

ORIGINAL RESEARCH ARTICLE - CLINICAL STUDY

A comparative clinical study on the efficacy of *agnikarma* and *eranda taila yoga* in the management of *gridhrasi*

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ABSTRACT

The art of healing of the ailments has been known from the time immemorial. Many indigenous ways and methods have been followed for the relief of suffering of mankind since Vedas. The method of Agnikarma is prevalent in our country since many centuries. Acharya Sushruta has preached, practiced and documented the details of Agnikarma which is followed by many renowned authorities till date. With advent of modern sophisticated surgical techniques the popularity of Agnikarma is declining. Most diseases of present day are due to altered life style. Gridhrasi is one such disease which is gaining prevalence in the present scenario. This condition is a Vātavyādhi which is included under the Mahāgadas¹, which itself speaks of its devastating nature. The symptoms of Gridhrasi resemble with that of sciatic pain, which is radiating in nature along the course of the Sciatic nerve. Other clinical features also seem to be agreeing among these two conditions. Sciatica has a life time incidence rate of 13 – 40% and rare in ages below 20, at its peak in the 5th decade and reducing thereafter 2.

Various treatment modalities have been mentioned by Ācharyas for Gridhrasi. Among them Agnikarma has been mentioned as superior. Pain is the main symptom of Gridhrasi and Agnikarma helps in painful conditions. As a part of conservative management Eranda Taila Yoga available in Bharatha Bhaishajya rathnakara³ is taken for the trial in the form of internal medication (paana) and enema (basti).

Keywords : *Gridhrasi, Eranda Taila Yoga, Sciatica*

Introduction

Agnikarma is mainly indicated in Ruja pradhana, Vata and Kaphaja vyadhis. It is of 2 types viz Ruksha Agnikarma (performed with dry substances) and Snigdha Agnikarma (performed with oily/sticky substances). Pancha dhatu shalaka has been used on a regular basis for the purpose of Agnikarma irrespective of the structure involved or level of the pathology. But according to the classic, specificity of Dahanopakarana depends on the disease level concerned.

Most of the painful conditions are related to

musculoskeletal system which comprises bones, joints, tendons, ligaments etc. The Dahnopakaranas mentioned for the diseases of these locations are Snigdha dravyas such as Kshaudra, Guda, Taila, Vasa, Madhuchista etc., as they have the deep heat penetration capacity with a greater latent heat period. Sushruta has described four types of Agnikarma on the basis of shapes which depend on different location of the body. These include Valaya, Bindu, Vilekha and Pratisarana¹. Vagbhata adds three more types viz, Ardachandra, Svastika and Ashtapada.

The word 'Gridhrasi' itself suggests the gait of the patient which is similar to Gridhra (vulture) due to pain. All the Ayurvedic classics including those written in medieval period have described the aetiopathogenesis and symptomatology of Gridhrasi in concise form. Gridhrasi is considered as Shoola Pradhana Vatavyadhi. The cardinal sign and symptoms of Gridhrasi are Ruka (Pain), Toda (Pricking sensation), Stambha (Stiffness) and Muhurspandana (Involuntary Movements) in the Sphik, Kati, Uru, Janu, Jangha and Pada in order and Sakthishepan-nigraha i.e. restricted lifting of the legs. The symptoms seen in Gridhrasi can be well correlated with "Sciatica" in modern parlance.

Surprisingly, the description narrated in these classics exactly coincides to the description of 'Sciatica' including the important diagnostic test SLR (Straight Leg Raising) which is described as 'Sakthishepanigraha' by Acharyas. Sciatica is a very painful condition in which pain begins in lumbar region and radiates along the postero-lateral aspect of thigh and leg. Hence, movement of the affected leg is restricted and patient is not able to walk properly. Indeed, patients at high risk for becoming disabled often receive more diagnostic tests less focus in medical management leading to chronic condition. It must be highlighted that there is a continued increase in disability and health care consumption related to chronic pain. The huge impact on the health care and social support systems of the inordinate amount of medical care expended on chronic pain is an important public health issue. Therefore, in addition to the suffering of individual patients enormous medical and social resources are expended, and pain is costly in terms of compensation and loss of work. Various treatment modalities have been mentioned by Ācharyas for Gridhrasi. Among them Agnikarma has been mentioned as superior. Pain is the main symptom of Gridhrasi and Agnikarma helps in painful conditions. Agnikarma using Pancadhātu śalāka has been found to give good effect in this condition.

