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Snigdha Agnikarma in *Grudhrasi* (Sciatica); A REVIEW ARTICLE

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ABSTRACT

Anushastra procedures, including Kshara karma, Agnikarma, and Raktamokshana, are recognized for their immediate and enduring effects. Agnikarma is particularly recommended for conditions characterized by Ruja pradhana, as well as Vata and Kaphaja disorders. The Pancha dhatu shalaka is routinely employed in Agnikarma, regardless of the anatomical structure or severity of the pathology involved. Notably, over 80% of painful conditions are associated with the locomotor system, which encompasses Sandhi, Asthi, Sira, and Snayus. These components are classified as Gambheera dhatus, and the Dahanopakaranas prescribed for ailments in these areas include Snigdha dravyas such as Kshaudra, Guda, Taila, Vasa, and Madhuchista. Snigdha dravyas are characterized by their elevated latent heat and superior percolation properties. Consequently, in cases such as Sciatica, Vertebral disc prolapse, Calcaneal spur, and Tendinitis, the application of Agnikarma using Snigdha dravyas is likely to yield more favourable outcomes compared to other forms of Dahanaopakrana, due to their capacity for deep heat penetration over extended durations.

KEYWORDS: *Grudhrasi, Agnikarma, Snigdha Agnikarma, Snigdha dravyas, Sira, Snayu, Sandhi, Asthi*

INTRODUCTION

In the modern world, there is a noticeable shift in lifestyle away from healthy practices, resulting in an increased susceptibility to various diseases. Factors such as an extreme lifestyle (Sedentary / Rapid lifestyle, stress (physical and mental, or both), poor posture, abrupt movements, and prolonged travel exert significant strain on the spine and the lower pelvic region. Low back pain (LBP) is the most commonly reported musculoskeletal issue among older adults.

The literature indicates a wide variation in the prevalence of sciatica symptoms, ranging from 1.6% in the general population to 43% in specific working groups. The lifetime incidence of low back pain is estimated to be between 50% and 70%, while the lifetime incidence of sciatica exceeds 40%. However, clinically significant sciatica is observed in only 4% to 6% of the population.[1]

Sciatica is characterized by pain that radiates from the back into the buttocks and down the lower limbs, typically along the posterior or lateral aspects. The most common cause is a prolapsed intervertebral disc, although the term also encompasses pain along the entire course of the sciatic nerve. This condition is increasingly prevalent in contemporary society.

Gridhrasi, classified as a *Vata Vyadhi*, is marked by symptoms such as stiffness (*Stambha*), pricking pain (*Toda*), general pain (*Ruk*), and frequent tingling (*Spandana*). These symptoms initially affect the buttocks (*Sphik*) and the posterior aspect of the waist (*Kati*), subsequently radiating to the back of the thighs (*Uru*), knees (*Janu*), calves (*Jangha*), and feet (*Pada*).[2]

Acharya Sushrutha has referenced *Gridhrasi* in the context of *Mahavatavyadhi Adhyaya*. In Ashtanga Hridaya, *Gridhrasi* is described as a condition where aggravated Vata Dosha affects the tendons from the calcaneal region (*Parshni*) to the toes (*Pratyanguli*), as well as the sacral and pelvic regions (*Sakthi pradesha*). This leads to a restriction of movement in the lower extremities (*Uktshepa Nigrahana*).[3]

The *Sarvangasundara* text elaborates on the symptom of '*पादे उद्धारणे अशक्ति* (*Pada Uddharane Ashakti*,)' which Exactly resembles the restricted straight leg raising test used in contemporary medicine to confirm sciatica. The teachings of the *Acharya*s emphasize this connection.
Acharyas have mentioned that *Avyakta Lakshana* is the *Poorvaroopa* of *Vata Vyadhi*. The pain experienced by the patient here is identical to the pain felt when the vulture pierces its beak deep into the prey to feed, and it is the cardinal feature of *Gridrassi*.[4]

OBJECTIVES

- To gather and assess textual references regarding *Grudhrassi* within the framework of Ayurveda.

