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Sarjarasa Agnikarma in the pain management in *Gridhrasi* - A Case Study

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ABSTRACT

Pain is the chief cause of visiting a doctor in most patients. *Vata* is responsible for all painful conditions in the body. *Gridhrasi* is one among *Vataja Nanatmaja Vyadhi* affecting the locomotor system in which pain is major symptom. The name itself indicates the way of gait shown by the patient due to extreme pain just like a *Gridhrasi* (Vulture). In *Gridhrasi* intense shooting pain start from *Sphik Pradesha* and radiates downwards to *Kati, Prusta, Uru, Janu, Jangha* and *Pada* in which the patient is unable to walk properly. On the basis of symptoms of *Gridhrasi*; it can be equated with the disease sciatica in modern science. It occurs due to spinal nerve irritation and is characterized by pain in distribution of sciatic nerve. Statistically it is estimated that low back pain and radiating pain due to lumbar disc prolapse are major cause of morbidity throughout the world. In Ayurveda, various methods used in treatment of *Gridhrasi* are *Bheshaja* , *Snehana*, *Swedana*, *Siravedha*, *Agnikarma* and *Basti*. Among these, *Agnikarma* is one of the para-surgical procedures which is very effective, simple, safe, and cost effective and having quick action. In current study a humble attempt is made to evaluate the role of *Sarjarasa* and as *Dahanopakarana* in the pain management in *Gridhrasi* w.s.r to sciatica. The study includes a case study of 29 year old female patient who insidiously developed pain in the low back region radiating to right leg. *Agnikarma* with *Sarjarasa* was performed for 4 sittings and assessment was done with subjective and objective parameters. After the treatment patient noticed relief from pain and stiffness and Gait improved considerably. *Agnikarma* with *Sarjarasa* is easy to perform, cost effective and patient friendly.

Key words: *Gridhrasi, Sciatica, Agnikarma, Sarjarasa, Agnikarma, Pain Management, Ayurveda.*

INTRODUCTION

Gridhrasi is one among the most common *Vatavyadhis* and uprising health problem in our daily lives. The earliest reference about the details of *Gridhrasi* is available from *Sushruta Samhita* (1500BC). *Acharya Charaka* and *Acharya Vaghbhata* have also described about *Gridhrasi* in their treatises. As mentioned by *Acharya Charaka*, *Gridhrasi* is a disorder in which pain starts from *Sphikpradesha* and radiates downwards to *Kati, Prushta, Uru, Janu, Jangha* and *Pada.*[1] The presentation of *Gridhrasi* can be correlated to Sciatica.

Statistically it is estimated that about 60% to 80% of world's population experience back pain at some time in their lives. Life time prevalence of Sciatica has been reported at 5.3% in men and 3.7% in women. It is generally accepted that 90% of acute episodes of low back pain settle, allowing return to work within 6weeks.

However, some 3-4% of the population aged between 16 and 44 years and 5-7% of the population aged between 45 and 64 years will report back problems as chronic illness.[2]

Sciatica is a symptom and not a disease. The symptom is pain, which starts in the back and radiates down one or both lower limbs.[3] It is the pain in the distribution of the Sciatic nerve or its component

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nerve roots (L5, S1). The syndrome is now accepted as being caused by lumbar disc prolapse.[4]

In the Modern medicine, the condition is managed by the administration of muscle relaxants, NSAIDS, corticosteroids, physiotherapy etc. Long term use of these medicines may cause mild to serious systemic illness. So there is a need for research of minimally invasive, cost effective protocol which can provide better efficacy.

Agnikarma is a procedure where therapeutic heat is used to nullify or reverse the morbidity.

Acharya Sushruta has mentioned *Agnikarma* superior to all other para surgical procedures. *Agnikarma* with *Panchaloha Shalaka* is already proved to be effective in the *Gridhrasi* and found approximately 65% result in previous studies[5] and is widely practiced in the hospitals but it creates a wound which affects the cosmetic appearance.

This study "A clinical study to evaluate the effect of *Sarjarasa* as *Dahanopakarana* in the pain management in *Gridhrasi* w.s.r. to sciatica" to introduce a new technique which caters to the Ayurvedic principle of *Snigdha Agnikarma* for *Uttara Uttara Dhatu* beyond the level of *Mamsa,* and keeping in view to the *Dosha* involvement in the *Samprapti* of the *Vyadhi*.

Furthermore a cost effective, easy to procure and prepare and a more cosmetically acceptable modality, for doing *Agnikarma*, i.e. with *Sarjarasa* as *Dahanopakarana* and to evaluate its efficacy.

