

# Agnikarma and its Role in Pain Management: A Narrative Review on Exploring Ayurvedic Interventions for Musculoskeletal Disorders

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## ABSTRACT

Pain management, particularly in chronic musculoskeletal disorders, remains a challenge to modern medicine and relies considerably on drug interventions full of multiple side-effects. Ayurveda (ancient system of medicine) has non-surgical and holistic interventions such as *Agnikarma* (application of therapeutic heat) that induce equilibrium in the body's energies. *Agnikarma* is of specific utility in managing *Vata* (movement) related disorders characterised by joint pain, stiffness of muscles, inflammation, and limitation of movement. This narrative review aimed to discuss the application of *Agnikarma* in pain management, explicitly referring to musculoskeletal disorders such as sciatica and osteoarthritis, by correlating Ayurveda's concepts with present-day pain management modalities. This review consolidates data from clinical trials and case reports of recent decades that confirm the efficacy of *Agnikarma* in pain management. Other Ayurvedic interventions, such as *Siravedha* (venepuncture), *Basti* (medicated enema), and *swedana* (fomentation), are also outlined in the context of how they add to the efficacy of *Agnikarma* in managing *Vata*-related musculoskeletal disorders. The review demonstrates that *Agnikarma* effectively reduces pain, inflammation, and stiffness of muscles, resulting in long-term relief and enhanced mobility in Sciatica, Osteoarthritis, and allied disorders. It enhances blood supply, heals tissues, and reduces inflammation. Along with other Ayurvedic treatments such as *siravedha*, *Agnikarma* is even more effective in relieving pain in the short term and curing in the long term. *Agnikarma* is a practical, non-surgical intervention that targets the cause of pain, particularly in *Vata*-related disorders. By providing long-term relief from pain with minimal side-effects, *Agnikarma* is a valuable alternative to drug interventions.

**Keywords:** *Agni*, Arthritis, Inflammation, Mobility, Therapy, *Vata*

## INTRODUCTION

Pain is a common experience and usually indicates the existence of an underlying body dysfunction. Pain control in contemporary medicine is predominantly based on pharmacologic management, including analgesics, opioids, and Non-steroidal Anti-inflammatory Drugs (NSAIDs). While such drugs give symptomatic relief, they have serious side-effects in the form of dependency, gastrointestinal disorders, and cardiovascular issues [1]. These limitations have encouraged research into alternative and integrative therapies that provide long-lasting relief with fewer side-effects.

Ayurveda is a comprehensive system of healing that seeks to re-establish balance among the body, mind, and spirit. Its approach is founded on the theory of *doshas*, *Vata*, *Pitta*, and *Kapha* that govern the body's functions. *Vata*, in particular, is the energy of movement and governs the body's physiological functions like circulation, respiration, and nerve conduction [2]. *Vata* imbalance causes pain, stiffness, and inflammation, particularly in the musculoskeletal system. *Agnikarma* is one such treatment, being a fundamental element of Ayurveda, an ancient system of medicine with more than 5,000 years of history and origins in India [3]. *Agnikarma*, an Ayurvedic parasurgical procedure, effectively treats *Vata* disorders, including Sciatica (*Gridhrasi*), Osteoarthritis (*Sandhi vata*), and muscle spasms. The treatment involves applying heat to specific points on the body, stimulating circulation, reducing inflammation, and restoring functional movement [4].

The non-invasive nature of *Agnikarma* offers a compelling alternative to modern pharmacological treatments. *Agnikarma* aims for pain relief by addressing the causes of pain, such as circulatory deficiency, inflammation, and spasms, rather than suppressing pain with medication. While medication only covers up pain, *Agnikarma* attempts to put the body into balance, offering a long-term remedy for pain [5].

In Ayurveda, pain is identified as a symptom of imbalance, i.e., *Vata dosha*. *Vata* is defined as possessing qualities such as dryness, coldness, and instability. When *Vata* becomes imbalanced due to stress, improper diet, lack of rest, or exposure to cold weather, it creates blockages in circulation, stiffness in muscles and joints, and an overall lack of harmony in body tissues. This results in the creation of pain, typically in the form of conditions such as Sciatica, arthritis, and muscle spasms [6].

*Agnikarma* is so effective in curing these disorders because it specifically acts on *Vata* imbalances. Heat or *Agni* is said to counteract the coldness, dryness, and motion of *Vata*. Applying heat in *Agnikarma* relaxes spasms, loosens obstructions, washes away noxious waste products (*Ama*), and promotes circulation, leading to the healing of tissues [7]. Relaxation of the muscles, relief from spasms, and the cure of root obstructions leading to pain occur with heat application in *Agnikarma*. *Agnikarma*'s therapeutic action is based on heat penetrating deep into tissues, stimulating metabolic activity (*Dhatwagni*) and washing away noxious waste products (*Ama*) obstructing the body and leading to pain and inflammation [8].

