

AGNIKARMA IN PAIN MANAGEMENT: BRIDGING TRADITIONAL WISDOM WITH MODERN THERAPEUTICS**Dr. Ayutansh Dobhal¹, Dr. Shubham Bhardhwaj^{*1}, Vd. Mohit Bagwari²**¹Post Graduate Scholar; Department of Panchakarma, Patanjali Bhartiya Ayurvedigyan Evam Anusandhan Sansthan; Haridwar.²Assistant Professor; Department of Panchakarma, Patanjali Bhartiya Ayurvedigyan Evam Anusandhan Sansthan; Haridwar.***Corresponding Author: Dr. Shubham Bhardhwaj**

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ABSTRACT

Agnikarma, a para-surgical procedure rooted in Ayurvedic tradition, utilizes therapeutic heat to manage musculoskeletal disorders, chronic pain, and localized inflammation. With increasing global interest in integrative medicine, Agnikarma presents a promising bridge between ancient wisdom and modern therapeutics. Scientific evaluations reveal its neurophysiological and biochemical mechanisms—such as improved circulation, modulation of pain pathways, and anti-inflammatory effects. This review explores the classical foundations, clinical applications, procedural techniques, safety profile, and emerging evidence supporting Agnikarma. It further examines how it can be integrated with allopathic modalities, providing a holistic, patient-centered approach to pain management and chronic disease care. Agnikarma exemplifies how traditional knowledge can be adapted for modern clinical relevance, encouraging further research and interdisciplinary collaboration.

KEYWORDS: Agnikarma, Pain Management, Traditional Healing, Cauterization.**INTRODUCTION**

Pain is one of the most common and debilitating symptoms leading individuals to seek medical attention. Despite advancements in pharmacological and surgical interventions, chronic pain management remains a challenge due to side effects, tolerance, and cost issues associated with conventional therapies. In this context, there is a growing interest in traditional healing practices that offer effective, low-risk alternatives. One such practice is Agnikarma, a para-surgical procedure rooted in the classical Ayurvedic system of medicine. Described extensively in ancient texts such as the Sushruta Samhita, Agnikarma involves the controlled application of therapeutic heat to affected areas using specially designed metallic instruments known as Shalakas.

Traditionally indicated for disorders of Vata and Kapha origin, Agnikarma is acclaimed for its efficacy in relieving pain, inflammation, and stiffness—especially in musculoskeletal and neurological conditions such as sciatica, arthritis, frozen shoulder, and plantar fasciitis. In recent years, there has been a revival of interest in this modality, supported by preliminary scientific evidence highlighting its physiological effects such as enhanced microcirculation, modulation of nerve conduction, and activation of endogenous pain-relieving mechanisms.

This review aims to explore Agnikarma not only through the lens of Ayurvedic principles but also by evaluating its relevance and potential integration into modern therapeutic frameworks. By bridging traditional wisdom with contemporary biomedical understanding, the article underscores the importance of validating and adapting time-tested practices like Agnikarma for modern-day clinical application, thereby fostering a holistic, patient-centered approach to healthcare.

THE AYURVEDIC BASIS OF AGNIKARMA**1. Philosophical and Dosha Basis**

According to Ayurveda, the human body is governed by three doshas: Vata, Pitta, and Kapha. Pain (known as Shoola) is primarily caused by the aggravation or imbalance of Vata dosha, which governs movement, nerve impulses, and sensory function. Secondary involvement of Kapha (causing stiffness or heaviness) and Ama (toxins or undigested metabolic waste) often contributes to chronicity and inflammation. Agnikarma acts through the following Ayurvedic mechanisms.

- Vata Shamana (Pacification of Vata): The penetrating and heat-producing nature (Teekshna and Ushna guna) of Agnikarma helps calm aggravated Vata.

- Srotoshodhana (Channel Cleansing): Heat clears blockages in the srotas (microchannels) that carry nutrients and nerve impulses.
- Ama Pachana (Detoxification): It helps digest local toxins (Ama) that accumulate in joints and muscles.
- Swedana Karma (Sudation Effect): The localized heat promotes sweating, which relieves stiffness and heaviness caused by Kapha.

- Rakta Stambhana (Hemostasis): In surgical settings, Agnikarma is also used for cauterization and controlling bleeding.

2. Classification of Agnikarma (Based on Tools and Materials Used)

^[1] Classical texts mention various substances and tools that can be used for Agnikarma, tailored to the depth and nature of the tissue involved.

