

Role of *Agnikarma Chikitsa* in the Management of Traumatic Ankle Strain: A Single Case Report

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Abstract: Background: Traumatic ankle strain is a frequent musculoskeletal injury, commonly resulting from sudden twisting or overstretching of the ankle joint. Conventional treatments such as RICE (Rest, Ice, Compression, Elevation), physiotherapy, and analgesics are often effective in acute cases, but may offer limited relief in persistent or recurrent conditions. *Ayurveda*, the ancient Indian system of medicine, offers holistic and drug-free alternatives such as *Agnikarma Chikitsa*, a para-surgical procedure involving therapeutic cauterization, particularly effective in localized *Vata-Kapha* disorders. **Objective:** To assess the clinical effectiveness of *Agnikarma Chikitsa* in the management of a traumatic ankle strain in a young adult. **Methods:** A 28-year-old male presented with pain, tenderness, and restricted ankle movement after a sports-related injury. The condition was clinically

diagnosed as a Grade I ankle strain, corresponding to *Snayugata Vata* in *Ayurveda*. *Agnikarma* was performed using a *Panchadhatu Shalaka* (five-metal rod) heated to red-hot and applied via the *Bindu Dahana* technique over the painful region. The procedure was conducted in three sessions at weekly intervals. *Kumari Swarasa* (fresh aloe vera pulp) was applied post-procedure to minimize thermal effects and aid tissue repair. **Results:** The patient experienced a significant reduction in pain and tenderness after the first session, with complete restoration of joint mobility by the third sitting. No adverse effects or recurrence were noted. **Conclusion:** *Agnikarma Chikitsa* proved to be a safe, effective, and affordable therapy for traumatic ankle strain, offering rapid symptom relief. It holds promise as a viable outpatient treatment for musculoskeletal injuries, both curative and preventive.

Keywords: *Agnikarma*, Traumatic ankle strain, *Snayugata Vata*, Pain management, *Panchadhatu Shalaka*.

Introduction

Ankle strains occur when there is excessive stretching or tearing of the muscles or tendons surrounding the ankle joint. Although such injuries typically heal with standard management approaches, persistent pain can result from underlying muscle guarding or microtrauma. In *Ayurvedic* texts, this condition aligns with the concepts of *Snayugata Vata* or *Kandara Shosha*, which are attributed to the aggravation of *Vata dosha* following trauma (*Abhigata*)^[1].

Agnikarma Chikitsa, a therapeutic technique involving the application of controlled heat through a heated metallic instrument, is a well-documented modality in *Ayurveda*. Ancient treatises such as the *Sushruta Samhita* advocate its use for alleviating pain, reducing inflammation, and managing disorders of the musculoskeletal system. It is traditionally employed to pacify aggravated *Vata* and *Kapha doshas*, thereby offering prompt symptomatic relief^[2].

स्नेहोपनाहाग्निकर्मबन्धनोन्मर्दनानि च ।

स्नायुसन्ध्यस्थिसंग्रामे कुर्याद्वायावतन्दितः । सु. चि. 4/8

In *Ayurveda*, *Agnikarma* is widely recommended for the management of musculoskeletal pain. *Acharya Sushruta* has detailed the use of *Agnikarma* in the treatment of *Vatavyadhi* (neuromuscular disorders) in the *Chikitsa Sthana* of *Sushruta Samhita*^[3]. Ankle strain, a common injury, can occur easily due to a sudden sideways or twisting motion of the foot. While often associated with

athletes, this condition is equally prevalent in the general population during routine activities such as walking on uneven surfaces, missteps, improper lifting techniques, or overstretching typically resulting from mechanical trauma^[4].

Given its safety and simplicity, *Agnikarma* serves as an effective treatment for pain affecting the muscles, tendons, ligaments, joints, and bones collectively known as musculoskeletal pain. The procedure involves the use of a specially designed pointed metallic instrument called a *Shalaka*, which is heated and applied to the affected area in precise points to alleviate pain and promote healing^[5]. Notably, this method is free from systemic side effects, making it a favourable alternative to conventional pain therapies.

Case Presentation

Patient Information:

A 28-year-old male presented to the OPD with complaints of pain, tenderness, restricted movement and stiffness in the right ankle joint for the past 2-3 days following a sports-related injury (twist while playing volleyball).

No H/O HTN, DM or any major illness.

Samanya Parikshan

<i>Nadi</i>	80/min	<i>Shabda</i>	<i>Spashta</i>
<i>Mala</i>	<i>Samya k</i>	<i>Sparsh a</i>	<i>SamashitaUshna</i>
<i>Mutr a</i>	<i>Samya k</i>	<i>Drik</i>	<i>Prakruta</i>
<i>Jivha</i>	<i>Niram</i>	<i>Aakruti</i>	<i>Madhyam</i>

Clinical Findings:

- Swelling: Mild (Grade I) over the lateral malleolus

- Tenderness: Present over lateral aspect of the ankle
- Pain score: 7/10 on Visual Analogue Scale (VAS)
- Movement: Painful dorsiflexion and eversion
- No signs of fracture or dislocation (confirmed via X-ray)

Samprapti Ghatak

Dosha- Vata

Dushya- Asthi

Updhatu- Snayu

Strotas- Asthivaha

Adhisthana- Asthi, sandhi

Vyaktisthana- Gulf Sandhi

Samprapti

Hetu sevan (Aaghata)



Vata dosha prakopa



Strotas Sthanavaigunya



Rikta strotas (Gulf Sandhi) Vayupurana



Gulf Pradeshi Shool, Chankramana Kashtata



Traumatic Ankle Injury

Diagnosis:

Based on history and examination, it was diagnosed as **Grade I traumatic ankle strain**, correlating with *Snayugata Vata* in Ayurveda.