In practice, *Agnikarma* is the application of regulated heat through instruments like *Panchdhatu Shalaka* (metal probe), needles, or cauterising tools. These instruments are employed to pass heat onto the site of pain, generally where there is chronic ache or muscle spasm. The procedure is highly effective for pain conditions like sciatica, osteoarthritis, muscle strain, and tendinitis, bringing immediate relief and long-term recovery [9].

In Ayurvedic belief, heat (*Agni*) is a very active agent in cleaning and renewing. Treatment is similar to thermal cautery; the mechanism is thought to dissolve blockages in the body's energy channels (*srotas*) [10]. Heat also boosts circulation, which aids in delivering nutrients to the tissues and clearing metabolic by-products, promoting healing. Applying heat over a local area has been proven

to improve circulation, ease muscle tension, and enhance natural healing processes within the body [11].

Though contemporary pain treatment has seen significant advances with the application of opioids, NSAIDs, and surgery, these usually have dire side-effects like addiction, gastrointestinal bleeding, and cardiovascular events. *Agnikarma* presents a potential substitute for these drug therapies, with minimal side-effects and sustained pain relief [12]. Heat application induces enhanced circulation, muscle relaxation, and regeneration of tissues with long-term effects without the adverse effects of the long-term use of analgesics. Moreover, *Agnikarma* has yielded excellent results compared to other Ayurvedic treatments, such as *Siravedha* (venepuncture) and *Basti* (medicated enema), which also significantly improve therapeutic effects [13,14].

This narrative review aimed to study the application of *Agnikarma* in treating musculoskeletal pain, i.e., disorders such as sciatica and osteoarthritis. The review tries to bridge the concepts of *Agnikarma* with modern pain management and highlight its use as an eco-friendly, non-surgical, and long-term option to drug treatment. Through the evaluation of clinical trials and case reports, the review also aimed to illustrate the combination of *Agnikarma* with other Ayurvedic treatment modalities to optimise patient outcomes and promote holistic, long-term pain relief.

## REVIEW OF LITERATURE

*Agnikarma* has been used effectively with success in relieving pain, especially in musculoskeletal conditions such as Osteoarthritis (joint disease), Sciatica (pain in nerves), and plantar fasciitis (inflammation of the sole). Its effectiveness in the management of Osteoarthritis (joint disease) and Sciatica (nerve pain) has been proven by studies with significant relief of pain and improvement in symptoms. The synergistic effect of *Agnikarma* with other Ayurvedic therapies, such as *Siravyadha* (bloodletting therapy) and *Kshar Karma* (caustic therapy), has produced enhanced pain management benefits. Even though such positive results are documented, limitations such as small studies and heterogeneous patient outcomes are documented, necessitating the conduct of large clinical studies. These findings are tabulated in [Table/Fig-1] [15-22].

## MATERIALS AND METHODS

In the present narrative review literature was accessed from PubMed, Google Scholar, and Ayurvedic journals. Research on *Agnikarma* and pain management in musculoskeletal disorders was given preference.

**Data collection:** Appropriate clinical articles, case series, and review articles published during 2015 to 2025 were included, emphasising *Agnikarma* versus other therapies such as *siravedha* and *Raktamokshana*.

**Data extraction:** Most essential data, like sample size, study design, treatment regimens, and outcomes, were retrieved from each study. The treatment durations and patients' demographics were also recorded. Data were integrated to establish common results on the efficacy of *Agnikarma* in pain management and treatment outcomes, establish limitations like small sample sizes, and suggest areas for future research.

## RESULTS

### Ayurvedic Principles Used in Agnikarma in Pain Management:

In Ayurveda, wellness depends upon the equilibrium of the three *doshas*: *Vata*, *Pitta*, and *Kapha*. Each *dosha* controls particular body functions, with *Vata* controlling all movement functions, such as circulation, breathing, and nervous system activity [23]. When deranged, *Vata* generates musculoskeletal pain, joint stiffness, and inflammation, especially in disorders such as Sciatica (*Gridhrasi*) and Osteoarthritis (*Sandhi vata*). *Agnikarma*, an Ayurvedic treatment, directly treats *Vata* imbalances by applying heat (Agni) on localised body parts [24]. Heat can soothe *Vata*, which is cold and dry, and is typically the cause of pain and stiffness in musculoskeletal disorders. Through the application of heat, *Agnikarma* seeks to balance the energy system of the body, reversing the quality of *Vata* and enhancing circulation [25].

