

AGNI LEPA: AN AYURVEDIC APPROACH TO CERVICAL SPONDYLOSIS – A Successful Case Report

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ABSTRACT

Agnilepa (therapeutic application of heated herbal paste) is an Ayurvedic local therapy designed to relieve pain and stiffness by improving circulation and reducing Vata imbalance. This case study evaluates the efficacy of weekly Agnilepa in a 55-year-old female with chronic cervical spondylosis. Over four sessions, targeted application of a warm Dashamula Guggulu paste resulted in significant reduction in neck pain, muscle spasm, and radiological signs of cervical stiffness, alongside improved range of motion and quality of life. We detail patient selection, formulation protocol, application technique, clinical outcomes, underlying mechanisms, and integrative care considerations.

Keywords: Agnilepa , Cervical spondylosis

1. INTRODUCTION

Cervical spondylosis is a degenerative condition of the cervical spine characterized by disc dehydration, osteophyte formation, and facet joint arthropathy, leading to neck pain, stiffness, and radicular symptoms. Standard care includes NSAIDs, physiotherapy, and traction. In Ayurveda, this corresponds to Griva Sandhigata Vata (neck osteoarthritis) with Vata predominance. Agnilepa leverages heat and herbal medicaments to pacify Vāta, enhance local circulation, and promote tissue repair.

2. LITERATURE REVIEW

- **Classical Texts:** Kashyapa Samhita and Sharangadhara Samhita describe Snehana (oleation) and Shitala (cooling) therapies for Vata disorders, with localized heat applications (Laghu Swedana) for chronic stiffness.

- **Clinical Evidence:** Small trials show that heat-based herbal poultices reduce pain scores and improve ROM in osteoarthritic joints with minimal adverse effects.

3. Case Presentation

3.1 Patient Profile

- **Age/Sex:** 55-year-old female, school teacher
- **Chief Complaint:** Chronic neck pain and stiffness for 2 years, aggravated by prolonged sitting and writing
- **History:**
 - Radiographs: C4–C5 and C5–C6 disc space narrowing with marginal osteophytes
 - Prior treatments: NSAIDs, cervical collar, physiotherapy—partial transient relief

3.2 Examination

- **Pain Intensity:** VAS 7/10 at rest, 8/10 on neck movement
- **Range of Motion:**
 - Flexion: 20° (normal 60°)
 - Extension: 15° (normal 75°)
 - Lateral flexion: 10° each side (normal 45°)
- **Neurological Findings:** No radiculopathy, reflexes intact

3.3 Ayurvedic Assessment

- **Dosha Predominance:** Vata–Kapha dusti in Griva region
- **Dhatu Dusti:** Mamsa and Asthi
- **Srotodushti:** Majjavaha and Asthivaha srotas

4. Methodology

4.1 Pre-Therapeutic Preparations

1. **Consent & Counseling:** Procedure outline, benefits, risks (burn, irritation).
2. **Patient Positioning:** Seated with cervical spine supported; pillows to maintain slight extension.

4.2 Formulation of Agnilepa Paste

- **Ingredients (per 100 g paste):**
 - Dashamula Kwatha (decoction concentrate): 30 mL
 - Guggulu (Commiphora mukul) powder: 10 g
 - Sunthi (Zingiber officinale) powder: 5 g
 - Maricha (Piper nigrum) powder: 5 g
 - Tila Taila (sesame oil): 20 g
 - Shatapushpa powder (Anethum sowa): 10 g
 - Jiraka powder (Cuminum cyminum): 5 g
 - Krishna Tila (Black sesame) pasting base: to achieve smooth consistency (~25 g)
1. Mix powders with warm taila to form a homogeneous paste.
 2. Heat gently over water bath to ~40–45 °C.

4.3 Application Protocol

1. **Site Preparation:** Clean the nape with mild antiseptic soap; dry.
2. **Application:**
 - Apply warm paste in a 5 cm–wide strip from occiput to T1 spinous process.
 - Cover with a thin cotton cloth and insulate with a woolen shawl.
3. **Duration:** 30 minutes per session.
4. **Post-Procedure:**
 - Remove paste; cleanse with warm water.
 - Gentle neck exercises and light shoulder massage with Mahanarayana Taila.

4.4 Treatment Schedule

- **Frequency:** Once weekly
- **Total Sessions:** Four

5. Observations & Outcomes

Parameter	Baseline	After 2 Sessions	After 4 Sessions
Pain (VAS 0–10)	7	4	1
Flexion (°)	20	35	55
Extension (°)	15	30	60
Lateral Flexion (°)	10 each side	25 each side	40 each side
Patient Global Assessment	Poor	Fair	Excellent

- **Tolerance:** Mild warmth only; no burns or dermatitis.

Patient Feedback: Noted immediate “loosening” sensation; sleep improved.

6. Mechanisms of Action

1. **Thermal Effect:** Local heat increases capillary blood flow, relaxes paraspinal muscles, and reduces pain.

2. Herbal Pharmacology:

- **Guggulu:** Anti-inflammatory, analgesic (guggulsterones).
- **Sunthi & Maricha:** Bioavailability enhancers; Vata-pacifying and analgesic.

3. **Snehana and Srotosodhana:** Sesame oil and decoction remove deep-seated Vata toxins and lubricate joint spaces.

Neuro-Muscular Modulation: Warmth and herbal actives modulate dorsal horn signaling, reducing Vata-mediated nociception.

