



**AN OBSERVATIONAL STUDY TO EVALUATE THE EFFECT OF AGNIKARMA
FOLLOWED BY TIKTAKSHEERA BASTI IN THE MANAGEMENT OF
VATAKAPHAJA GRIDHRASI VIS- A VISSCIATICA**

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ABSTRACT

Sciatica refers to the low back pain radiating to lower limb in a dermatomal distribution, Sciatica is a common cause of pain and disability; it is more persistent and severe than low back pain. Its prevalence from different studies ranged from 1.2% to 43%. Physical activity at work and occupational work load, such as lifting, work related twisting of the trunk, occupational exposure to whole body vibration for example machine operators, motor vehicle drivers have also been suggested to be risk factors for Sciatica. Obesity has previously been linked to Sciatica. All these factors create pressure on spinal cord producing low back ache and radiating pain. Signs and symptoms of Sciatica show close resemblance with Gridhrasi. As per Acharya Charaka, while explaining about prime line of treatment for Asthi pradoshaja vikara Tikta ksheera basti has been mentioned. In Gridhrasi as there is involvement of Asthi this basti will yeild better results and while explaining Chikitsa sutra for Gridhrasi by Acharya Charaka, Agnikarma has been mentioned as the line of treatment. A minimum of 10 subjects who fulfilled the diagnostic and inclusion criteria were subjected to the intervention. The overall results in the study revealed statistically highly significant result.

KEYWORDS: Gridhrasi, Sciatica, Tiktaksheera basti.

INTRODUCTION

Sciatica is a debilitating condition in which the patient experiences pain and / or parenthesis in the distribution of the sciatic nerve or an associated lumbosacral nerve root. Often, a common mistake referring to any low back pain or radicular pain as sciatica. Sciatica prevalence from different studies ranged from 1.2% to 43%. It is a relatively common musculoskeletal disorder with an annual incidence ranging from 1 – 5%. It is the cause of high health related costs to society and a high disability burden to individuals suffering from Sciatica previous studies have found the associations between Occupational factors and herniated lumbar disc. Specific strains such as Lifting and carrying heavy objects, improper trunk postures, prolonged standing, prolonged sitting, whole body vibration and constantly repeated series of movements are the risk factors for Sciatica. Usual onset of disease is between 40 to 50 years of age. The Classical feature is aching type of pain in the buttock and paraesthesia's radiating into the posterior

lateral thigh and leg. There may be motor and sensory deficits in the lower limb depending on which the root is involved.^[1]

Gridhrasi is one among the Vata Nanatmaja Vyadhi^[2] the name itself indicates change of gait shown in the patients due to extreme pain just like Gridra, this disease not only inflicts pain but also causes difficulty in walking. Such presentation was common in olden period and ancient science of life named it as Gridhrasi Roga. It is considered as Shoola Pradhan Vata Vyadhi. Many researches were conducted on this disease, but still the complete cure of this is mirage. Gridhrasi indicates the typical gait that resembles of a bird "Gridhra" i.e. vulture, which is often seen in patients of Gridhrasi Roga. The cardinal clinical features of Gridhrasi Roga are –Ruka (Pain), Toda (Pricking Sensation), Stambha (Stiffness), Muhurspandan in the Sphik – Kati – Uru – Janu – Jangha Pada in the order Sakthikshepan – Nigrah i.e. restricted lifting of lower limb. In Kaphanubandh Tandra, Arochak

and Gaurav are also present.^[3] The clinical features seen in Gridhrasi Roga can be well correlated with Sciatica of modern medicine. Sciatica is very painful condition, in which pain begins in lumbar region and radiate along the postero-lateral aspect of thigh and leg. Hence movement of affected lower limb is restricted and patient is not able to walk properly.

As the condition is a Vata Vyadhi as well as Pakvashaya is the Sthana for Vata Dosha, henceforth Basti Karma is main line of Chikitsa as Basti Karma has Anekakarmakarakatvat action like Samshodhana, Samshamana, acts on the Tridoshas as well as Samsarga and Sannipataja Doshas and is considered as Ardha as well as Sarva Chikitsa.^[4] As per Acharya Charaka, while explaining about prime line of treatment for Asthi pradoshaja vikara, Tikta ksheera basti has been mentioned.^[5] In Gridhrasi as there is involvement of Asthi this basti will yield better results and while explaining Chikitsa sutra for Gridhrasi by Acharya Charaka, Agnikarma has been mentioned as one the line of treatment for curing acute conditions.^[6] Hence by considering the above facts study has been planned to evaluate the efficacy of Agnikarma and Tikta ksheera basti in Gridhrasi.

