In the context of the limitations of conventional therapies, Ayurveda may serve as a valuable complementary approach in chronic neurodegenerative disorders.

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Conflict of interest

No conflict of interest declared by the authors.

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