This heat therapy is rooted in the Ayurvedic principles of Agni (digestive fire) and *Dhatwagni* (tissue metabolism). By causing local circulation and allowing tissue repair, *Agnikarma* decreases inflammation, relieves pain, and allows joint mobility [26]. It is perfectly adapted to the overall Ayurvedic pain management regimen, which emphasises holistic treatment methods like *Basti* (medicated enema), *swedana* (fomentation), and *Raktamokshana* (bloodletting), all synergistically working to restore balance, cure the body, and avoid recurrence of pain [27]. *Agnikarma*, thus, is consistent with Ayurvedic principles and offers a holistic and natural approach to musculoskeletal pain management, as shown in [Table/Fig-2] [23-27].

### Effectiveness of Agnikarma in Treating Vata-related Pain Disorders:

In Ayurveda, *Vata dosha* governs all body movements, including circulation, nerve conduction, and muscle contraction. *Vata* imbalance leads to pain, stiffness, and inflammation, particularly in

Authors (Year)	Key Findings	Research Focus	Challenges/Limitations	Future Scope
Shah HM, (2024) [15]	<i>Agnikarma</i> provided significant relief for <i>Vatakantak</i> (plantar fasciitis).	Case study on the effectiveness of <i>Agnikarma</i> in heel pain.	Limited sample size and short follow-up period.	Further clinical trials with larger sample sizes and extended follow-up.
Meena A, et al., (2021) [16]	<i>Agnikarma</i> and Ayurvedic formulations show improvement in Osteoarthritis ( <i>Sandhivata</i> ).	Application of Ayurvedic methods for managing Osteoarthritis.	Inconsistent results across different patients.	Further research on treatment standardisation and long-term effects.
Shah P, (2024) [17]	Arthrothermia® (combination of <i>Agnikarma</i> and <i>Kshar Karma</i> ) provides positive outcomes for Osteoarthritis.	Investigating the novel treatment method for Osteoarthritis.	Limited application beyond clinical trials.	Expanded clinical trials and broader application in different regions.
Kumar JV et al., (2014) [18]	<i>Agnikarma</i> is more effective than <i>siravedha</i> for treating Sciatica ( <i>Gridhrasi</i> ).	Comparative study of <i>Agnikarma</i> and <i>siravedha</i> for Sciatica.	Small sample size and lack of diversity in participants.	Larger studies with diverse demographics to confirm findings.
Nandini D (2024) [19]	<i>Agnikarma</i> shows better results than <i>Raktamokshana</i> in managing Sciatica.	Clinical evaluation comparing <i>Agnikarma</i> and <i>Raktamokshana</i> in Sciatica.	Small sample size and short treatment duration.	Further studies comparing <i>Agnikarma</i> with modern pain management techniques are needed.
Priyanka K et al., (2024) [20]	<i>Agnikarma</i> combined with <i>Siravyadha</i> shows significant pain relief in Sciatica.	Exploring the synergy of <i>Agnikarma</i> and <i>Siravyadha</i> for Sciatica.	Variability in patient response and limited follow-up.	Further randomised controlled trials with larger cohorts and longer follow-up are needed.
Tembhekar T (2023) [21]	Review of parasurgical procedures in Ayurveda, highlighting the role of <i>Agnikarma</i> .	Understanding <i>Agnikarma</i> as a parasurgical method in pain management.	Limited clinical data and varying practices across regions.	Standardisation of procedures and integration into mainstream pain management.
Sharma A. (2022) [22]	A survey study reveals widespread use of <i>Agnikarma</i> for musculoskeletal pain relief.	Overview of <i>Agnikarma</i> in clinical practice.	Lack of large-scale controlled studies and limited practitioner training.	Future focus on training practitioners and standardising treatment protocols.

[Table/Fig-1]: Previous work done on *Agnikarma* [15-22].

This table summarises key findings, research focus, challenges, and future directions for *Agnikarma* in pain management, based on recent studies and clinical trials.