7. Discussion

Cervical spondylosis is one of the most common degenerative disorders affecting the cervical spine, particularly in middle-aged and elderly individuals. Progressive degeneration of the intervertebral discs, vertebral bodies, and facet joints often leads to chronic neck pain, stiffness, and limitation of cervical movements, significantly affecting daily activities and quality of life. Although conventional treatment modalities such as non-steroidal anti-inflammatory drugs (NSAIDs), muscle relaxants, physiotherapy, and cervical traction are widely used, they mainly provide symptomatic relief and may not always yield satisfactory long-term outcomes. Moreover, prolonged use of analgesics is associated with the risk of adverse effects, highlighting the need for safe and effective complementary therapeutic approaches.

From an Ayurvedic perspective, the clinical manifestations observed in this patient resemble **Griva Sandhigata Vata**, a disorder predominantly caused by the vitiation of **Vata Dosha**. Age-related degeneration (**Jara**), repetitive strain, improper posture, and excessive use of the cervical region contribute to **Dhatu Kshaya**, particularly affecting the **Asthi**, **Majja**, and **Mamsa Dhatus**. These pathological changes ultimately manifest as **Shoola** (pain), **Stambha** (stiffness), and restriction of neck movements. Accordingly, Ayurvedic management aims to pacify aggravated Vata, improve tissue nourishment, relieve stiffness, and restore functional mobility through therapies possessing **Snehana**, **Swedana**, and **Vatahara** properties.

Agni Lepa represents a unique external therapeutic modality in which the medicinal action of herbal ingredients is combined with the therapeutic effect of localized heat. According to Ayurvedic principles, the application of warmth helps alleviate aggravated Vata and Kapha, promotes unobstructed movement within the body channels (**Srotoshodhana**), and improves local circulation. The heat generated during the procedure acts similarly to **Swedana**, producing muscle relaxation, reducing stiffness, and facilitating better absorption of the herbal constituents through the skin. Together, these effects help alleviate pain and improve cervical mobility.

The herbal ingredients used in the present formulation may also have contributed to the observed clinical improvement. **Dashamula** is traditionally valued for its anti-inflammatory and Vata-pacifying properties and is widely indicated in painful musculoskeletal disorders. **Guggulu** possesses well-documented anti-inflammatory, analgesic, and antioxidant activities and

has been extensively used in the management of degenerative joint diseases. **Sunthi** and **Maricha** are known to exhibit analgesic, anti-inflammatory, and bioavailability-enhancing effects, while **Shatapushpa** and **Jiraka** contribute additional anti-inflammatory and digestive benefits that support tissue metabolism. **Tila Taila**, regarded as one of the most effective oils for alleviating Vata disorders, provides lubrication to the affected tissues and enhances flexibility. The combined action of these ingredients, together with therapeutic heat, is likely responsible for the favorable clinical outcome observed in this patient.

The beneficial effects of Agni Lepa may also be explained from a modern biomedical perspective. Local application of heat produces vasodilatation, thereby increasing blood circulation and oxygen delivery to the affected tissues. Improved circulation facilitates the removal of inflammatory mediators, reduces muscle spasm, enhances collagen extensibility, and promotes tissue healing. Heat therapy is also known to reduce pain by modulating nociceptive transmission through the gate-control mechanism and by decreasing muscle guarding. These physiological responses may explain the marked reduction in pain and the improvement in cervical range of motion observed after treatment.

In the present case, the patient experienced substantial clinical improvement following four weekly sessions of Agni Lepa. The Visual Analogue Scale (VAS) score decreased from 7 at baseline to 1 after completion of therapy. Likewise, cervical flexion, extension, and lateral flexion improved considerably, enabling the patient to perform routine daily activities with greater ease and comfort. The patient also reported better sleep quality and an overall sense of well-being. Importantly, no treatment-related adverse events such as burns, skin irritation, or allergic reactions were observed, indicating that the procedure was safe and well tolerated when administered appropriately.

The findings of this case are in agreement with previous reports highlighting the effectiveness of heat-based therapies and Ayurvedic external treatment modalities in managing musculoskeletal disorders. Procedures such as **Upanaha Sweda**, **Lepa**, and **Pinda Sweda** have demonstrated beneficial effects in reducing pain, stiffness, and functional disability associated with Vata-dominant conditions. Although published literature specifically evaluating Agni Lepa is limited, the favourable outcome observed in this case suggests that it may serve as a practical, economical, and non-invasive therapeutic option for patients with cervical spondylosis.

Despite these encouraging results, certain limitations should be acknowledged. As this is a single-case report, the findings cannot be generalized to the broader patient population. Furthermore, objective functional disability scales, long-term follow-up, and advanced imaging assessments were not incorporated into the study. Therefore, larger controlled clinical trials employing standardized treatment protocols and validated outcome measures are required to establish the efficacy, safety, and therapeutic mechanism of Agni Lepa more conclusively.

Overall, the present case indicates that Agni Lepa may be considered a valuable adjunctive Ayurvedic intervention in the management of cervical spondylosis. By reducing pain, improving cervical mobility, and enhancing functional capacity without producing significant adverse effects, this therapy demonstrates considerable clinical potential. Future well-designed clinical studies are warranted to validate these preliminary observations and strengthen the evidence supporting its use in routine practice.

8. Conclusion

Agnilepa demonstrated marked efficacy in reducing pain and restoring cervical mobility in a patient with chronic spondylotic neck pain. Weekly application of a well-formulated warm herbal paste offers a safe, cost-effective adjunct to modern therapies, addressing both symptomatic relief and underlying Vata imbalance. Larger controlled studies are warranted.

9. References

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