AIMS AND OBJECTIVES

To evaluate the efficacy of Agnikarma followed by Tikta ksheera basti in the management of Gridhrasi vis-a-vis Sciatica.

MATERIALS AND METHOD SOURCE OF DATA

Total 10 Subjects with clinical features of Gridhrasi vis-a-vis Sciatica coming under the inclusion criteria approaching the out-patient and in-patient department of Sri Kalabyraveshwara Ayurvedic Medical College, Hospital & Research center, Bengaluru were selected for the study.

Diagnostic criteria

- Subjects presenting with the Lakshanas of Gridhrasi^[7]
- Subjects presenting with the signs and symptoms of Gridhrasi^[8]
- Patients with positive SLR test.

Inclusion criteria

- Patients of either gender in between the age group of 18 to 70 years.
- Patients presenting with the Lakshanas of Vatakapahaja Gridhrasi.

Exclusion Criteria

- Any systemic illness that interfere with the course of intervention
- Pregnant and lactating women

Study design

- Single arm, active, open label clinical study

Intervention

Subjects were administered Agni karma followed by Tiktaksheera basti in Yoga bastipattern.

1. Agni karma

Poorva Karma

- Patient made to lie down in supine position.
- Subjected for Sthanika Abhyanga with Moorchita Taila.
- Leaves of Eranda, Dhatura was taken and cut into small pieces, fried in moorchitaitaila.
- In Prone position after Abhyanga the exact sight of Agni karma should be marked and cleaned.

Pradhana Karma

Fried leaves which are hot were kept inside the Eranda leaves and moderate pressure was given at the tender points.

Paschat Karma

- Patient in the prone position, madhu was applied whole over the lower limb.
- Warm water was given for the patient to drink.
- Patient was asked to lie in prone position for 15 minutes.

Tikta ksheera Basti

a. Method of Preparation of Tiktaksheera basti:

Madhu 60 ml was taken in *Khalwa* and 10 grams of *Saindhava Lavana* was added to it & continuous churning was done to make a homogeneous mixture, to that homogeneous mixture – 80 ml of *Guggulu tiktaka ghruta* was added slowly and stirring was continued until a uniform consistency was attained. Later 30 grams of *Rasna Kalka churna* was taken and lukewarm water is added and made into semisolid consistency and this was added to the above mixture, *Kwatha* made out of *Yashtimadhu ksheerapaka*- 500ml was filtered through a fine sieve then added slowly and part by part for proper mixing.

b. Preparation of patient (*Athura Siddatha*)

Abhyanga – Sthanika Abhyanga was administered with *Moorchita tila taila* followed by *Sthanika Nadi Sweda* to *Shroni, Kati, Vankshana, Pakwashaya Pradesha*. *Swedana – Nadi Sweda* with *Ushna Jala*. *Anuvasana Basti – Given after Laghu Ahara Sevana, Tiktaksheera basti – Given in empty Stomach.*

Pradhana Karma

- Patient is asked to lie in left lateral position.
- Anuvasana and Niruha basti are given alternately as per Yoga Bastipattern shown in table.

Table 1: Showing the pattern of Yoga Basti.

Day	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th
Basti	A	N	A	N	A	N	A	A

1. *Anuvasana Basti – Guggulu tiktaka ghruta – 80 ml*

(After consuming Laghu aahara)

2. **Niruha Basti** – Tiktaksheera basti (On empty stomach at 7am)

Table 2: Showing Niruha Basti Ingredients.

Madhu	60 ml
Saindhava Lavana	10 gms
Guggulu Tiktaka Ghruta	80 ml
Rasna Kalka	30 gms
Yashtimadhu ksheera paka	500 ml

Paschat Karma

Anuvasana Basti: Patients were made to lie down in supine position for 100 Matrakala, patting of buttocks, raising the legs (3 times each) was performed in order to retain sneha inside for a longer period.