Author et al.,	Ayurvedic principles and doshas	Vata imbalance and pain	Agnikarma therapy	Mechanisms of action	Holistic pain management	Agnikarma in musculoskeletal health
Eiram A et al., [23]	Describes the role of <i>Vata</i> , <i>Pitta</i> , and <i>Kapha</i> in balancing pain and healing. <i>Agnikarma</i> targets <i>Vata</i> for pain relief.	<i>Vata</i> imbalance causes pain, especially in Sciatica and Osteoarthritis. <i>Agnikarma</i> restores balance and reduces pain.	<i>Agnikarma</i> uses heat to relieve pain in <i>Vata</i> -related disorders like Sciatica.	Heat stimulates circulation and relieves pain by balancing <i>Vata dosha</i> .	It offers holistic pain relief with other therapies like <i>Marma</i> and <i>Basti</i> .	<i>Agnikarma</i> provides immediate relief and long-term recovery for <i>Vata</i> -related pain.
Waghulkar M et al., [24]	<i>Vata</i> imbalance is central to pain. <i>Agnikarma</i> restores balance by targeting <i>Vata dosha</i> .	<i>Vata</i> aggravation causes joint pain in Osteoarthritis and Sciatica. <i>Agnikarma</i> addresses this root cause.	<i>Agnikarma</i> balances <i>Vata</i> , providing immediate and long-term relief by applying heat.	Heat improves blood circulation and stimulates tissue repair.	Works with therapies like <i>siravedha</i> and <i>Basti</i> for synergistic pain relief.	<i>Agnikarma</i> helps joint mobility and reduces stiffness in <i>Vata</i> -dominant conditions.
Kahi A [25]	Focuses on <i>Vata</i> 's role in movement and how <i>Agnikarma</i> balances it to reduce pain.	<i>Vata</i> imbalance causes musculoskeletal pain like Sciatica and arthritis. <i>Agnikarma</i> restores <i>Vata</i> balance.	<i>Agnikarma</i> relieves musculoskeletal pain by balancing <i>Vata</i> through heat therapy.	<i>Agnikarma</i> increases circulation and reduces inflammation by balancing <i>Vata dosha</i> .	<i>Agnikarma</i> is combined with <i>Basti</i> to address both symptoms and causes of pain.	Effective in Sciatica and Osteoarthritis, <i>Agnikarma</i> restores joint mobility and reduces inflammation.
Mohanam M [26]	Discusses Ayurvedic concepts like <i>Agni</i> and <i>Ama</i> , showing how <i>Agnikarma</i> balances <i>Vata</i> .	<i>Vata</i> imbalance causes pain in musculoskeletal disorders like Osteoarthritis. <i>Agnikarma</i> restores balance.	<i>Agnikarma</i> applies heat to treat <i>Vata</i> -related pain, improving circulation and reducing inflammation.	Heat from <i>Agnikarma</i> stimulates circulation, promotes healing, and balances <i>Vata</i> .	<i>Agnikarma</i> is combined with other Ayurvedic therapies for comprehensive pain management.	<i>Agnikarma</i> promotes joint mobility and long-term recovery in <i>Vata</i> -related disorders.
Chakole BA [27]	<i>Agnikarma</i> stimulates A-beta fibres, reducing pain through the Gate Control Theory.	<i>Vata</i> imbalance causes musculoskeletal pain, particularly in joints. <i>Agnikarma</i> reduces this by applying heat.	<i>Agnikarma</i> applies heat for musculoskeletal pain, especially for <i>Vata</i> -related disorders.	<i>Agnikarma</i> activates the Gate Control Theory, reducing pain by stimulating A-beta fibres.	Part of a holistic treatment approach when combined with therapies like <i>Basti</i> .	<i>Agnikarma</i> relieves musculoskeletal pain, improves circulation, and reduces stiffness in <i>Vata</i> disorders.

**[Table/Fig-2]:** Ayurvedic principles underlying *agnikarma* in pain management [23-27].

This table summarises key Ayurvedic principles, *Agnikarma* therapy, and its impact on musculoskeletal health

musculoskeletal disorders like Sciatica (*Gridhrasi*) and Osteoarthritis (*Sandhi vata*). These conditions are frequent pain caused by the cold, dry, and mobile nature of *Vata*. *Agnikarma*, a valuable Ayurvedic treatment, is very effective in managing *Vata* pain. The process involves controlled use of heat (*Agni*) over specific body areas. This heat balances *Vata*, counteracting its cold and dry nature. By improving circulation, reducing inflammation, and relaxing muscles, *Agnikarma* is an immediate pain relief with long-term effects [28].

For Sciatica, *Agnikarma* works on the sciatic nerve and adjacent muscles, stimulating local circulation and relieving pain due to nerve issues. For Osteoarthritis, with *Vata* imbalance leading to pain and stiffness, *Agnikarma* enhances joint mobility and reduces inflammation through stimulation of local circulation and tissue repair. Treating the root cause of pain, *Vata dosha* imbalance, *Agnikarma* not only provides symptomatic relief but also facilitates healing overall. This makes it an effective therapy in the treatment of chronic musculoskeletal pain, a non-pharmacological, holistic treatment in line with Ayurvedic principles [29].