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- To compile and analyse textual references pertaining to *Agnikarma* in Ayurveda.
- To comprehend the textual references associated with *Snigdha Dravya Yuktha Agnikarma* in Ayurveda.
- To evaluate the potential effects of *Sneha Dravya Yukta Agnikarma* on *Grudhrassi* in *Ayurveda*.

MATERIALS AND METHODS

An effort was undertaken to compile various references concerning *Agnikarma, Grudhrassi*, and the effects of Snigdha *Agnikarma* on *Grudhrassi* as outlined in classical texts.

***Grudhrasi* Etimolgy**

The name *Gridhrasi* itself indicates the way of gate show by the patients due to extreme pain just like a *Gridhra* (Vulture). Such a condition show difficulty in walking, it disturbs daily routine and overall life of patients.

Vyutpatti -

The word *Gridhrasi* is derived from *Gridhra* dhatu and *runn. pratyay* i.e to desire, to strive after greedily, to be eager for.

गृध धातु+ ऋन् प्रत्यय= गृध्

By adding *सो* and *क*

Gridhrasi word is derived ie. ***गृध्+ सो+ क= गृध्रसि(वाचस्पत्य)***

Nirukti

गृधमपि स्यति सो ।(वाचस्पत्य)

The disease where gait of the affected person resembles like the gait of a Vulture is known as *Gridhrasi*. The word *Gridhra* means;

गृध्रोमांसलोलूपोमनुष्यः तंसयति पीडयति नाशयति वा । (श.क. द्रुम)

This is the bird which is fond of meat and it pierces its beak deep inside the meat then draws it out forcefully, the word *syaati* in Sanskrit means to cause suffering, exactly such type of pain occurs in *Gridhrasi* and hence the name.

Synonyms of Gridhrasi

1)Ringhinee:

It means to creep or crawling or that makes a person to go slowly. Moreover according to *Shabdakalpadruma* refers to *Skhalana* meaning displacement. It may be a mere co-incidental observation that displacement of the soft annulus is the prime pathology of Sciatica as referred by the word *Ringhinee*.

2) Randhini:

By *Dalhana* (S.Ni.1/74)

'गृध्रसी रंधिणी इति लोके ।

This term indicates weak point or rupture. Likewise, disc is the weakest point in the lumbar spine and tends to rupture causing Sciatica as referred by the word *Randhini*.

***3) Radhina*:**

By *Aadhamala* and *Kaashiram* (Sh. Sm. Pra. kh. chi.7/108)

गृध्रसिति प्रसिद्धा लोके राधिना शब्दवाच्या इति केचित् ।

The term *Radhina* indicates pressing, compressing or destroying.

***Grudhrassi* in Other Classical Texts [3]**

Yogaratnakara

The *Yogaratnakara* delineates the symptomatology and classification of *Gridhrasi* within the context of *vata vyadhinidana*. Several formulations beneficial for *Gridhrasi* are described in the vata vyadhi chikitsa, including *Vishagarbha taila*.

Bhaishajya Ratnavali

This text outlines the treatment of *Gridhrasi* according to *Chakradatta*, detailing *pathya* and *apathya* in the *vata vyadhi rogaadhikara like Rasonapinda, Panchamooli kwatha, Krushna churna. Vishagarbha taila* is also mentioned in this context.

Harita Samhita

Harita categorizes *Vata vyadhis* into five varieties, identifying 16 diseases associated with each type. He dedicates specific chapters to *Gridhrasi Vata,* explaining its *Nidan, lakshana,* and *chikitsa*, and classifies *Gridhrasi* as a disorder of *Vyana Vata*.

Kashyapa Samhita

In the *Kashyapa Samhita, Gridhrasi* is listed among 80 types of *Vata* imbalance disorders.