Niruha Basti: After this the patient was asked to lie in a comfortable position on the droni with his body in raised position by means of pillow in such a way that the Veerya of the Basti may spread throughout the body.

Assessment criteria

Assessment was done on BT (Before treatment) & AT (After treatment) Stamba (Stiffness)

- ✚ No Stiffness – 0
- ✚ Mild Stiffness – 1
- ✚ Moderate Stiffness – 2
- ✚ Severe Stiffness - 3

Ruk (Pain)

- ✚ No Pain – 0
- ✚ Mild Pain – 1
- ✚ Moderate Pain – 2
- ✚ Severe Pain – 3

Toda (Pricking Sensation)

- ✚ No pricking sensation – 0
- ✚ Mild pricking sensation – 1
- ✚ Moderate pricking sensation – 2
- ✚ Severe pricking sensations – 3

Ghrunate (Catch)

- ✚ No Catch – 0
- ✚ Mild Catch – 1
- ✚ Moderate Catch – 2
- ✚ Severe Catch – 3

Muhuspandana (twitching)

- ✚ No Twitching – 0
- ✚ Mild Twitching – 1
- ✚ Moderate Twitching – 2
- ✚ Severe Twitching – 3

Tandra (Drowsiness)

- ✚ No drowsiness – 0
- ✚ Mild drowsiness – 1
- ✚ Moderate drowsiness – 2

- ✚ Severe drowsiness – 3

Gourava (Heaviness)

- ✚ No Heaviness – 0
- ✚ Occasional heaviness but does routine work – 1
- ✚ Persistent heaviness but continues routine work – 2
- ✚ Persistent heaviness which hampers usual work – 3
- ✚ Unable to carry out routine work due to heaviness – 4

Aruchi

- ✚ Very little desire towards food – 0
- ✚ Desire for food little late than normal time – 1
- ✚ Eating timely without much desire – 2
- ✚ Normal desire for food – 3

OBSERVATIONS

Distribution of subjects based on Age

In the present study, 3(30%) Patients belonged to the age group of 21-30 years, 3(30%) patients belonged to the age group of 31 – 40 years, 3(30%) belonged to the age group 41 –50 years.

Distribution of subjects based on Gender

In the present study 6(60%) patients were males and 4(40%) patients were females respectively.

Distribution of subjects based on Occupation

In the present study, 2(20%) were Tailors, 4(40%) were Drivers and 4(40%) were Homemakers.

Distribution of patients based on the low back ache and radiation of pain to the affected limb

In the present study all 10(100%), patients had low back pain, 6(60%) patient had low back pain radiating to right lower limb, 4(40%) patients had low back pain radiating to left lower limb.

Statistical Analysis

The assessment was done before treatment (BT) and after treatment (AT) and parameters like Stamba, Ruk, Toda, Ghrunate, Muhuspandana, Tandra, Gaurava and Aruchi were subjected to Wilcoxon Signed Rank Test.

Interpretation	P Value
Insignificant	>0.05
Significant	<0.05
Highly S2 insignificant	<0.01, <0.001

RESULTS

BT-AT	Ranks		MeanRank	Sum ofRanks	Z Value	P Value	Remarks
Sthamba	NR	10	5.50	55	-2.87	<0.05	S
	PR	0					
	Ties	0					
Rukh	NR	10	5.50	55	-2.89	<0.05	S
	PR	0					
	Ties	0					
Toda	NR	10	5.50	55	-2.89	<0.05	S
	PR	0					
	Ties	0					
Ghrunate	NR	10	5.50	55	-2.97	<0.05	S
	PR	0					
	Ties	0					
Muhuspandana	NR	10	5.50	55	-2.87	<0.05	S
	PR	0					
	Ties	0					
Tandra	NR	8	4.50	36	-2.71	>0.05	NS
	PR	0					
	Ties	2					
Gourava	NR	10	5.50	55	-2.87	<0.05	S
	PR	0					
	Ties	0					
Aruchi	NR	9	5.00	45	-2.73	>0.05	NS
	TR	0					
	Ties	1					

In the present study, the Wilcoxon signed rank test on Sthamba, Ruk, Toda, Muhuspandana, Ghrunate and Gourava revealed statistically significant result. And Tandra and Aruchi revealed statistically insignificant result.