**Comparative Evaluation of *Agnikarma* with Other Ayurvedic Therapies for Pain:** *Agnikarma* is among the primary Ayurvedic therapies used to manage *Vata*-type pain conditions, particularly Osteoarthritis and Sciatica. It works by introducing heat (*Agni*) to the affected parts, which counteracts the coldness and dryness of *Vata dosha*, eliminating pain, reducing inflammation, and enhancing circulation [30]. However, it is used primarily together with other Ayurvedic therapies such as *siravedha*, *Raktamokshana*, and *Basti* to provide total pain relief. *siravedha* entails bloodletting to improve circulation and relieve pain, particularly in poorly drained areas [31]. Although *Agnikarma* is meant to treat local pain and stiffness of muscles, *siravedha* treats the body's detoxification and the enhancement of circulation. Using these treatments together results in immediate relief from pain and long-term healing by improving blood circulation. *Raktamokshana*, like *siravedha*, aims to remove toxic blood to alleviate pain caused by toxins [20]. *Agnikarma*, however, is a localised heat that targets the musculoskeletal pain and inflammation. Both of them, together, provide an integrated treatment through the combination of systemic detoxification and localised pain relief. *Basti*, an Ayurvedic enema therapy, treats *Vata* imbalances through the process of internal detoxification

[32]. While *Agnikarma* targets local pain relief, *Basti* treats internal toxins and gastrointestinal disorders. The employment of both treatments provides better pain management by targeting the symptoms and aetiology of pain [32]. These Ayurvedic treatments thus function synergistically, providing an integrated pain relief mechanism as shown in [Table/Fig-3] [20,30-33].

### Mechanisms of *Agnikarma*: Incorporating Heat Therapy into Ayurvedic Treatment

Heat in Ayurveda is a very effective curative force, especially in diseases of imbalanced *Vata dosha* [30]. *Vata*, being cold, dry, and unsteady, tends to produce pain, inflammation, and stiffness of the muscles. *Agnikarma* reverses this by applying the *Ushna* (hot) energy to the affected areas, which acts against the cold and dry nature of *Vata* and brings about balance [34]. *Agnikarma*'s action is local heating to stimulate circulation, enhance tissue metabolism (*Dhatwagni*), and eliminate toxins (*Ama*) from the system. Treatment by heat increases blood circulation, relaxing the muscles, reducing inflammation, and aiding tissue healing [35]. With its influence upon the energy pathways (*srotas*), it removes obstructions and restores the free movement of *Prana* (vital energy) and *Ojas* (life energy), which are essential for healing. In Ayurvedic philosophy, heat in *Agnikarma* conforms to the law of *Agni*, or the digestive fire, that governs the body's ability to change and cleanse [36]. Using *Agni* in *Agnikarma* not only corrects *Vata dosha* but also enables the natural healing processes of the body through the enhancement of the process of metabolism, the removal of pain, and enhanced mobility [37]. Heat therapy in Ayurvedic healing offers an efficient and natural means of pain management, as shown in [Table/Fig-4] [30,34-37].

### Patient Outcomes of Ayurvedic Pain Management: *Agnikarma*'s Role

Relief from pain shortly after the procedure is the norm with patients undergoing the procedure. Relief of this immediate nature is consistent with the Ayurvedic belief that *Agni* or heat can balance out *Vata dosha*, opposing its dryness and coldness, the aetiology of immobility and pain [38]. In the long run, *Agnikarma* has been linked with continued improvement in joint function, lower recurrence of pain, and greater mobility. Patients with chronic disorders like Sciatica find considerable relief from radiating pain, while patients