Bhela Samhita

Chapter 24 of *Chikitsa Sthana* discusses various general and specific measures for alleviating *Vata*. Treatments involving *Bala Taila, mulika taila, and sahachara taila* for *Basti* and *Abhyantara pana*, as well as *unmardana* and *Raktamokshana*, are noted.

Kalyanakaraka

The eighth chapter, referred to as *Vatarogadhikara*, addresses the pathology and symptomatology of *Gridhrasi*, while its treatment is elaborated upon in the twelfth chapter, known as *Vata Roga Chikitsa*.

In the ***Ashtanga Hridaya***, the fifteenth chapter, *Nidanasthana*, provides a detailed account of the symptomatology and pathogenesis of *Gridhrasi* under the section titled *Vatavyadhi Nidana*. Additionally, the twenty-seventh chapter of *Sutrasthana* specifies the site for *Siravedha* in cases of *Gridhrasi*.

Madhava Nidana discusses two distinct types of *Gridhrasi* in the *Vata Vyadhi Nidana* chapter, highlighting specific symptoms such as *Dehasya Pravakrata* (Sciatic scoliosis) in the *Vataja* type, and *Mukhapraseka* and *Bhaktadvesha* in the *Vata-Kaphaja* type.

Chakradatta, in his discourse on the treatment of *Gridhrasi*, mentions various herbal remedies, including *Vaarthaka prayoa, Eranda phala payasa (kheer* made from castor seeds), *raasnadhi gutika*, as well as *Basti* therapy and surgical interventions like *sira vyadha* and *Agnikarma*. He also recommends *Rasna Guggulu Vati* for treating *Gridhrasi* and suggests *Ajmodadi Vati* for managing *Ugra Gridhrasi* in the *Amavata Rogadhikara.*

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Arundatta, in his commentary *Sarvanga Sundari* on *Ashtanga Hridaya*, clarifies that pain arises from *Vata* in the *Kandara*, particularly when raising the leg straight, which limits thigh movement.

Gadanigraha elaborates on the treatment of *Gridhrasi* in two sections: the fourth chapter of *Prayoga Khanda*, titled *Gutikadhikara*, and the nineteenth chapter, *Vatarogadhikara*, within the *Kayachikitsa Khanda*, where Basti chikitsa, along with *Agnikarma and Raktamokshana*, is discussed.

Vangasena provides a clearer explanation of the symptomatology and treatment approach, stating that procedures such as *Deepana, Pachana, Vamana, Virechana, Basti, and Siravyedha* should be employed for *Gridhrasi*, with *Rasna Guggulu* also mentioned as part of the treatment regimen.

In the ***Shashilekha*** commentary on *Ashtanga Sangraha*, Indu notes that the symptoms of *Gridhrasi and Vishwachi*

Sharangadhara Samhita
In the seventh chapter, specifically the 108th sloka of *Purvakhanda* known as *Rogaganana, Gridhrasi* is classified among the 80 types of *Nanatmaja Vatavyadhi*. The treatment protocols for *Gridhrasi* are elaborated in the second and fifth chapters of *Madhyama Khanda.*

Rasaratna Samuchchaya
The management of *Gridhrasi* is detailed in the 30th chapter of *Rasaratna Samuchchaya.*

Bhavaprakasha
Within *Bhavaprakasha, Gridhrasi* is categorized under *Vatavyadhi Nidana*. Various types of *Gridhrasi*, along with their respective treatments, are discussed.

Agnikarma
The *Agnikarma* technique entails a procedure wherein heat is applied to the affected area. This method generates a therapeutic burn in the form of *Bindu*, which aids in alleviating pain. Approximately 2000 to 3000 years ago, when contemporary medical techniques were less advanced, our esteemed *Acharya*s employed instruments such as *Pippalli, Godanti, Shar, Shalaka, Jambosta, Loh, Madhu, Guda, and Sneha* for managing pain associated with muscular and joint disorders.

Classification of *Agnikarma*: [5]
❖ Based on *Akruti:*
1) Bindu
2) Vilekha
3) Valaya
4) Pratisarana
(Vaghbhatta introduced three additional types)
5) Ashtapada
6) Ardha-Chandrika
7) Swastika.