Gridhrasi being a Snāyugata vikāra use of Tapta dravās are indicated for Agnikarma according to classics. Moreover Tapta dravās are considered to have more

penetrating power than Rūkṣa instruments such as Śalāka. As a part of conservative management Eranda Taila Yoga described in Bharatha Bhaishajya Rathnakara was selected for the trial.

This Yoga is explained in the classical text especially for the disease Gridhrasi. The drug was used in the form of internal medication (paana) and enema (basti).

AIMS AND OBJECTIVES:

- ❖ To review and analyze available literature of Agnikarma explained in Ayurveda.
- ❖ To innovate an ideally suitable procedure for performing Agnikarma using Sneha.
- ❖ To compare the therapeutic effect of Agnikarma (using Sneha) and Eranda Taila Yoga (paana and basti) in Gridhrasi.
- ❖ To analyze the thermal behavior of Sneha to formulate mode of action of Agni karma.

METHODOLOGY:

CRITERIA FOR SELECTION OF PATIENT

The clinical trial was performed in patients selected from the Outpatient department Patients attending OPD and IPD of Post Graduate Department of ShalyaTantra, National Institute of Ayurveda, Madhava Vilas Hospital, Jaipur were selected for trial. During the course of selection;

- a) A separate case proforma according to the protocol were used for documentation
- b) Informed written consent from each patient was taken before including in the trial

Inclusion criteria:

- Patients with classical symptoms of Gridhrasi (sphik/kati/prishta/uru/ jangha/ paada shoola, stambha,supti) and diagnosed cases of Gridhrasi were included.
- Patients of age limit between 20 - 60 years, irrespective of sex and socio-economic status.
- Positive SLR and Lasegues sign.

Exclusion criteria:

- Patients with systemic diseases like Diabetes mellitus, Tuberculosis,
- Traumatic lesion in lumbo-sacral region
- Infective, Neoplastic conditions of spine
- Hip joint arthritis
- Pelvic pathology
- Pregnancy

Investigations:

- Blood routine
- X-ray lumbo-sacral spine AP and Lateral view
- MRI if necessary

STUDY DESIGN:

The present clinical study comprised of 120 patients. They were divided into three groups as Group-A, Group-B & Group- C

Group A: Agnikarma was done using Sneha

Group B: Eranda Taila Yoga given orally (paana) & enema (basti)

Group C: Agnikarma was done using PancaLoha śalāka.

Observational period:

The total duration of the study was 2 weeks with periodical observations done once in a week.

Follow up period:

2weeks after the completion of treatment

Assessment criteria:

Effect of therapies were evaluated by using parameters as stated below⁵⁶ with standard grading.

Procedure of Agnikarma

The procedure of Agnikarma consisted of;

Poorva Karma

Pradhaana Karma

Paschaath Karma

Poorva Karma

- ❖ Informed consent of the patient was taken.
- ❖ The patient was put on liquid diet before Agnikarma.
- ❖ For Group A sterile Sponge holding forceps, Cotton pieces, Drape, Sneha dravya , Steel dish, Borosil glass pipette, Yasti Madhu choorna, Ghrita Kumari were kept ready.
- ❖ For Group C sterile Sponge holding forceps, Cotton pieces, Drape, Panca Loha shalaka, Steel dish, Yashtimadhu choorna or Ghrita Kumari were kept ready.
- ❖ The area of Agnikarma was cleaned with antiseptic solution and draped.
- ❖ The area of maximum tenderness or pain on the spine was palpated and determined.

Pradhāna Karma

For Group A, a small amount of Eranda Taila Yoga was taken in a sterile dish, Kept over water bath and heated For Group C the Shalaka was heated directly over the heat source until red hot.

- ❖ The patient was put in prone position \
- ❖ Agnikarma was done over the spine, covering the area of maximum tenderness
- ❖ Bindu Dahana Vishesha was adopted
- ❖ Hot oil was used in Group A. The Hot Eranda taila yoga was sucked using a Borosil glass pippette, poured on the pre – determined site and wiped off after a 1 minute. The consistency of Eranda taila yoga was helpful in adopting this procedure
- ❖ **Method adopted in Clinical Practice:**

Dattura leaves are cut into pieces, fried in a pan. This Mixture is taken in Dattura leaf and wrapped. This bolus is used for Agnikarma. A coin is used to support the bolus and prevent from direct heat contact. It is more acceptable for the patient as it doesn't cause any cosmetic disturbance. This procedure is practically fruitful in Tila taila based oil preparations and principle of indirect heat method is followed.

For group C Heated Pancha Loha Shalaka was used. At

least 1/2 cm gaping was maintained between the Dagdha Stāna.

Paschat karma

Yastimadhu choorna or Ghrita kumari was applied immediately after Agnikarma.