Author et al.,	Agnikarma	Siravedha	Raktamokshana	Basti	Combination Therapy	Holistic Pain Management
Biradar MS (2024) [30]	Agnikarma, after Siravyadhana, provides significant pain relief in <i>Gridhrasi</i> (Sciatica).	Siravyadhana provides partial relief when used alone, enhanced with Agnikarma.	Raktamokshana offers bloodletting benefits, but is less effective for pain relief than Agnikarma.	Basti helps in Vata balancing, but needs complementary therapies like Agnikarma for pain relief.	Agnikarma combined with Siravyadhana shows superior relief for sciatica pain.	Agnikarma, combined with therapies like Basti, addresses root causes and symptoms, offering a comprehensive solution.
Ramdhave SS (2024) [31]	Agnikarma offers faster relief and longer-term improvement in <i>Gridhrasi</i> .	Siravyadhana helps with blood stagnation, but Agnikarma provides faster results.	Raktamokshana helps with Vata imbalance and detoxification, though it is slower in action.	Basti purifies Vata but is most effective with Agnikarma for pain relief.	The combination of Agnikarma and Siravyadhana improves outcomes for sciatica pain.	Using Agnikarma with Siravyadhana and Basti offers an integrative approach to pain management.
Priyanka K (2024) [20]	Agnikarma is effective in reducing <i>Gridhrasi</i> pain, offering immediate relief.	Siravyadhana reduces pain but works best with Agnikarma for more comprehensive relief.	Raktamokshana helps reduce toxins but lacks the fast pain relief that Agnikarma provides.	Basti is a key therapeutic tool for Vata issues, but complements Agnikarma for pain reduction.	Agnikarma plus Siravyadhana show synergistic effects, speeding up recovery in Sciatica.	Combining Agnikarma with Siravyadhana and Basti addresses both external symptoms and internal imbalances.
Vats H (2025) [32]	Agnikarma significantly impacts inflammatory biomarkers and reduces pain in Knee OA.	Siravyadhana is effective for pain but less effective in treating inflammation than Agnikarma.	Raktamokshana may reduce toxins, but it does not have the same impact on inflammation as Agnikarma.	Basti is used to balance Vata but is more effective when combined with Agnikarma in musculoskeletal conditions.	Agnikarma combined with Siravyadhana shows positive results in treating osteoarthritis pain and inflammation.	Agnikarma addresses both inflammatory biomarkers and musculoskeletal pain, offering long-term pain relief.
Masalekar S (2025) [33]	Agnikarma effectively addresses musculoskeletal pain and provides fast pain relief.	Siravyadhana offers relief but is less effective in chronic pain compared to Agnikarma.	Raktamokshana improves circulation but does not provide immediate pain relief like Agnikarma.	Basti detoxifies but does not directly impact pain relief, as Agnikarma does.	Agnikarma, when combined with Siravyadhana, accelerates the healing process and pain relief in musculoskeletal disorders.	Agnikarma combined with Siravyadhana and Basti offers a holistic solution for musculoskeletal pain.

**[Table/Fig-3]:** Comparative analysis of *agnikarma* and other ayurvedic pain therapies [20,30-33].

This table compares the effectiveness of *Agnikarma* with *Siravyadhana*, *Raktamokshana*, *Basti*, and Combination therapies in managing pain, particularly *Vata*-related disorders like Sciatica and Osteoarthritis

Author et al.,	Principles of ayurvedic healing	Mechanism of action of ayurvedic	Effects on circulation and metabolism	Role of heat in detoxification	Restoration of energy balance	Therapeutic benefits of ayurvedic
Barange P (2025) [30]	Focus on <i>Vata</i> , <i>Pitta</i> , and <i>Kapha doshas</i> for balancing bodily functions.	<i>Agnikarma</i> uses heat to balance <i>Vata</i> , stimulate circulation, and detoxify.	Improves blood circulation and tissue repair, promoting healing.	Heat enhances detoxification by increasing circulation and clearing blockages.	Restores <i>Prana</i> and <i>Ojas</i> by balancing <i>Vata</i> and <i>Pitta</i> , improving overall health.	Immediate pain relief and long-term improvement in conditions like Sciatica.
Barai AK (2025) [34]	Ayurveda focuses on the balance of internal energies through natural methods.	<i>Agnikarma</i> stimulates metabolism and balances <i>Vata</i> , aiding in pain relief.	<i>Agnikarma</i> enhances circulation in targeted areas, improving metabolic functions.	Heat clears toxins and promotes detoxification through improved circulation.	Restores energy balance by addressing root causes of <i>Vata</i> imbalance and promoting healing.	Effective in scar management and pain relief, particularly in musculoskeletal conditions.
Suresh SP (2025) [35]	<i>Vata dosha</i> governs movement and healing in the body; <i>Agnikarma</i> restores balance.	<i>Agnikarma</i> uses heat to reduce inflammation, improve circulation, and relieve pain.	Stimulates blood flow to tissues, accelerating tissue repair and metabolic activity.	Heat promotes circulatory detoxification, reducing inflammation and aiding tissue healing.	<i>Agnikarma</i> restores <i>Vata</i> balance, improving energy flow and promoting self-healing.	Effective pain management in <i>Gridhrasi</i> and other <i>Vata</i> -dominant conditions.
Wasedar V (2025) [36]	Ayurveda emphasises holistic healing by restoring balance to the body's energies.	<i>Agnikarma</i> works by stimulating heat to release toxins and improve circulation.	<i>Agnikarma</i> enhances circulation and metabolic function, aiding the healing of damaged tissues.	Heat in <i>Agnikarma</i> helps detoxify the body by improving circulation and reducing stagnation.	<i>Agnikarma</i> restores energy balance, promoting optimal health by balancing <i>Vata</i> and improving <i>Prana</i> .	Significant recovery from lumbar disc extrusion with <i>Agnikarma</i> therapy, improving mobility.
Ajay A (2025) [37]	Grahi and Stambhana therapies focus on halting leakage and balancing energies.	<i>Agnikarma</i> uses heat to address <i>Vata</i> imbalance, alleviate pain, and promote healing.	Stimulates circulation and tissue regeneration, improving joint function and mobility.	Heat promotes detoxification by stimulating blood flow and helping clear metabolic waste.	<i>Agnikarma</i> restores <i>Vata</i> and <i>Pitta</i> balance, promoting healing and rejuvenation.	<i>Agnikarma</i> provides long-term musculoskeletal pain relief and improves joint function.

