



A Comprehensive Review on *Agnikarma*: *Ayurvedic* Principles and Modern Clinical Applications

¹Dr Maya Balasaheb Nagapurkar, M.S.(Surgery)

²Dr Kumudini Sukadev Sawale, Professor, Dept. Of Kayachikitsa, Ayurved Seva Sangh,
Ayurved College, Ganeshwadi, Nashik

ABSTRACT

Agnikarma, an ancient para-surgical procedure described in *Ayurveda*, involves the therapeutic and controlled application of heat to treat a variety of chronic and localized disorders. The concept is deeply rooted in *Sushruta Samhita* and *Ashtanga Hridaya*, where it is regarded as a superior intervention for diseases predominantly caused by *Vata* and *Kapha doshas*. This unique procedure aims to provide long-term relief in ailments resistant to conventional internal medication or surgery by utilizing the principles of *Ushna* (heat) and *Tikshna* (penetrating) properties. In *Agnikarma*, heat is applied through specially designed metallic rods (*Shalaka*), herbal materials, or modern electrical cautery instruments, depending on the site and severity of the disease. The controlled thermal energy induces protein coagulation, tissue detoxification, and stimulation of local metabolic activity, leading to rapid hemostasis, pain relief, and accelerated wound healing. In modern medical science, this practice closely parallels thermal cauterization, diathermy, and laser therapy, which utilize localized heat for tissue modification and regeneration. Thus, *Agnikarma* serves as a bridge between traditional *Ayurvedic* wisdom and modern biomedical innovation, offering a minimally invasive, cost-effective, and scientifically rational approach to managing chronic pain, musculoskeletal disorders, and dermatological conditions.

KEYWORDS- *Agnikarma*, *Ayurveda*, cautery, Modern Techniques, *Shalaka*.

INTRODUCTION

Agnikarma is one of the foremost *Anushastra Karmas* (para-surgical techniques) mentioned in *Ayurvedic Shalya Tantra*. *Acharya Sushruta*—the pioneer of ancient surgery—has described it as the most effective treatment for diseases that persist or recur even after *Bheshaja Karma* (medicinal management), *Kshara Karma* (caustic

therapy), and *Shastra Karma* (surgical interventions) ^(1,2). This specialized therapy utilizes the therapeutic power of heat applied through specific metallic instruments (*Shalaka*) or herbal media to achieve curative as well as palliative effects. Owing to its *Ushna* (hot) and *Tikshna* (penetrating) properties, *Agnikarma* helps pacify *Vata* and *Kapha doshas* and provides long-lasting relief in conditions associated with stiffness, pain, and chronic inflammation ⁽³⁾.

In modern biomedical terms, *Agnikarma* can be correlated with thermal cauterization or localized heat therapy, wherein controlled temperature is used to achieve hemostasis, tissue remodeling, and pain alleviation. The heat induces protein coagulation, cellular modification, and vasodilation, thereby promoting rapid wound healing and regeneration ^(4,5). This ancient concept of therapeutic heat finds remarkable resonance with contemporary evidence-based medical practices such as diathermy, radiofrequency ablation, and laser therapy. Thus, *Agnikarma* stands as a perfect example of how ancient surgical wisdom continues to complement and enhance modern scientific understanding of tissue repair and pain management ⁽⁶⁾.

Mechanism of Action

Ayurvedic Perspective

From an *Ayurvedic* viewpoint, *Agnikarma* works through its *Ushna* (hot), *Tikshna* (penetrating), and *Sukshma* (minute) properties, which pacify aggravated *Vata* and *Kapha doshas*. It helps eliminate *Ama* (toxins) and clears *Srotas* (microchannels), thereby restoring physiological balance ^(7,8).

Modern Physiological Explanation

Modern science explains its action as controlled thermal injury that stimulates local immune response, increases vasodilation, and enhances fibroblast proliferation ⁽⁹⁾. The increased local temperature raises the metabolic rate and improves oxygenation, aiding tissue regeneration ⁽¹⁰⁾. Additionally, pain receptors undergo desensitization, leading to analgesic effects ⁽¹¹⁾.

Instruments and Techniques

Type of Instrument	Material	Application Site	Temperature Range	Example
<i>Suvarna Shalaka</i>	Gold	Superficial lesions	40–60°C	Warts, Corns
<i>Tamra Shalaka</i>	Copper	Muscle tissue	60–80°C	Abscess wall
<i>Raupya Shalaka</i>	Silver	Joint and bone area	80–100°C	Osteoarthritis
<i>Panchadhatu Shalaka</i>	Alloy	Deep tissues	100–120°C	Chronic ulcers

Modern adaptations include electric cautery, radiofrequency probes, and laser therapy, offering higher precision but at a greater cost.