❖ Based on *Dhatus:*
1) Twakdagdha
2) Mamsa Dagdha
3) Sira snayu Asthi Sandhi Dagdha.

❖ According to the *Dravyas* Used:
1) Snigdha - This is performed using oily substances such as *madhu, ghrita, and taila*, and is recommended for *sira, snayu*, *sandhi*, and *ashti*.
2) Ruksha - This is executed with instruments like *pippali shalaka* and *ajashakra*, and is suitable for *twak dagdha*.

Agnikarma in Grudhrassi
Agnikarma is recognized as one of the therapeutic approaches for various *Vataja Vyadhis*. *Acharya Yogaratnakara* specifically highlights *Agnikarma* as a primary treatment for *Gridhrasi*.[6] In the context of *Gridhrasi*, *Agnikarma* is indicated along with its application site, which is identified as the *Anthara-Kandara-Gulpha Madhye*.[2] This region can be understood as the pathway through which the Sciatic Nerve traverses, situated in the groove between the medial Malleolus and the Achilles Tendon.

Concept of Dermatomes in Sciatica
A dermatome is a clinical term utilized for pinpointing symptoms associated with neurological disorders. It denotes the specific area of skin where an individual experiences symptom in a pattern that is characteristic of a particular spinal level. Dermatomes are typically organized in long, vertical, and continuous bands that extend from the lower back down into the leg and foot.
The tibial branch of the sciatic nerve originates from the L5, S1, S2, and S3 spinal nerves. This nerve innervates the calf muscles located at the back of the leg. Its sensory component continues as the sural nerve, which provides sensation to parts of the outer ankle and heel. [7]

Snigdha Agnikarma In Grudhrassi
A variety of *Dahana Upakaranas* are available for the practice of *Agnikarma*. Among these, *Madhu, Guda, and Sneha* are utilized specifically for conditions affecting the *Sira-Snayu-Asthi-Sandhi*. The *Utkshepa Nigrahana* technique applied to the lower extremities in cases of *Grudhrasi* suggests that the *vataja siras* are impacted[4], making *Sneha* a particularly suitable option among the *Dahana Upakaranas*.
The inherent deep-penetrating characteristics of Sneha enable it to reach the affected area effectively, facilitating actions such as counter-irritation of the nerves, vasodilation of blood vessels, increased extensibility of collagen, and enhanced metabolic activity as per Vant Hoff's Law, all of which contribute to alleviating pain.[8]

Procedure for *Agnikarma* with *Snigdha Dravyas*: [8]
Poorva karma
1. Collection of materials: *Snigdha Dravya*, Wick / Glass Dropper, Bowl, *Madhu-Ghrita*
2. Preparation of patient and making him lay down in a lateral position, exposing the *anthara kandara gulfa madhye*.

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Pradhana Karma

3. A small quantity of *Snigdha* Dravya (*Taila*) is placed in a sterile dish and heated on a stove.
4. The heated *Snigdha Dravya* is to be extracted using a Glass dropper or wick.
5. This liquid is then to be applied to the designated site, specifically in *grudhrasi Anthara kandara gulfa madhye.*
6. A gap of approximately ½ cm should be maintained between the treated areas.

Paschat Karma

7. Immediately following *Agnikarma*, a mixture of Madhu and *Ghrita* should be applied.
8. The patient should be allowed to rest until the burning sensation subsides.

DISCUSSION

Various concepts and theories have been proposed to elucidate the role of thermal therapies in pain management.