**[Table/Fig-4]:** Mechanisms of *agnikarma*: incorporating heat therapy into ayurvedic treatment [30,34-37].

This table compares *Agnikarma* and other Ayurvedic therapies, highlighting their effects on circulation, detoxification, energy restoration, and therapeutic benefits in pain management

with Osteoarthritis find lower stiffness and greater mobility of joints. These long-run advantages are linked with *Agnikarma*'s capability to restore the balance of *Vata*, improve tissue metabolism (*Dhatwagni*), and eliminate toxins (*Ama*) from the body [39]. From an Ayurvedic perspective, the long-term effects of *Agnikarma* are not just symptomatic but overall, targeting the cause of pain, an imbalance of *Vata*. By inducing the body's healing responses, *Agnikarma* relieves pain and rebalances the body's inherent equilibrium, giving rise to overall better health and less reliance on drugs. That is why *Agnikarma* becomes a valuable addition to Ayurvedic pain treatment, providing instant and long-term curative effects [40].

## DISCUSSION

The application of *Agnikarma* in modern Ayurvedic treatment provides a unique approach to pain relief, especially for *Vata* conditions such as Sciatica (*Gridhrasi*) and Osteoarthritis (*Sandhi vata*). As an Ayurvedic concept, pain is mainly viewed as a result of doshic imbalance, most notably *Vata*, which governs movement and circulation. When *Vata* is aggravated by stress, improper diet, or physical trauma, pain, stiffness, and inflammation result [41]. *Agnikarma*, through the controlled application of heat (Agni), addresses these imbalances head-on by calming *Vata*, promoting circulation, and stimulating the body's internal healing response. This

treatment not only gives symptomatic relief but also balances the body's energies, and hence long-term healing and pain reduction ensue (Ayurvedic principles of *Vata*, *Pitta*, and *Kapha*) [42].

The effectiveness of *Agnikarma* in managing musculoskeletal pain has its basis in Ayurvedic philosophy, i.e., the understanding of how Agni (digestive fire) governs the body's ability to transform and cleanse. In line with Ayurvedic principles, heat is used to combat the cold, dry, and mobile quality of *Vata dosha*, which are typically at the root of musculoskeletal diseases like Sciatica and Osteoarthritis [13]. *Agnikarma* works to loosen jammed energy channels (*srotas*), improve blood flow, and stimulate tissue healing by applying heat to specific points. The technique aligns with the Ayurvedic philosophy of heat being a medicine that can restore balance and enhance overall well-being [14].

Clinical experience attests to *Agnikarma* as a successful therapy for Osteoarthritis and Sciatica, two *Vata dosha*-related disorders. Clinical evidence suggests that *Agnikarma* offers quick pain relief and mobility restoration through circulation stimulation and inflammation relief. Heat application reduces muscle spasms and relaxes joint stiffness, typical of these disorders [8]. In Sciatica, *Agnikarma* has been found to alleviate pain travelling down the sciatic nerve, offering instant relief in a single sitting (Ayurvedic understanding of *Vata* and nerve function). In Osteoarthritis, *Agnikarma* improves joint function by stimulating circulation to the cartilage and soft tissues, which is crucial for tissue healing and joint mobility [43]. This two-way mechanism of action of *Agnikarma* pain reduction and tissue repair enhancement makes *Agnikarma* an effective treatment in managing chronic musculoskeletal disorders.

As more clinical trials are undertaken to demonstrate its effectiveness, especially in treating *Vata*-type pain disorders, *Agnikarma* has the potential to be more widely accepted. Future trials also standardise treatment and outcome measures, potentially introducing *Agnikarma* to the masses [44]. Increasing interest in integrative medicine-combining Ayurvedic therapy with conventional medical therapy also allows *Agnikarma* to be incorporated into comprehensive pain management programs. Through the confirmation of its efficacy through rigorous scientific testing, *Agnikarma* could become widely accepted and well-regarded as a therapy for chronic pain and musculoskeletal disorders [39].