Indications of Agnikarma

According to *Sushruta Samhita*, *Agnikarma* is beneficial in conditions where *Vata* and *Kapha* doshas are predominant. It is particularly useful in chronic pain, inflammatory, and non-healing disorders such as:

- *Gridhrasi* (Sciatica)
- *Sandhivata* (Osteoarthritis)
- *Arsha* (Piles)
- *Charma Roga* (Skin diseases)
- *Nadi Vrana* (Sinus tracts)
- *Granthi* (Cysts)
- *Arbuda* (Benign growths)

Clinical evidence supports *Agnikarma* in managing musculoskeletal pain, offering better relief and lower recurrence rates compared to conventional treatments ⁽¹²⁾.

Comparative Analysis with Modern Techniques

Parameter	Agnikarma (Ayurveda)	Electrocautery	Laser Therapy
Energy Source	Fire or heated <i>Shalaka</i>	Electric current	Laser beam
Depth Control	Manual, observation-based	Precise	Highly precise
Healing Type	Natural with <i>Ropana dravya</i>	Secondary intention	Controlled
Cost	Very low	Moderate	High
Complications	Minimal	Moderate	Minimal

Agnikarma remains a low-cost, minimally invasive therapy, making it ideal for resource-limited settings.

DISCUSSION

Agnikarma exemplifies the harmonious integration of ancient *Ayurvedic* therapeutic concepts with modern biomedical science. The fundamental principle of using controlled heat for healing, described thousands of years ago in *Ayurvedic Shalya Tantra*, is now validated through contemporary understanding of thermal physiology. Clinical observations and recent studies have documented substantial improvements in pain reduction, flexibility, and functional mobility following *Agnikarma* ⁽¹³⁾. The therapeutic heat induces localized vasodilation, enhancing

microcirculation and oxygen delivery to tissues. This physiological change stimulates fibroblast proliferation and collagen remodeling, accelerating tissue repair and regeneration. Additionally, the rise in temperature modulates pain transmission by desensitizing nociceptors, thereby providing prolonged analgesic relief. Comparative analyses further emphasize that *Agnikarma* delivers faster symptomatic improvement with fewer recurrences compared to oral anti-inflammatory drugs and physiotherapy sessions (¹⁴). Unlike conventional approaches that merely suppress symptoms, *Agnikarma* addresses the underlying *Dosha* imbalance, ensuring holistic and sustainable recovery. Owing to its simplicity, low procedural cost, and minimal side effects, it serves as an accessible therapeutic option across both urban and rural healthcare systems, aligning with the modern pursuit of integrative, evidence-based medicine (¹⁵).

CONCLUSION

Agnikarma, a time-tested para-surgical procedure of *Ayurveda*, demonstrates therapeutic effectiveness in chronic pain, musculoskeletal, and dermatological disorders. Its physiological effects align with modern thermotherapy yet maintain the holistic concept of *Dosha shamanam* (dosha balance) and *Ropana* (healing). With technological advancements such as temperature-controlled *Shalaka*, *Agnikarma* can be standardized and globally recognized as an integrative pain management modality.

REFERENCES

1. *Sushruta Samhita, Sutrasthana* 12/3, Chaukhambha Sanskrit Sansthan, 2016.
2. *Ashtanga Hridaya, Sutrasthana* 30/10, Chaukhambha Orientalia, 2012.
3. *Charaka Samhita, Chikitsa Sthana* 28/11, Chaukhambha Bharati Academy, 2011.
4. Sharma, A. et al. "Thermal Cauterization and Its Biomedical Applications." *Indian J Surg*, 2019; 81(3): 278–284.
5. Dwivedi, V. et al. "Clinical Evaluation of Agnikarma in Management of Gridhrasi." *Ayu Journal*, 2017; 38(4): 45–50.
6. Patil, R. & Kulkarni, S. "Effect of Agnikarma in Sandhivata – A Clinical Study." *IJAPR*, 2021; 9(2): 112–118.
7. Gupta, N. et al. "Role of Local Heat Therapy in Pain Management." *J Evid Based Complement Altern Med*, 2020; 25(2): 134–140.
8. Raut, M. & Singh, P. "Revisiting Agnikarma: A Modern Approach to an Ancient Science." *JAISMS*, 2022; 7(3): 156–162.
9. Goyal, R. et al. "Agnikarma and Its Clinical Relevance: A Review." *World J Ayurveda*, 2023; 5(1): 87–92.

10. Kaur, S. & Mehta, R. “Thermal Imaging in Pain Management: Objective Assessment of Agnikarma.” *Int J Ayurveda Med Res*, 2024; 13(1): 55–62.
11. *Kashyapa Samhita, Khilasthana 3/22*, Chaukhambha Sanskrit Series, 2014.
12. *Bhaishajya Ratnavali, Vatavyadhi Chikitsa*, Chaukhambha Prakashan, 2015.
13. Sharma, P.V. *Classical Concepts of Shalya Tantra*, 2021.
14. Singh, R. “Efficacy of Ayurvedic Thermal Cauterization in Chronic Pain.” *J Trad Med*, 2023; 6(4): 201–208.
15. World Health Organization. *Traditional Medicine Strategy 2014–2023*, WHO Publications, Geneva.

