

## A CLINICAL STUDY TO EVALUATE THE SADYO SHOOLAHARA EFFECTIVENESS OF LAGHUPANCHAMoola KASHAYA WITH TRIVRUTH CHOORNAM IN GRIDHRASI (SCIATICA)

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### ABSTRACT

*Gridhrasi* is one among *Vataja nanatmaja Vikara* characterised by *Sthabdhata, Ruk, Toda* which radiates from buttock region, lumbar region, thigh, knee, calf muscles and legs. *Gridhrasi* is of two types viz *Vataja* and *Vata Kaphaja Gridhrasi*. *Vataja Gridhrasi* is characterized by severe pain and *Vata Kaphaja Gridhrasi* has symptoms viz *Tandra, Gaurava* and *Aruchi*. The signs and symptoms of *Gridhrasi* can be correlated to sciatica of modern medicine. Sciatica is characterized by constant aching pain felt in lumbar region which may radiate to the buttock, thigh, calf and foot and pain is experienced along the sciatic nerve pathway. It was a clinical study with a pre and post design in 30 patients who were diagnosed with *Gridhrasi*. After examination *Laghupanchamoola Kashaya* with *trivruth choornam* was given for 7 days. The assessment criteria were noted before and after treatment and on follow-up. Among the subjective and objective parameters, in the Overall effect of treatment in *gridhrasi*, out of 30 patients in this study, 15 patients (50%) got Mild effectiveness in shoola, and 15 patients (50%) got Moder-

ate effectiveness in shoola. The overall effect of the treatment was 30.19%. Hence it can be concluded that *Laghupanchamoola Kashaya* with *trivruth choornam* is having mild improvement on symptoms of *Gridhrasi* and shows the long-lasting result.

**Keywords:** *Gridhrasi*, *Sciatica*, *Laghupanchamoola Kashaya*, *Trivruth choornam*

## INTRODUCTION

*Gridhrasi* is one among *Vataja Nanatmaja Vikara*<sup>1</sup> characterized by pain that radiates along *kati*, *prushta* (hip), *uru* (thigh), *janu* (knee), *jangha& pada* (leg and foot)<sup>2</sup>. It is classified as *Vataja* and *Vata Kaphaja*<sup>3,4,5</sup> variety based on the dominance of a particular *Dosha*<sup>6,7,8</sup>. In modern parlance, *Gridhrasi* looks similar to *Sciatica*. *Sciatica* is a term that refers to pain that radiates along the sciatic nerve and is typically felt in the buttock, down the leg, and possibly to foot<sup>9</sup>. *Sciatica* is a relatively common condition with a lifetime incidence varying from 13% to 40%<sup>10</sup>. The prevalence of sciatic symptoms reported in the literature varies considerably ranging from 1.6% in the general population to 43% in a selected working population. Although the prognosis is good in most patients, a substantial proportion (up to 30%) continues to have pain for 1 year or longer. In the Modern system of medicine, administration of NSAIDS (Non-Steroidal Anti-Inflammatory Drugs), analgesics, muscle relaxants etc; gives temporary relief and their long-term use can produce toxic effects to the different systems of the body. As the last resort, surgical procedures are carried out, which are quite expensive and need hospitalization and also cause adverse effects like, bowel and bladder incontinence. Today there is a need to find a drug to manage acute pain which is cost-effective, easily available and has excellent results with zero side effects. Here in this study *Laghupanchamoola*<sup>11</sup> (*Brihati* – *Solanum Indicum*, *Kantakari* – *Solanum xanthocarpum*, *Shalparni* – *Desmodium gangeticum*, *Prishnaparni* – *Uraria picta*, *Gokshura* – *Tribulus Terrestris*) was utilized in the form of *kwatha* along with *trivruth choorna* (*Operculina turpethum*) as *prakshepaka dravya* to find out its efficacy. The properties are *kashaya- tikta- madhura* in *rasa* as having *Vataghna*, *Pittaghna*, *Brimhana* and *Bala vardhana karma*. In

both *Ashtanga Sangraha* and *Ashtanga Hridaya*, the five drugs of *Laghupanchamoola* are grouped under *Hrisvapanchamoola* and its properties are *Madhura Rasa*, *Madhura Vipaka*, neither *Atishita* nor *Atiushna* and *Sarva doshahara* by its action i.e., neither too hot nor too cold in potency and pacify all the three *doshas*.