With growing research being conducted on these combined procedures, *Agnikarma* can be a component of multimodal pain management protocols, presenting patients with a natural, safe alternative to conventional drugs. In this context, *Agnikarma* is of great potential not just as a monotherapy but also as an adjunct therapy in modern pain management protocols [45].

Overall, despite a multitude of issues regarding standardisation, training of practitioners, and integration into the mainstream, *Agnikarma*'s potential as a safe, natural, and effective therapy for *Vata* imbalance-related pain disorders is considerable. Through treatment of the cause and the symptoms of pain, *Agnikarma* demonstrates an integrated approach to treatment consistent with Ayurvedic healing principles. The potential of *Agnikarma* as an integral component of modern Ayurvedic medicine is in further studies, standard protocols, and greater integration of Ayurveda and modern medicine [46].

### Challenges and Future Directions of Integrating *Agnikarma* into Modern Ayurvedic Practice

The inclusion of *Agnikarma* in modern Ayurvedic practice also has some challenges, most related to standardising procedures. Unlike conventional medical treatments, *Agnikarma* lacks universally standardised treatment procedures, i.e., temperature, duration of heat application, and determination of appropriate treatment points [42]. Such inconsistencies can lead to inconsistent outcomes, making the overall effectiveness on populations difficult to ascertain. Lack of trained practitioners and standardised equipment inhibits

its widespread application in clinics. The other challenge is cultural acceptance. Although *Agnikarma* is extensively practised in Ayurvedic clinics, its adoption in contemporary health systems is usually suspected because there has not been empirical research to validate its long-term efficacy compared to the standard treatments. Moreover, the traditionalism of *Agnikarma* might prevent its use in conventional hospitals and health institutions that adhere to evidence-based, pharmacological treatments [47]. Despite these issues, the prospects for *Agnikarma* in orthodox and complementary health systems are bright. With the standardisation of the procedures, clinical trials, and further research into its efficacy, *Agnikarma* could emerge as a firmly established complementary therapy in pain management, especially in chronic musculoskeletal disorders, as a natural, effective, drug-free option [48].

### Limitation(s)

*Agnikarma*, with its potential, is plagued with some limitations, primarily due to the lack of standardisation in its practice [49]. The heat temperature, duration, and the point of application of heat are variable with the practitioners, resulting in uncontrolled outcomes and the inability to prove its efficacy in different patient groups. Further, the lack of standardised protocol results in the restricted clinical use of *Agnikarma* in evidence-based practice [50]. The ancient practices of *Agnikarma* may lack the rigors of controlled clinical trials and, therefore, may question their reproducibility and safety compared with modern medical standards. The lack of formal training programs for the practitioners also restricts their acceptance, as the improper use may lead to complications or loss of efficacy [51]. Lack of training is one of the causes of the global resistance to the acceptance of *Agnikarma* in conventional systems of health care. Moreover, though Ayurveda is gaining popularity, conventional healthcare practitioners and patients are likely to treat Ayurvedic therapy as secondary. Therefore, there is resistance towards the acceptance of *Agnikarma* for pain management [52]. Lack of large-scale clinical trials and empirical evidence on its long-term efficacy remains a significant barrier to its full acceptance in conventional health care systems. However, the simultaneous application of the *Agnikarma* with other Ayurvedic therapies such as *siravedha*, *Raktamokshana*, and *Basti* may enhance its therapeutic efficacy [53].

### CONCLUSION(S)

*Agnikarma*, an Ayurvedic heat therapy, is helpful in the management of *Vata*-type pain disorders like Sciatica and Osteoarthritis by normalising the *dosha* of *Vata*, reducing pain, and improving circulation. Despite its possible usefulness, its use in conventional medicine is not advisable for reasons like standardisation, lack of professional training, and paucity of empirical studies. It must be subjected to clinical trials to establish its efficacy and determine standard protocols for its usage. As Ayurveda becomes more popular in integrative medicine, *Agnikarma* can be a valuable tool in pain management, offering a drug-free alternative to pharmacological drugs. A combination of *Agnikarma* with other Ayurvedic interventions like *siravedha* and *Basti* can be a holistic solution to chronic pain.

**Ethical consideration:** Research ethics guide this narrative review. All data quoted are public sources, and no patient data were utilised. All works referenced are properly cited to provide intellectual integrity and prevent plagiarism. The review respects the traditional Ayurvedic practices but considers their integration into modern healthcare systems.

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