Methodology

Preparation of *Sarjarasa* stick

Materials required

- *Sarjarasa Churna* (*Shorea robusta*)
- Wooden stick (10 cm x 3mm)
- Stove

Preparation of *Sarjarasa* sticks

- *Sarjarasa* in the form of resin was powdered.
- The powdered *Sarjarasa* was taken in a vessel and melted.
- Wooden skewers were dipped in the molten *Sarjarasa* and taken out.

Case Report

A 29 year old female patient presented to the OPD complaining of low back ache radiating to right foot since 2 weeks, associated with stiffness and pricking pain. Mode of onset was Insidious and the pain was Pulling and pricking in nature associated with numbness and stiffness. Pain Aggravates on Walking, standing for long hours and relieves on Hot fomentation.

Clinical examination

Tenderness : + at L4 L5, L5-S1 level SLR + at 30 degree (Rt side) Lassegues sign +ve.

Braggard's sign +ve

Intervention

Agnikarma procedure

- Patient was asked to lie in prone position.
- Most tender points were marked.
- The *Sarjarasa* stick was ignited with a lighter and pressed over the marked areas and was removed immediately.
- As *Paschat Karma, Madhu* and *Ghrita* was applied as mentioned in classics
- The procedure is repeated once in a week for 4 weeks.

Assessment

Table 1: Subjective Parameters

Grades	0	1	2	3	4
Sthamba	Absent	Occasional	Mild	Moderate	Severe
Toda	Absent	Occasional	Mild	Moderate	Severe
Spandana	Absent	Occasional	Mild	Moderate	Severe
Tandra	Absent	Occasional	Mild	Moderate	Severe
Gourava	Absent	Occasional	Mild	Moderate	Severe
Arocaka	Absent	Occasional	Mild	Moderate	Severe

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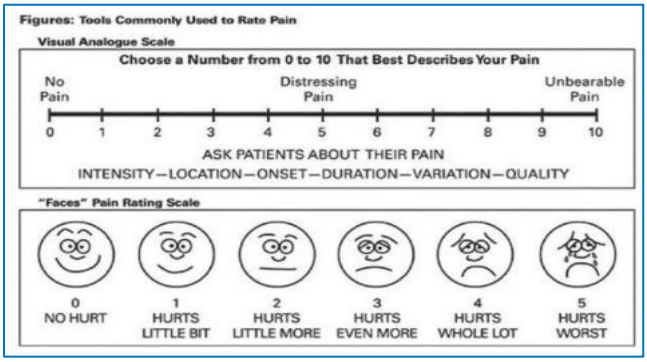
Figure 1: Pain – VAS Scale



Objective Parameters

SLR - Goniometer

Bregard's - Positive / Negative

Lasegue's - Positiove / Negative

OBSERVATIONS

General observations

- Pain and stiffness improved considerably.
- Considerable improvement was noted in the GAIT of patient
- Not time consuming procedure
- Cost effective
- Minimal discolouration happens without any scar formation.
- Heat dissipation is faster so has to be performed immediately after heating.
- Patient friendly

RESULTS

Table 2: Subjective Parameters

Parameter	Day 1 BT	Day 1 AT	Day 8 AT	Day 15 AT	Day 22 AT	F 1	F2
Sthambha	5	4	3	2	1	1	1
Toda	4	3	2	2	0	0	0
Spandana	-						
Tandra	-						
Gaurava	-						
Arocaka	-						
Pain in VAS Scale	7	6	3	3	1	1	1

Improvement in *Sthambha* - 80%

Improvement in *Toda* - 100%

Improvement in Pain - 85%

Table 3: Objective Parameters

Parameter	Day 1 BT	Day 1 AT	Day 8 AT	Day 15 AT	Day 22 AT	F 1	F2
SLR	30	30	40	50	60	60	60
Lasegues	+	+	+	+	+	+	+
Bregards	+	+	+	+	+	+	+
GAIT	Affected	Affected	Improved	Improved	Improved	Improved	Improved

DISCUSSION

Probable mode of action of *Sarjarasa*

Sarjarasa is a resin obtained from *Shala* which is already mentioned by various Acharyas as having *Vedanahara* property. Acharya Sushruta has mentioned *Agnikarma Chikitsa* in the management of *Sira*, *Snayu* or *Sandhi* or *Asthi Samprapti*. Acharya has also mentioned "*Ksoudra Guda Sneha Cha*" i.e. *Snigdha Dravyas* as *Dahanopakarana* in *Sira*, *Snayu* or *Sandhi* or *Asthi Samprapti*. It is easy to use, cost effective and patient friendly.

