



THE HEALING FIRE: A REVIEW ON THE RELEVANCE OF AGNIKARMA IN TENDON FASCIITIS

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Abstract

Agnikarma, an ancient Ayurvedic para-surgical procedure described by *Acharya Sushruta*, employs controlled thermal cauterization to achieve long-lasting relief in chronic and localized *Vata-Kapha* disorders. It is one of the most scientifically designed therapies in Ayurveda, merging surgical precision with physiological understanding. Tendon fasciitis, a modern musculoskeletal disorder characterized by inflammation and micro-degeneration of fascia, shares symptomatic and pathological similarity with *Snayu Shoola* and *Snayugata Vata*. This review aims to explore the theoretical foundations of *Agnikarma*, interpret its mechanism from Ayurvedic and modern perspective and evaluate its therapeutic relevance in tendon fasciitis. The analysis integrates textual interpretations from classical Samhitas, contemporary Ayurvedic research, and modern thermal physiology to demonstrate that *Agnikarma* serves as an effective, minimally invasive intervention with both symptomatic and curative benefits.

Key words - *Agnikarma*, Tendon Fasciitis, *Snayu Shoola*, Para-surgical Therapy

1. INTRODUCTION

Ayurveda, the ancient science of life, describes health as the equilibrium of *Dosha*, *Dhatu*, and *Agni*. *Agni* is the transformative principle responsible for all physiological and biochemical reactions within the body. The therapeutic use of fire in *Agnikarma* symbolizes restoration of internal and external equilibrium through the *Agni Tatva*. *Acharya Sushruta*, the father of Indian surgery, recognized fire as a curative tool in his enumeration of *Anushastra Karmas* (non-cutting surgical techniques). He stated “*Yatra Shastram Na Pravartate, Tatrāgniḥ Pravartate* – “Where surgical instruments are inapplicable, fire serves as the healer.”

This highlights Agnikarma's superiority in treating disorders refractory to medicine (*Bheshaja*), alkali (*Ksharakarma*), or scalpel (*Shastrakarma*) [1].

Tendon fasciitis, such as plantar fasciitis or Achilles tendinitis is a common overuse injury characterized by pain and stiffness due to micro-tears, collagen disarray, and local inflammation. Conventional treatment include NSAIDs, steroid injections, or physiotherapy—often yield temporary relief with recurrence [2].

As per Ayurveda Classical references treatment of painful conditions of *snayu* with *Agnikarma* is well documented and in few centres it has been practically approached. It's a high time once again we encounter such pain conditions with Ayurveda principles and treatments and view it through scientific perspective. Hence, the Ayurvedic concept of *Agnikarma* provides a valuable, integrative approach combining localized doshic correction with physiological healing.

2. REVIEW OF LITERATURE

2.1 Classical Perspective

In *Sushruta Samhita*, *Agnikarma* is defined as a thermal procedure indicated in diseases of *Vata-Kapha* origin such as *Gridhrasi*, *Sandhigata Vata*, *Snayu Roga*, and *Arsha* [3].

The procedure is categorized by depth of application:

- *Twak Dagdha* – superficial cauterization for skin disorders.
- *Mamsa Dagdha* – for muscular ailments.
- *Snayu Dagdha* – for ligament or tendon disorders.
- *Asthi* and *Sandhi Dagdha* – for deep structural conditions [4].

In *Ashtanga Hridaya* Acharya *Vagbhata* describes through *Agnikarma* long term result can be achieved with least recurrence. *Dagdhvā Doṣaṃ Na Punarbhavati Rogah* – “Once the vitiated Dosha is burned, the disease does not recur.” This illustrates *Agnikarma*'s potential for permanent disease remission.

2.2 Modern Correlation

Thermal therapies, including laser ablation, radiofrequency therapy, and heat cauterization are well-established modern parallels. The controlled application of heat enhances local vasodilation, increases metabolic activity, and promotes collagen synthesis [5]. Studies have shown that tissue temperatures between 45°C–60°C induce protein denaturation, stimulating repair mechanisms without extensive necrosis [6].

Table 1: Comparative View of *Agnikarma* and Modern Thermotherapy

Parameter	<i>Agnikarma</i> (Ayurveda)	Modern Thermal Therapy
Medium	Heated metal rod, herbal or mineral applicators	Radiofrequency, laser, ultrasound
Principle	<i>Dosha</i> pacification via <i>Agni Tatva</i>	Controlled tissue heating
Target	<i>Vata-Kapha</i> disorders, localized pain condition	Chronic inflammatory pain
Depth	As per <i>Dhatu</i> involvement	Device-calibrated
Effect	Doshic correction + tissue healing	Local hyperemia + analgesia

3. MATERIALS AND METHODS

This review employed a thematic qualitative approach using both classical and modern literature. **Sources of study:** *Sushruta Samhita*, *Ashtanga Hridaya*, *Charaka Samhita*, and authentic commentaries were studied alongside modern biomedical databases such as PubMed, AYUSH Research Portal, and Google Scholar.