DISCUSSION ON AGNI KARMA

The actual mechanism of action of Agnikarma still remains as an enigma to the medical community. Several theories can be adopted to explain these mechanisms but their action varies according to the condition. As how it gives result on acute conditions.

Effect on dosha

Agnikarma is considered as best therapy for vata and kapha dosha because Agni possesses ushna, tikshna, sukshma and aashukari guna which are opposite to vata and kapha. Thus removes srotoavarodha and increase the rasa – rakta samvahana to the affected site.

Discussion on Tikta ksheera basti

Gridhrasi is Vatananatmaja Vyadhi; Vata dosha is mainly responsible for the state of normalcy as well as is a cause for vitiation of two other doshas. As mentioned by Charaka acharya, intake /indulge in any specific causative factors such as gramyahara etc can result in Shithalibhavanti mamsani, Vimuchyate sandhayaha. Vidahyathe raktam, Vishyandatte cha analpamedaha. In such conditions the marrow does not remain intact inside the hollow part of bones⁹.

And in other context Chakrapani while explaining Stambhana Upakrama has mentioned “Gatimantamiti pravyaktagatimantam” “Gatimanta prati stambhakasya vardhakatvaath^[10] i.e. the characteristic feature of Stambhana is that it surely prevents the out flow of substances irrespective of the nature of their mobility. So in this context we can take Shamana of Vedana vata vega by stambhana chikitsa where we adopted Tikta Ksheera Basti. And as Basti is Vataharanam Shreshtam. Vata dosha predominantly present in Asthi and Sandhi. Tikta rasa helps in depletion of moisture, fat, muscle fat, bone marrow, lymph etc and it also has tendency to go towards Asthidhatu after assimilation of Akasha and Vayu Mahabhoota. In this context Ksheera is used as Basti dravya which is prepared with Tikta rasa dravyas which are effective in Asthirogas. Ksheera has snigdha and Madhura properties hence it does vata dosha shaman in the body. Considering all these factors it was decided to evaluate the efficacy of Tiktaksheera basti in Gridhrasi.

Probable mode of action of Tikta ksheera Basti

Vata dosha is predominantly in Asthi dhatu and joints by Ashraya – ashrayi phenomenon. Ksheera used as Basti dravyas in the present clinical trial was prepared with Tikta rasa dominant drugs which are said to be effective in Asthigata and Majjagata rogas. It was presumed that Ksheera and Tikta dravyas when used together in the form of Ksheera Basti will act on the site of Gridhrasi i.e joints and all will be in a position to breakdown chain of reactions occurring in the form of samprapti at one hand

and arrest the prognosis of the diseases on the other hand in addition of producing subjective improvement in patients.

Tikta ksheera basti dravyas when introduced through rectum reach up to the level of Nabhi, Kati, Parshva and Udara pradesha (Pakwashaya) and produces cleansing effect. Autonomic nervous system controls and regulates various organs and viscera of the body. Tikta ksheera basti activates ANS and thus performs the act of exertion of vitiated doshas, malas and flatus.

It is possible that Basti dravya may produce local effect by irritating and stimulating the nerve endings of colon and rectum. It is expected that this activation of nerve endings will initiate the reflex of expelling vitiated Doshas from the rectum without absorption of the basti dravyas.

It is expected that Basti dravyas will act by its veerya which spreads throughout the body with the help of Apana, Udana and Vyana Vayu when administered through rectum. Basti dravyas contains Madhu, Saindhava and Ghrita. Madhu contains sucrose and many more enzymes. Honey is an aqueous solution of glucose, fructose, sucrose, formic acid and other constituents. Saindhava contains NaCl and other ions which fulfill the requirement for generating action potentially by which ion exchange takes place through the semi permeable membrane of the intestine. This exchange of ions may help in taking out vitiated doshas mainly vayu from the body. Ghrita used in Basti dravya is basically Snigdha guna pradhana which can control vitiated vata dosha due to its properties.

Conclusion

The clinical study was undertaken to study the effect of Tiktaksheera basti in the management of Vatakaphaja Gridhrasi. Present study has proved to be effective in reducing the Lakshanas of Vatakaphaja Gridhrasi and has shown good results in most of the assessment parameters taken into consideration. Hence it can be taken up as better choice treatment in the management of Vatakaphaja Gridhrasi.

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