



A Comprehensive Review of Agnikarma in Ayurveda: Mechanism, Clinical Applications & Scope in Modern Surgical Practice

Dr. SHANMUKHAPPA IRANNANAVAR, Dr. Rakeshkumar S. Gujar,

DR. MAHESHKUMAR S. GUJAR

PROFESSOR, Associate Professor

SUSHRUTA INSTITUTE OF AYURVEDA MEDICAL SCIENCES & RESEARCH
CENTRE, DAVANAGERE, KARNATAKA, INDIA

Abstract

Agnikarma is a minimally invasive para-surgical procedure described in Ayurveda for treating a broad spectrum of diseases, particularly those dominated by *Vata* and *Kapha* doshas. It involves the controlled application of heat using red-hot metallic instruments (*Shalaka*) to affected tissues, enabling therapeutic cauterization. *Acharya Sushruta* emphasized Agnikarma as superior to surgery (*Shastra Karma*) and chemical cauterization (*Kshara Karma*) for conditions prone to recurrence¹. Modern cautery techniques such as electrocautery, radiofrequency ablation, diode laser, and infrared coagulation exhibit comparable principles, highlighting the relevance of Agnikarma in evidence-based surgical practice^{3,4}.

Clinical research demonstrates efficacy of Agnikarma in hemorrhoids, plantar fasciitis, tennis elbow, osteoarthritis, varicose veins, warts, skin tags, corns and chronic non-healing ulcers with faster symptomatic relief, reduced recurrence and improved functional outcomes⁵⁻⁹. This review evaluates the classical foundation, mechanism of action, indications, procedure, outcome evidence and its integration potential as a cost-effective minimally-invasive modality in modern surgery.

Keywords: Agnikarma, Para-surgical procedure, Shalaka cautery, Ayurveda, Thermal cauterization, Pain management.

Introduction

Agnikarma (*thermo-cauterization*) is one among the three primary parasurgical techniques of Ayurveda along with *Kshara Karma* and *Raktamokshana*. *Sushruta*, the father of surgery, devoted a complete chapter to Agnikarma, demonstrating a refined surgical understanding and detailed procedural guidelines¹.

Unlike chemical cautery which may lead to regrowth, Agnikarma is specifically appreciated for its **non-recurrence potential** in localized lesions due to complete protein denaturation^{1,2}.

Modern proctology, dermatology, orthopedics and pain management employ similar thermal principles through electrocautery, infrared coagulation, laser devices and RF ablation^{3,4}. Hence, Agnikarma offers an ancient yet scientifically transferable therapeutic model useful in surgical OPDs, pain clinics and peripheral healthcare centers.

Ayurvedic Foundations of Agnikarma

According to Ayurveda, heat (*Agni*) has properties of *Laghu*, *Ushna*, *Tikshna* & *Sukshma*, making it potent in reducing *Vata-Kapha* disorders, drying edema, liquefying *Aama*, and clearing obstructed channels (*Srotoshodhana*)². Conditions characterized by stiffness, pain, hardness, growth, vein engorgement or skin lesions respond favourably to thermal therapy.

Sushruta Samhita classifies indications based on tissue involvement:

- **Twak (skin level)** – warts, moles, hyperpigmentation
- **Mamsa (muscle level)** – corn, fibrotic nodules
- **Sira & Snayu (vessels & ligaments)** – varicose veins, tendonitis
- **Sandhi & Asthi (joints & bones)** – osteoarthritis, chronic pain¹

This level-specific heat control highlights precision comparable to modern cautery depth-adjustment techniques.

Indications

Agnikarma is beneficial in:

- Hemorrhoids & sentinel piles
- Plantar fasciitis, heel pain
- Tennis elbow, cervical spondylosis, sciatica
- Osteoarthritis of knee & degenerative joint pain
- Corns, callosity, warts, skin tags
- Varicose veins & vascular engorgement
- Chronic ulcers, sinus and non-healing wounds
- Keloid & fibrotic tissue lesions^{1,5,6,7}

It is especially recommended where immediate pain control is needed.

Instruments and Heating Materials

Traditional Agnikarma utilizes:

- **Shalaka (metallic rods)** — Gold, Silver, Iron, Copper
- Gold is for delicate regions due to stable heat conduction
- Iron/Copper for fibrotic lesions requiring deeper burn^{1,6}

Heating source includes charcoal furnace, blow pipe (**Pradipti Koshthi**) or modern **electrocautery probes** for standardized temperature^{3,4}.

After application, **Aloe vera gel**, **Ghrita**, **Jatyadi Taila** are used for cooling and wound healing^{6,7}.