MATERIAL USED	IDEAL FOR TREATING
SHALAKA (METAL ROD)	BONES, JOINTS (DEEP STRUCTURE)
PIPPALI (LONG PEPPER)	MUSCLES AND LIGAMENTS
GODANTI(GYPSUM)	TENDONS
LAKSHA(LAC)	SKIN DISORDERS, SUPERFICIAL CONDITIONS
GHEE OR OIL	NEVER RELATED DISORDERS (FOR GENTLE HEATING)

3. Dahana Vishesha

^[2]Refers to the distinct Akriti (shapes) formed by the red-hot Shalaka during Agnikarma at the application site.

Acharya Sushruta described four main types.

- Valaya (circular),
- Bindu (dot-like; as per Acharya Dalhana, requires a pointed Shalaka),
- Vilekha (parallel lines), and
- Pratisarana (rubbing the heated Shalaka without forming a specific shape).

Acharya Dalhana further classified Vilekha into three subtypes based on direction.

- Tiryak (oblique),
- Riju (straight),
- Vakra(zigzag).

Additionally, Acharya Vagbhata contributed three more Akritis:

- Ardhachandra(crescent-shaped),
- Swastika (four-armed mark),
- Ashtapada (eight-armed mark).

4. Site of Application of Agnikarma

- Sthanik (Local Site)
- Sthanantariya(Distal to site of Disease)

5. Dhatugata Samayaga Dagdha Lakshana

^[3]Proper signs of cauterization based on tissue involvement are described as follows:

- **Twak Dagdha** shows signs like.
 - **Shabdapradurbhava** (crackling sound),
 - **Durgandha** (foul smell), and
 - **Twak Sankocha** (skin contraction).
- **Mamsa Dagdha** is marked by
 - **Kapotvarnata** (ashy-grey discoloration),
 - **Alpa Sotha and Vedana** (mild swelling and pain), and
 - **Shushka Sankuchita Vrana** (dry, contracted wound).

- **Sira-Snayu Dagdha** presents as

- **Krishna-Unnata Vrana** (blackish, raised wound) and
- **Srava Sannirodha** (cessation of discharge).

- **Asthi-Sandhi Dagdha** is characterized by

- **Arunata** (dark reddish hue),
- **Rukshata** (dryness),
- **Karkashata** (roughness), and
- **Sthirata** (firmness or stability).

6. Dagdha Prakara

^[4]Refers to improper burn types resulting from negligence during the Agnikarma procedure, leading to the absence of Samyaka Dagdha Lakshana and manifesting as the following.

- **Plusta Dagdha**: Identified by **Vivarnata** (skin discoloration); termed "**Tutha**" by Acharya Vagbhata.
- **Durdagdha**: Characterized by **Sphota** (large blisters), **Chosha**, **Daha** (burning sensation), **Raga** (redness), **Paka** (suppuration), and **Vedana** (drawing-type pain).
- **Atidagdha**: Severe burn marked by hanging flesh, dislocation of limbs and joints, and damage to **Sira**, **Snayu**, **Asthi**, and **Sandhi**, often accompanied by **Jwara** (fever), **Daha** (intense burning), **Pipasa** (thirst), and **Murcha** (fainting). Healing is slow and leaves behind persistent discoloration.

Samyaka Dagdha Vrana Lakshana refers to the ideal burn wound, which is.

- **Anavgadha** (not deep),
- Exhibits **Talphalavranata** (bluish-black coloration like palm fruit),
- Is **Susamsthita** (evenly shaped without any elevation or depression),
- Along with the appropriate preceding signs observed in **Twak**, **Mamsa**, **Sira**, **Snayu**, **Asthi**, and **Sandhi Dagdha** conditions.

Mechanisms of Action: Traditional vs Modern Viewpoints

^[5] Agni karma is primarily indicated in disorders caused by vitiated Vata and Kapha doshas, making it an effective therapy due to the Ushna (hot), Sukshma (subtle), Teekshna (sharp), and Ashukari (quick-acting) properties of Agni, which help pacify these doshas. According to Ayurveda, each Dhatu possesses its own Dhatwagni, and when this metabolic fire is diminished, diseases manifest. Agnikarma, by applying external heat using a red-hot Shalaka, stimulates and strengthens the local Dhatwagni, which aids in digesting the aggravated doshas and facilitates healing.

From a modern perspective, the application of localized heat raises tissue temperature, enhancing blood perfusion, improving oxygen delivery, and supporting healing in ischemic and degenerative tissues. The heat also

promotes clearance of inflammatory mediators, thereby reducing inflammation and pain. Furthermore, Agnikarma activates the Descending Pain Inhibitory (DPI) mechanism, stimulating the CNS and promoting the release of endogenous opioids such as those from POMC cells in the arcuate nucleus and brainstem, contributing to pain relief.