Administration of Eranda Yoga:

Eranda Taila Yoga Paana - 5ml at bedtime with warm water for 7days

Eranda Taila Yoga Matra Basti 30ml after following dietary regimens for 7 days.

Procedure:

Patient was made to lie in left Lateral position, anal orifice was lubricated. A red rubber catheter was inserted slowly into the anal orifice; Luke warm Eranda taila yoga 30ml was pushed. Mild patting was done over the Gluteal region. Patient is made to lie in Supine position for 10min.

SUBJECTIVE CRITERIA

1. Pain: Pain visual analogue scale

0	1	2	3	4	5	6	7	8	9	10
No pain	Mild pain		Discomforting		Distressing		Horrible		Excruciating	

2. Stiffness:

No stiffness	-0
Mild stiffness	-1
Moderate stiffness	-2
Severe stiffness	-3

OBJECTIVE CRITERIA

3.Tenderness:

No tenderness	- 0
Patient says joint is tender	- 1
Patient winces	- 2
Patient winces and withdraws the effected part	- 3
Patient will not allow the joint to be touched	- 4

4. SLR test:

900 – 760	- 0
750 – 610	- 1
600 – 460	- 2
450 – 310	- 3
Below – 300	- 4

5. Lassegues sign:

Positive	- 1
Negative	- 0

6. Deep tendon Reflexes:

Ankle jerk:

Absent	-0
Normal	- 1
Diminished	- 2
Exaggerated	- 3

Knee jerk:

Absent	-0
Normal	- 1
Diminished	- 2
Exaggerated	- 3

7. Sensory impairment:

Present	- 1
Absent	- 0

8. Muscle wasting

Present	- 1
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Absent - 0
9. Gait
 Normal - 0
 Impaired - 1

Assessment of the total effect of the therapy: Assessment of the total effect of therapy was made by analyzing the data with suitable statistical tests of significance. Paired T Test and Analysis of Variance (ANNOVA TEST)

OBSERVATIONS:

Table No I: Showing the distribution of patients according to Symptomatology

Symptomatology No %		Group A		Group B		Group C		Total		
		No	%	No	%	No	%			
Pain		40	100	40	100	40	100	120	100	
Stiffness		35	87.5	32	80	30	75	97	80.8	
Tenderness		40	100	40	100	40	100	120	100	
SLR test		40	100	40	100	40	100	120	100	
Lassegue's Sign		40	100	40	100	40	100	120	100	
Sensory Impairment		35	87.5	32	80	30	75	97	80.8	
Deep Tendon Reflex	K/J	D	29	72.5	27	67.5	27	67.5	83	69.2
		A	2	5	2	5	3	7.5	7	5.8
	A/J	D	6	15	5	12.5	3	7.5	14	11.7
		A	0	0	1	2.5	2	5	3	2.5
Muscle wasting		2	5	3	7.5	5	20	10	8.3	
Gait		35	87.5	32	80	30	75	97	80.8	

RESULTS

Table No II: Showing the results of group A

Sl.	Parameter		Mean of difference	SD	SE	't' value	'P' value
1.	Pain		4.35	1.98	0.31	13.886	0.028
2.	Stiffness		0.75	0.58	0.09	8.06	<0.001
3.	Tenderness		1.20	0.51	0.08	14.69	<0.001
4.	SLR test		1.35	0.425	0.09	14.73	<0.001
5.	Lasegues sign		0.42	0.50	0.07	5.36	<0.001
6.	Sensory impairment		0.05	0.22	0.03	1.43	>0.05
7.	D e e p t e n d o n r e f l e x	Knee jerk	0.6	0.49	0.07	7.649	<0.001
		Ankle jerk	0.3	0.49	0.07	4.08	<0.001
8.	Muscle wasting						
9.	Gait		0.6	0.49	0.07	7.649	<0.001

Table No.III: Showing the results of group B

Sl.	Parameter	Mean of difference	SD	SE	't' value	'P' value	
1.	Pain	3.52	1.46	0.23	15.193	0.028	
2.	Stiffness	0.57	0.63	0.1	5.718	<0.001	
3.	Tenderness	1.07	0.61	0.09	11.04	<0.001	
4.	SLR test	1.02	0.61	0.09	11.04	<0.001	
5.	Lasegues sign	0.42	0.50	0.07	5.36	<0.001	
6.	Sensory impairment	0.04	0.49	0.07	5.09	<0.001	
7.	Deep tendon reflex	Knee jerk	0.8	0.54	0.08	9.49	<0.001
		Ankle jerk	0.2	0.46	0.07	2.72	<0.01
8.	Muscle wasting	0.05	0.22	0.03	1.43	>0.05	
9.	Gait	0.37	0.49	0.07	4.83	>0.05	