Materials and Methods

Procedure: *Agnikarma* on the Ankle Joint

Purva Karma (Pre-operative Preparation)

1. Informed written consent was obtained from the patient prior to the procedure.
2. A thorough clinical examination was performed, including assessment of vital parameters.
3. The patient was taken into the *Agnikarma* therapy room and positioned comfortably on the procedure table.

Pradhana Karma (Main Procedure)

1. The affected ankle area was cleansed using *Triphala Kashaya*, a herbal decoction known for its antimicrobial and cleansing properties.
2. The area was then gently dried using sterile cotton gauze.
3. A *Panchadhatu Shalaka* (a five-metal pointed rod) was heated over a gas flame until it reached a red-hot state.
4. Using the *Bindu Dahan* technique, 5–10 therapeutic cauterization points (*Samyak Dagdha Vrana*) were made over the site of pain. The cauterization was precise, targeting the *Mamsa Dhatus* (muscle tissue), as per classical Ayurvedic principles.

5. Throughout the procedure, *Kumari Swarasa* (fresh aloe vera pulp) was applied topically to cool the area and prevent blister formation. Aloe vera also promotes wound healing and soothes the skin.

Pashchat Karma (Post-operative Care)

1. The patient was instructed to apply fresh *Aloe vera* pulp to the



cauterized area in case of any discomfort or burning sensation at the site of *Dahana* (thermal cauterization), as it helps soothe the skin and promote healing.

Precautions Taken

1. Spirit or alcohol-based antiseptics were deliberately avoided during the procedure due to their flammable nature, which could increase the risk of *Atidagdha* (excessive burns).
2. The *Agnikarma* procedure was performed a total of three times, each session spaced at a 7-day interval, to achieve optimal therapeutic results.

Observations

Sr. No.	Observations	Day 0	Day 7	Day 14
1	Pain	+++	++	+
2	Tenderness	+++	++	-
3	Restricted Movement of Ankle Joint	++	+	-

The patient reported significant relief in pain by the third sitting and complete restoration of ankle function. No adverse reactions were observed.

Result

Following completion of *Agnikarma* therapy over a period of 14 days, the patient reported complete relief from pain and tenderness. There was no longer any restriction in joint movement, and the patient was able to stand upright without discomfort, indicating significant clinical improvement. The procedure was well-tolerated by the patient throughout all sessions, and no adverse effects or

complications were observed during or after the treatment.

Discussion

Agnikarma is particularly effective in managing localized *Vataja* and *Kaphaja* disorders. In this case, it significantly alleviated symptoms such as *Vedana* (pain) and *Sparsha Asahatva* (tenderness), which were almost entirely resolved following the procedure. The likelihood of recurrence (*Apunarbhava*) is minimal when the underlying pathology (*Vyadhi*) is confined to a local region (*Sthanik Vyadhi*) and adequately treated through this thermal modality.

As a minimally invasive OPD-based therapy, *Agnikarma* requires limited instruments and space, making it ideal for outpatient pain management of conditions like ankle strain.

The therapeutic mechanism of action of the *Panchadhatu Shalaka* (five-metal cauterizing rod) lies in its ability to deliver controlled heat (*Agni*), which possesses the *Ushna* (hot) and *Tikshna* (penetrating) qualities. These properties are antagonistic to the cold and heavy attributes of *Vata* and *Kapha* doshas—the primary doshas implicated in the pathogenesis of conditions like *Gulpha Sandhi Shotha* (ankle joint inflammation) and *Shula* (pain)^{[6][7]}.

According to Ayurvedic principles, *Agnikarma* acts by increasing *Dhatwagni* (local tissue metabolism), thereby facilitating the removal of accumulated *Ama* (toxins) and doshic imbalances. This enhances local circulation, reduces inflammation, and alleviates pain^[8]. Additionally, as the heat is applied in a localized and controlled manner, it minimizes the risk of suppuration (*Paka*)

and prevents recurrence of the condition^[9].

Moreover, *Agnikarma* is not only curative but also serves preventive and post-operative roles. Its application has also been acknowledged in *Ayurvedic* literature for its haemostatic (bleeding control) effect, making it a multifaceted therapeutic tool in clinical practice^[10].

Furthermore, *Agnikarma* offers rapid relief often enabling the patient to resume daily activities within minutes of the procedure. Compared to conventional surgical interventions, this therapy is cost-effective, eliminating the need for multiple post-operative dressings, antibiotics, analgesics, and anti-inflammatory medications^{[11][12]}. Thus, it presents an affordable and accessible solution, particularly for economically disadvantaged populations. Compared to conventional analgesics, this approach avoids gastrointestinal side effects and offers a quicker, localized solution for musculoskeletal pain.

Conclusion

Agnikarma Chikitsa demonstrated highly effective results in alleviating all major symptoms associated with traumatic ankle strain, particularly pain, which is often the most distressing symptom for the patient. The therapy proved to be a safe, cost-effective, and efficient modality with rapid symptomatic relief and minimal risk of side effects or complications. In addition to pain reduction, it also improved joint mobility and functional recovery within a short duration. The absence of systemic drug use and the outpatient-friendly nature of the procedure make it a suitable alternative or complementary approach in musculoskeletal injury management.

This case highlights the potential of *Agnikarma* as both a curative and preventive therapy, reducing the likelihood of chronicity or recurrence when applied in appropriate clinical settings.

Patient Consent: Informed written consent was obtained from the patient.

Conflict of Interest: None declared.

Funding: Nil.

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Conflict of Interest: Non

Source of funding: Nil

Cite this article:

Role of Agnikarma Chikitsa in the Management of Traumatic Ankle Strain: A Single Case Report
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Ayurline: International Journal of Research In Indian Medicine 2025; 9(5):01- 06