The Gate Control Theory of Pain also supports Agnikarma's mechanism, suggesting that non-painful stimuli like heat can block painful inputs from reaching the CNS by stimulating large nerve fibers that inhibit pain transmission. Additionally, according to Vant Hoff's principle, a rise in body temperature boosts basal metabolic rate, and warm tissues lead to muscle relaxation, thus reducing spasms, inflammation, and pain, offering a holistic explanation of how Agnikarma provides therapeutic benefits.

Traditional Ayurvedic View	Modern Scientific Interpretation
Dosha Shamana - Pacifies Vitiated Vata and Kapha	Neuromodulation - Heat Alters Nerve Conduction and Pain Signals in Sensory Neurons
Ama Pachana - Burns Off Accumulated Ama(toxins)	Protein Denaturation - Destroys Local Inflammatory Mediators and Pathogens
Srotoshodhana - Clears Obstructed Srotas(channels)	Improved Circulation - Heat Induces Vasodilation, Enhancing Blood and Lymph Flow
Agni Deepana - Stimulates local Digestive/Metabolic Fire	Tissue Metabolism - Enhances Local Cellular Activity and Accelerates Healing
Shoolahara - Alleviates Shoola (pain)	Endorphin Release - Thermal Stimulation Promotes Release of Natural Analgesics (Endorphins)
Vrana Shodhana and Ropana - Cleanses and Heals Wounds	Debridement and Regeneration - Cauterization Removes Necrotic Tissues and Promotes Tissues Repair
Prevention of Recurrence - As per Sushruta, Properly Done Agnikarma Prevents Disease Recurrence at Site	Scar Tissue Formation and Nerve Desensitization Reduce Risk of Symptom Reappearance

INDICATIONS^[6]

Traditional Ayurvedic Indications	Modern Scientific Interpretation
Gridhrasi (Sciatica)	Sciatic Nerve Compression - Nerve Root Pain due to Disc Issues or Inflammation. Heat Application Relieves Pain and Stiffness.
Katigraha (Low Back Pain)	Mechanical Low Back Pain, Lumbar Spondylosis - Improves Local Circulation and Reduces Muscle Spasm.
Sandhivata (Osteoarthritis)	Degenerative Joint Disorders - Agnikarma Reduces Joint Stiffness, Inflammation and Improves Mobility
Vishwachi (Cervical Radiculopathy)	Cervical Nerve Impingement - Heat Helps Relieve Neuralgia and Muscle Tightness
Sandhi Mukta (Shoulder Dislocation with Stiffness)	Post Traumatic or Degenerative Joint Contractures - Helps Restore Function Through Muscle Relaxation
Siragatavata (Neurological Pain in Veins and Nerves)	Peripheral Neuropathy - Thermal Application Modulates Nerve Pain and Enhances Blood Flow
Snayugata Vata (Ligament Disorders)	Ligament Injuries And Inflammation - Localized Heating Reduces Inflammation and Accelerates Repair
Avabahuka (Frozen Shoulder)	Adhessiv Capsulitis - Improves Shoulder Range of Motion and Reduces Periarticular Fibrosis
Arsha (Piles) and Bhangandara (Fistula-in-Ano)	Anorectal Disorders - Cauterization is Used for Hemostasis and to Destroy Abnormal Tissues (Like Sinus Tracts)
Asthigata Vata (Bone-Related Pain and Degeneration)	Fracture Healing Support, Osteoporosis and Chronic Bone Pain - Thermal Stimulus Aids in Metabolic Activation and Analgesia

CONTRAINDICATIONS^[7]

Traditional Ayurvedic Contra-Indications	Modern Scientific Interpretation
Rakta Dushti (Vitiation of Blood)	Conditions like Bleeding Disorders (e.g., Hemophilia), or Coagulopathies Where Heat Can Worsen Hemorrhage
Pandu (Anemia), Jwara (Fever), and Atisara (Diarrhea)	In Systemic Illnesses like Fever, Infections, or Weakened States, Thermal Therapies May Stress the Body Further.
Raktatisara (Bloody Diarrhea), Kshaya (Emaciation), Aruchi (Loss of Appetite)	Severe Dehydration, Malnutrition, or Chronic Illness Make Patients Unsuitable for Procedures Requiring Tissue Stress.
Bala Kshaya (General Debility or Low Strength)	Immunocompromised or Frail Patients May Not Tolerate the Stress or Inflammation Caused by Cauterization.
Garbhini	Avoided Due to Potential Systemic Impact, Risk of Stress on the Fetus, and Interference with Hormonal Balance.
Diseases in Marma Sthana (Vital Points) or Above Clavicle Region (Urdhvajatrugata Rogas)	Vital Areas such as Eyes, Face, Head, or Major Vessels are Risky for Cauterization due to High Complication Risk.
Bala and Vriddha avastha	In Children and Elderly, Skin and Tissue Resilience is Lower, and Recovery is Slower, Making Burns Unsafe.
Mano Vikara	Patients with Mental Health Conditions may not Cooperate or Tolerate the Procedure Calmly and Safely.