Table No. IV: Showing the results of group C

Sl.	Parameter	Mean of difference	SD	SE	't' value	'P' value	
1.	Pain	3.87	1.5	0.2	15.9	0.0018	
2.	Stiffness	0.5	0.67	0.10	0.53	<0.001	
3.	Tenderness	1.15	0.53	0.08	13.6	<0.001	
4.	SLR test	1.25	0.58	0.09	13.43	<0.001	
5.	Lasegues sign	0.55	0.5	0.07	6.90	<0.001	
6.	Sensory impairment	0.52	0.50	0.07	6.565	<0.001	
7.	Deep tendon reflex	Knee jerk	0.7	0.5	0.08	8.275	<0.001
		Ankle jerk	0.1	0.30	0.04	2.08	>0.05
8.	Muscle wasting	0.05	0.2	0.03	1.43	>0.05	
9.	Gait	0.47	0.50	0.07	5.94	<0.001	

DISCUSSION:

The result of the Group A, group B, Group C showed

- ❖ Analysis of variance within the groups and between the groups was highly significant in Pain and Sensory impairment.
- ❖ The relief in pain indicates reduced nerve irritation and hence there is positive response in relieving sensory impairment in concerned dermatomes.
- ❖ Analysis of Variance Within the groups was significant

in Stiffness, Tenderness, SLR, Lasegues sign and Gait.

- ❖ Analysis of Variance was insignificant within and between the groups in Deep tendon reflexes and Muscle wasting.
- ❖ The trial revealed that the treatment modalities incorporated were successful in relieving pain and sensory impairment which troubles the individuals suffering from Gridhrasi.

- ❖ The maximum relief in Pain has in turn showed result in reducing the symptoms such as stiffness, tenderness, Change in SLR degree, Lasegues sign. The relief of all these symptoms clinically has shown Gait improvement in maximum patients.

CONCLUSION:

- The present study entitled “A comparative clinical study on the efficacy of Agnikarma (using Sneha) and Eranda Taila Yoga (Paana and basti) in the management of Gridhrasi “showed a promising result to the patients.
- Agnikarma using sneha can be used as an alternative method to Agnikarma using Panchaloha shalaka as it produces minimum discomfort to patients.
- The non palatability of Eranda taila yoga can be better modified with preparing Gelatinous capsules and made comfortable for oral intake.
- Matra basti using Eranda yoga can be a treatment of choice as a shamana sneha. In ancient classics eranda taila proves its efficacy in palliating the symptoms of Gridhrasi.

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सारांश:

वैदिक काल से मनुष्यों की वेदनाओं के निवारण का प्रयत्न किया जाता रहा है। 'अग्निकर्म' का प्रयोग कई शताब्दियों से प्रचलित है। आचार्य सुश्रुत ने 'अग्निकर्म' का प्रयोग किया और उसे सूत्रबद्ध किया है, जिसका आधुनिक काल तक अनेक विद्वानों द्वारा इसका अनुलोमन किया जा रहा है। आधुनिक काल में विभिन्न शल्य के साधनों के प्रचलन से 'अग्निकर्म' की प्रचलिता कम होती जा रही है। आधुनिक काल की अनेक व्याधियां जीवन शैली में परिवर्तन के कारण उत्पन्न हो रही हैं। 'गृध्रसी' नामक व्याधि इन्ही कारणों से उत्पन्न होने वाले व्याधियों में एक व्याधि है। 'गृध्रसी' एक प्रकार की वातव्याधि है जोकि 'महागद' में एक है। 'गृध्रसी' रोग के लक्षण आधुनिक चिकित्सा शास्त्र के 'सियाटिका' नामक व्याधि से साम्य रखती है। इस रोग के घटित होने की दर 13-40: है। 20 वर्ष से कम आयु में यह व्याधि नहीं पायी जाती है। जीवन के पांचवें दशक में इसकी बहुलता पायी जाती है। 'गृध्रसी' रोग के लिए अनेक प्रकार के चिकित्सा साधनों का वर्णन किया गया है, जिन्में 'अग्निकर्म' को सर्वश्रेष्ठ बताया गया है। 'भरतभैषज्यरत्नाकर' में आभ्यान्तर प्रयोग व वस्ति के लिए 'एरण्ड तैल योग' का वर्णन किया गया है। अतः अग्निकर्म व 'एरण्ड तैल योग' को शोध कार्य के लिए चुना गया है।