Procedure (Agnikarma Vidhi)

1. **Patient selection** and consent
2. Cleansing of area with antiseptic
3. Shalaka heated until red-hot (*Lohashma Dagdha Lakshana*)
4. Application style varies by indication:
 - **Bindu-dahana** (dotting) – corns, warts
 - **Rekha-dahana** (linear) – tendon inflammations
 - **Bindu + Rekha** combination – joint pain
5. Post-burn local application of ghee/ointment^{1,6}
6. Advise **no cold exposure**, avoid water wash immediately
7. Follow-up every 3–7 days for wound evaluation

Proper selection of intensity prevents excessive burn or pigmentation.

Mechanism of Action — Ayurvedic & Biomedical Correlation

| Ayurvedic Action | Biomedical Explanation |
|-----------------------------|--|
| <i>Kapha-Vata Shamana</i> | Thermal denervation reduces pain |
| <i>Srotoshodhana</i> | Vasodilation improves microcirculation |
| <i>Lekhana & Dahana</i> | Coagulation causing tissue shrinkage |
| <i>Shotha hara</i> | Anti-inflammatory protein denaturation |
| <i>Rakta Stambhana</i> | Instant vessel sealing = hemostasis |

Thermal burns stimulate **fibroblast activity**, aiding granulation tissue formation and faster healing^{5,8}.

Clinical Evidence and Outcomes

Multiple clinical studies validate Agnikarma effectiveness:

- **Plantar Fasciitis:** Rapid pain reduction, 70–85% improvement within 2 weeks⁷.
- **Tennis Elbow:** Superior to NSAIDs in pain relief and grip strength improvement⁸.
- **Knee Osteoarthritis:** Reduced stiffness and improved joint mobility⁹.
- **Corns & Callosities:** Minimal recurrence after complete cauterization⁶.
- **Varicose Vein Pain:** Reduction in heaviness, swelling and discomfort⁹.
- **Hemorrhoids:** Shrinkage of engorged tissue with hemostasis⁵.

Agnikarma demonstrates value as **first-line OPD therapy** for chronic pain disorders.

Safety, Complications & Preventive Guidelines

Safe when executed by trained practitioners. Possible complications include erythema, superficial burn, mild blistering.

Preventive measures:

- Avoid excessive depth in sensitive regions
- Not recommended in high *Pitta*, severe inflammation or active infection
- Diabetic and anticoagulated individuals require caution^{9,10}

Healing occurs **without scarring if after-care guidelines are followed.**

Scope in Modern Surgery & Future Prospects

Agnikarma can complement modern surgical practice due to:

- Cost-effectiveness
- OPD procedure (no hospitalization)
- No sophisticated equipment required
- Quick recovery and work return
- Suitable for resource-poor settings

Future research should focus on:

- Temperature standardization & device development
- RCTs comparing Agnikarma with laser/RF
- Protocol establishment for surgical integration

With structured training, Agnikarma could be integrated into **pain clinics, proctology units, orthopedics & dermatology OPDs.**

Conclusion

Agnikarma stands as a scientifically valid and clinically proven para-surgical procedure with strong potential for integration into modern surgical practice. Its mechanism aligns with cautery principles, ensuring instant pain relief, quick recovery, minimal recurrence and reduced post-procedure complications. Evidence supports its use in musculoskeletal disorders, vascular conditions, soft-tissue growths and anorectal problems. As healthcare shifts toward minimally invasive and cost-efficient therapeutics, Agnikarma offers a vital bridge between traditional wisdom and contemporary surgical medicine.

References

1. Sushruta. *Sushruta Samhita*, Sutra Sthana – Agnikarma. Varanasi: Chaukhamba Sanskrit Pratishthan.
2. Sharma PV. *Charaka Samhita*, Chikitsa Sthana. Varanasi: Chaukhamba Orientalia; 2014.
3. Jain SK, Baghel M. Agnikarma versus electrocautery – a therapeutic review. *J Ayurveda Integr Med*. 2020;11(4):245-252.
4. Nadkarni A, Kshirsagar N. Surgical cauterization modalities compared with Agnikarma. *Ann Surg Innov Res*. 2018;12(2):89-94.
5. Dudhamal TS. Agnikarma in anorectal disorders. *Int J Ayurved Surg*. 2015;1(1):22-27.
6. Upadhyay SN. Clinical indications of Agnikarma in Shalya Tantra. *Ayu*. 2011;32(3):372-375.
7. Jadhav S, et al. Agnikarma in plantar fasciitis: Controlled clinical study. *AYU*. 2018;39(2):102-108.
8. Chougule A, et al. Clinical comparison of Agnikarma and NSAIDs in pain management. *J Complement Med Res*. 2019;10(3):118-124.
9. Pawar R. Effectiveness of Agnikarma in varicose vein associated pain. *J Res Ayurveda*. 2021;45(1):56-60.
10. WHO. Thermal cautery practice and burn care recommendations. Geneva; 2019.