Impact on Metabolic Activity

An increase in temperature, as described by Vant Hoff's law, enhances the rate of metabolic activities. In living organisms, elevated temperatures can lead to protein denaturation, thereby disrupting enzyme-mediated metabolic processes. When temperatures exceed 45°C, significant tissue damage can occur. However, from a therapeutic perspective, a controlled increase in temperature stimulates all cellular activities, including motility and the production and release of chemical mediators. Additionally, cellular interactions, such as phagocytosis and growth, are expedited.[8]

Nerve stimulation

The sensory receptors in the skin are activated by thermal stimuli, such as heat and cold, which can be distinctly perceived. Afferent nerves that respond to heat may exert an analgesic effect by influencing the gate control theory of pain.[8]

Probable mode of action

Agnikarma serves to balance the *Vata and Kapha Doshas*, leveraging the inherent qualities of *Agni*, which include *Ushna, Tikshna, Sukshma, and Ashukari Guna*. The heat transferred to the *Twak Dhatu* facilitates the removal of blockages in the *Srotas* and enhances blood flow to the affected area. This increased circulation aids in the elimination of inflammatory and pain-inducing substances, thereby providing symptomatic relief. Additionally, the therapeutic heat elevates the *Dhatvagni*, promoting the digestion of local *Ama*.

The use of *Snigdha dravyas*, characterized by their high latent heat capacity, allows for a more significant temperature fluctuation at the tissue surface and deeper layers.

Consequently, the penetration of heat is more effective when these viscous substances are employed in *Agnikarma*. This approach is particularly beneficial for conditions affecting the *Snayu, Sira, Sandhi, and Asthi*, such as *Grudhrasi*.

The therapeutic applications of *Snigdha Agnikarma* encompass pain relief, alleviation of muscle spasms, enhancement of healing processes, resolution of chronic inflammation, and improvement in joint mobility.

TABLES

Disease of *Twak*	Disease of *Mamsa*	Disease of *Sira, Snayu, Sandhi and Asthi*
Pippali *Ajashakrut* *Godanta* *Shara* *Shalaka* *Varth* *Suryakantha*	*Jambavoshta* *Loha* *Swarna* *Kamsya* *Tamra*	*Madhu* *Guda* *Sneha – Vasa, Ghrita, Sarjarasa, Madhuchishta.*

Fig 1: Table for various *Dahanopakaranas* explained in *ayurveda.*

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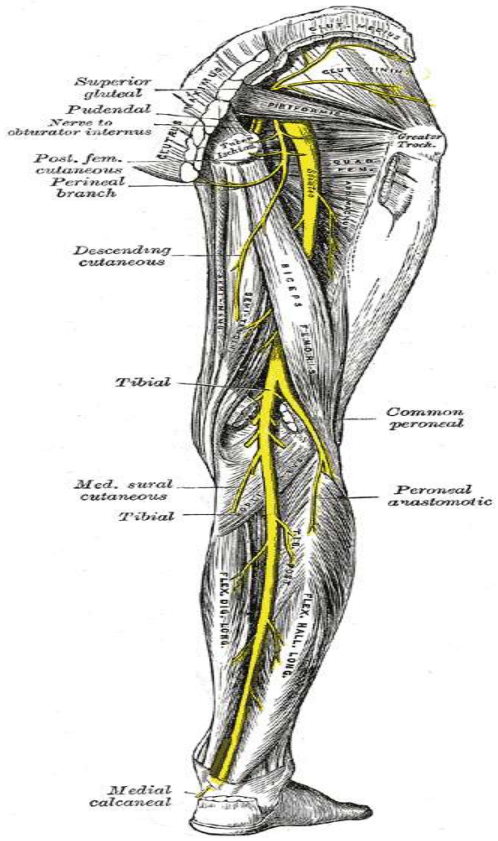


Fig 1: Sciatic Nerve Supply

CONCLUSION

Agnikarma has been a staple in clinical practice for centuries. It has demonstrated efficacy in treating locomotor disorders, including vertebral disc prolapse, tennis elbow, calcaneal spur, carpal tunnel syndrome, and osteoarthritis, particularly when combined with *Snigdha dravyas*. The prolonged heat retention associated with *Snigdha dravyas* facilitates deeper thermal penetration through the Sukshma Sira, making it a highly effective treatment option for *Grudhrasi* (sciatica).

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