Probable mode of action of *Agnikarma*[6]

Effect on *Dosha*

Agnikarma is considered as best therapy for *Vata* and *Kapha Dosha* because *Agni* possesses *Ushna, Sukshma, Tikshna Guna, Aashukari Guna* which are

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opposite to *Vata* and *Kapha*. Thus removes *Srotovarodha* and increase the *Rasa-Rakta Samvahana* to the affected site.

Effect on *Dhatu*

Therapeutic heat transferred by *Agnikarma* increase the *Dhatwagni*, so metabolism at the *Dhatu* level increases which helps to digest the *Amadosha*.

Possible scientific explanations - Increased metabolism

This is in accordance with Van Hoff's statement that, heating of tissues accelerates the chemical changes i.e., metabolism. The increase in metabolism is greatest in the region where most heat is produced, which in the superficial tissues. As a result of increased metabolism there is an increased demand for oxygen and foodstuffs, and an increased output of waste products, including metabolites.

Effects of heating on nerves

Heat appears to produce definite sedative effects by means of sensory excitation. There is evidence that any sensory excitation reaching the brain simultaneously with a pain excitation, results in the pain impulse being more or less attenuated. Pain receptors of skin and motor end plate stimulated at 45˚C Pathway for pain and thermal signals run parallel and ends into same area but only stronger one can felt. Therefore complete exclusion of pain impulse by heat occurs.

Effect on temperature

The theory of thermodynamics applied upon a biological system - suggests that when thermal energy is transferred from an instrument to a tissue its internal energy increases and the heat energy gets transferred to the cells. The thermostatic center of the body immediately gets activated to distribute this localized rise in temperature throughout the body. As a result vasodilatation occurs and blood flow increases. According to Vant Hoff's principle the basal metabolism of the body increases by certain percentage for every 10 rise in body temperature. Rise in temperature induces relaxation of muscles & hence muscles spasm with inflammation and pain gets reduced. Muscles relaxes most readily when tissues are warm which in turn reduces the spasm, inflammation and pain. As blood passes through the tissues in which the rise of temperature has occurred it becomes heated and carries heat to other parts of the body. Thus by means of *Agnikarma* vasomotor center is affected along with the heat regulating center in the hypothalamus, and a generalized dilatation of the superficial blood vessels results. The vasodilation ultimately leads to increased blood flow to the site.

Gate Theory[7]

The first pain modulatory mechanism called the "Gate Control" theory was proposed by Melzack and Wall in the mid-1960s. The concept of the gate control theory is that non-painful input closes the gates to painful input, which results in prevention of the pain sensation from traveling to the CNS (i.e., non-noxious input [stimulation] suppresses pain). The theory suggests that collaterals of the large sensory fibers carrying cutaneous sensory input activate inhibitory interneurons, which inhibit (modulate) pain transmission information carried by the pain fibers. Non-noxious input suppresses pain, or sensory input "closes the gate" to noxious input. The gate theory predicts that at the spinal cord level, non-noxious stimulation will produce presynaptic inhibition on dorsal root nociceptor fibers that synapse on nociceptors spinal neurons (T), and this presynaptic inhibition will block incoming noxious information from reaching the CNS (i.e., will close the gate to incoming noxious information).

CONCLUSION

Sthambha improved by 80%, *Toda* improved completely, *Ruk* improved by 85%. SLR improved 50%, No considerable improvement was noted in Bragard's test and Lasegue's test. Gait of the patient also improved. Advantages of *Sarjarasa* are it is patient friendly, cost effective, can be easily performed with minimal scar formation compared to *Panchaloha Shalaka*. These procedures can be adopted with oral

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medicines and other external treatments mentioned in classics, for a better promising result.

Figure 2: Preparation of *Sarjarasa* sticks.

Fig: 2a

Fig: 2b

Fig: 2c

Fig: 2d

Fig: 2e

Fig: 2f

Fig: 2g

Fig: 2h

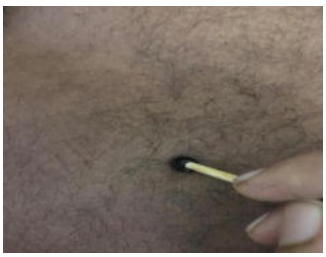

Fig: 2i

Figure 3: Improvement in Range of movements

Fig. 3a: Before Treatment

Fig. 3b: After Treatment

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