Inclusion Criteria:

- Peer-reviewed Ayurvedic and medical studies (2010–2024).
- Experimental or clinical reports on heat therapy for musculoskeletal disorders.
- References establishing conceptual or mechanistic parallels.

Exclusion Criteria:

- Non-peer-reviewed articles and duplicate data.

Data were analyzed thematically under the following headings: conceptual correlation, mechanism of action, and therapeutic implications.

4. DISCUSSION

4.1 Ayurvedic Mechanism: According to *Samhita* principles, the therapeutic effect of *Agnikarma* arises from the *Ushna*, *Tikshna*, *Sukshma*, and *Vyavayi* properties of *agni* ^[7]. These qualities penetrate the deeper *Dhatus*, liquefy *Kapha*, disperse *Vata*, and remove *Avarana* (obstructions) in *Srotas*.

Ushnam Tikṣṇam Cha Sūkṣmam Cha Vyāvāyi Vikāśi Cha – “Fire possesses heat, sharpness, subtlety, and pervasiveness.” (*Su. Su. 12/5*) Thus, *Agnikarma* functions as both a *Srotoshodhana* (channel-cleansing) and *Vata-Kapha Shamana* therapy. When applied to *Snayu Roga*, controlled heat alleviates stiffness (*Stambha*),

reduces pain (*Shoola*), and promotes local circulation (*Rakta Gati Vriddhi*). The resulting *Samyak Dagdha Vrana* heals rapidly due to increased tissue metabolism and absence of residual *Dosha Dushti* [8]. Due to these effects it results in instant pain relief by reducing *Vata* and *Kapha* as both are having *Sheeta guna* and *Agnikarma* employs the release of *Ushna guna* at the site of treatment.

4.2 Modern Mechanism

In biomedical terms, *Agnikarma*-induced heat triggers multiple physiological responses:

1. **Vascular Effects:** Local vasodilation improves blood perfusion, oxygenation, and waste removal [9].
2. **Neural Effects:** Heat activates thermoreceptors and modulates nociceptive transmission, elevating pain threshold via endorphin release [10].
3. **Biochemical Effects:** Thermal stimulation reduces inflammatory mediators (IL-6, TNF- α) and promotes collagen realignment [11].
4. **Regenerative Effects:** Controlled microburns stimulate fibroblast proliferation and neovascularization, aiding structural repair [12].

Table No.2 Schematic Representation of *Agnikarma*'s Multi-Level Mechanism:

Level	Mechanism/Action	Primary Clinical Effect
Ayurvedic	Counteracts <i>Sheeta Guna</i> of <i>Vata</i> ; Clears <i>Srotavarodha</i> (obstruction).	Immediate pain relief; Non recurrence.
Neuro-Anatomical	Activates Gate Control Mechanism; Releases Endogenous Opioids; Destroys Nociceptors.	Profound and long-lasting analgesia.
Vascular	Induces Vasodilation; Increases Blood Supply.	Flushes inflammatory mediators; Reduces local stiffness and swelling.
Cellular/Local	Controlled Micro-Burn; Sterile Inflammation.	Triggers local tissue repair and remodeling.

4.3 Clinical Evidence

Clinical studies demonstrate significant improvement in pain scores and functional mobility among patients treated with *Agnikarma* for plantar fasciitis, lateral epicondylitis, and osteoarthritis[13].Comparative trials indicate that *Agnikarma* yields superior pain relief compared to physiotherapy and ultrasound modalities [14]. In a 2022 randomized controlled trial, *Agnikarma* showed 82% reduction in Visual Analogue Scale (VAS) scores and improved quality of life measures after 4 weeks of treatment [15].

5. CONCLUSION

Agnikarma represents the confluence of surgical art and physiological science within Ayurveda. *Agnikarma* is the unique contribution of Ayurveda where a lot of its efficacy in tendon fasciitis stems from its ability to restore *Vata-Kapha* balance, enhance circulation, and stimulate natural tissue healing.

Even the pain gate theory can explain how *Agnikarma* can result in instant pain relief in most of the musculoskeletal disorders. Unlike external heat therapies that provide temporary relief, *Agnikarma* addresses both *Dosha* pathology and structural dysfunction. Its low recurrence rate, cost effective treatment, minimal invasiveness, and holistic approach make it a promising therapeutic modality for chronic musculoskeletal disorders. Further integration with modern diagnostic imaging and clinical trials will strengthen its scientific validation and facilitate its incorporation into mainstream pain management.

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