CONCLUSION

Agnikarma, a traditional Ayurvedic para-surgical procedure, demonstrates significant therapeutic value in the management of pain-related disorders. Rooted in classical texts, it is primarily indicated in conditions caused by Vata and Kapha vitiation, such as sciatica, osteoarthritis, frozen shoulder, and musculoskeletal pains. The procedure involves the controlled application of heat using specialized instruments like red-hot Shalaka or other heated substances (Dravyas), chosen according to the affected Dhatu (tissue). Ayurvedic concepts such as Dhatwagni, Dosha Shamana, and Srotoshodhana explain its holistic action, while modern interpretations point to mechanisms like increased blood perfusion, reduction of inflammatory mediators, stimulation of endogenous opioids, and the gate control theory of pain inhibition.

Proper execution leads to Samyaka Dagdha Lakshana, while negligence can result in complications like Plusta, Durdagdha, or Atidagdha burns. Though highly effective, Agnikarma has contraindications in cases of systemic illness, debility, pregnancy, pediatric and geriatric patients, and in areas involving vital structures.

Bridging traditional Ayurvedic wisdom with modern biomedical science enhances the credibility, safety, and applicability of Agnikarma in today's integrative healthcare. It stands as a cost-effective, drug-free alternative or adjunct therapy, especially beneficial in chronic pain where conventional options are limited or carry side effects.

REFERENCES

1. Kaviraj Ambika Dutt Shashtri: Vol.1, Sutra Sthana, Agnikarmavidhiadhyaya of Shushrut Samhita of Maharishi Sushruta Edited with Ayurveda tatvasandipika Hindi commentary published by Chaukhamba Sanskrit Sansthan, Varanasi, 14th edition. 12/4. P. 51.
2. Kaviraj Ambika Dutt Shashtri: Vol.1, Sutra Sthana, Agnikarmavidhiadhyaya of Shushrut Samhita of Maharishi Sushruta Edited with Ayurveda tatvasandipika Hindi commentary published by Chaukhamba Sanskrit Sansthan, Varanasi, 14th edition. 12/11. P. 52.
3. Kaviraj Ambika Dutt Shashtri: Vol.1, Sutra Sthana, Agnikarmavidhiadhyaya of Shushrut Samhita of Maharishi Sushruta Edited with Ayurveda tatvasandipika Hindi commentary published by Chaukhamba Sanskrit Sansthan, Varanasi, 14th edition. 12/8.P.51.
4. Kaviraj Ambika Dutt Shashtri: Vol.1, Sutra Sthana, Agnikarma vidhiadhyaya of Shushrut Samhita of Maharishi Sushruta Edited with Ayurveda tatvasandipika Hindi commentary published by Chaukhamba Sanskrit Sansthan, Varanasi, 14th edition. 12/16.P.53.
5. Dr. Rabinarayan Tripathy, Dr. Shaithya Raj, Dr. Rajeshwari, P.N., Dr. Athulya and Dr. Lakshmy C. Senan, 2016. "A review on the action of agnikarma", International Journal of Current Research, 8(06): 32319-32322.
6. Kaviraj Ambika Dutt Shashtri: Vol.1, Sutra Sthana, Agnikarma vidhiadhyaya of Shushrut Samhita of Maharishi Sushruta Edited with Ayurveda tatvasandipika Hindi commentary published by Chaukhamba Sanskrit Sansthan, Varanasi, 14th edition. 12/10.P.52.
7. Kaviraj Ambika Dutt Shashtri: Vol.1, Sutra Sthana, Agnikarma vidhiadhyaya of Shushrut Samhita of Maharishi Sushruta Edited with Ayurveda tatvasandipika Hindi commentary published by Chaukhamba Sanskrit Sansthan, Varanasi, 14th edition. 12/14. P.53.