### AIM AND OBJECTIVES

To evaluate the effect of *Laghupanchamoola kashaya* with *Trivruth choornam* as *prakshepa dravya* in the management of *Sadyoshoola in Gridhrasi* (*Sciatica*).

### METHODOLOGY

#### Method of collection of data

A minimum of 30 patients fulfilling the diagnostic and inclusion criteria of either gender was selected for the clinical study.

#### Diagnostic criteria:

The patient who presented with signs and symptoms of *Gridhrasi*, both *vataja* and *vatakaphaja*

- *Ruk* (Pain) on *Sphik*, *Kati*, *Prishtha*, *Uru*, *Janu*, *Jangha* and *Pada*

Associated with one or multiplicity of these:

- *Toda* (Pricking pain)
- Straight Leg Raising Test positive

#### Inclusion criteria:

- Patients who fulfilled the diagnostic criteria.
- Patients of age limit between 20 - 70 years, irrespective of gender and socio-economic status

#### Exclusion criteria:

- Patients with systemic diseases
- Traumatic lesion in lumbo-sacral region
- Infective, Neoplastic conditions of the spine
- Pregnancy and lactation

## PROCEDURE AND DESIGN OF THE STUDY

### Plan of treatment

Included patients were treated as follows:

*Laghupanchamoola kwatha* with two divided doses of 48 ml with 6 gm of *trivruth choornam* each before food in the morning & evening for 7 days.

### Study duration

The total duration of the study was 7 days of active intervention with periodical observations done once in 4 days.

### Assessment criteria

#### Subjective Parameters

- *Ruk* (pain)
- *Toda* (pricking pain)

#### Objective Parameters

- Straight Leg Raising Test
- VAS scale (Visual Analogue Scale)

#### Investigations:

- Blood Routine Examination (Complete Blood Count, Serum Creatinine, Serum Uric acid, RA factor, Random Blood Sugar).
- Urine routine examination (Albumin, sugar, Microscopic).
- Radiological examination of the lumbo sacral spine in anterior-posterior and lateral position.

- MRI.

### Assessment of results

- Statistical analysis was done using SPSS package, version 22
- All the qualitative variables were summarized using frequency and percentages
- The quantitative variables were summarized using mean and standard deviation, median and interquartile range (Q3, Q1)
- Data were analyzed using normal distribution then performing parametric and non-parametric tests
- Since all subjective variables were qualitative data, the assessment was done by paired t-test.

The corresponding p-value was noted and obtained results were interpreted as follows:

- For p value > 0.05 – interpreted as no significant.
- For p value < 0.05 – interpreted as significant.

## OBSERVATIONS AND RESULTS

The observations give a detailed descriptive statistical analysis about all the 30 patients suffering from *Gridhrasi* according to their Age, Sex, Religion, Education, Socioeconomic status, Marital status, Occupation, Duration of illness, Ahara, *Prakrithi*.

## RESULTS

### Statistical analysis of Subjective and Objective parameters

Group	Mean score				%	S.D (±)	S.E (±)	t value	p-value
	BT			BT-AT					
<i>Ruk</i>	5.97	AT	4.83	1.14	18.99	0.776	0.144	3.43	<0.05
		AF	3.83	2.14	35.75	1.042	0.193	5.92	<0.05
<i>Toda</i>	1.77	AT	1.37	0.40	22.64	0.675	0.125	1.60	<0.05
		AF	1.00	0.77	43.40	0.728	0.135	3.16	<0.05
SLR Active Right Leg	2.20	AT	1.80	0.40	18.18	0.563	0.105	1.71	<0.05
		AF	1.70	0.50	22.73	0.572	0.106	2.20	<0.05
SLR Active Left Leg	1.63	AT	1.57	0.03	4.08	0.254	0.047	0.32	>0.05
		AF	1.40	0.23	14.29	0.504	0.094	1.18	>0.05
SLR Passive Right Leg	2.07	AT	1.73	0.34	16.13	0.547	0.102	1.56	<0.05
		AF	1.50	0.57	27.42	0.626	0.116	2.81	<0.05
SLR Passive Left Leg	1.60	AT	1.47	0.13	8.33	0.346	0.064	0.69	>0.05
		AF	1.27	0.33	20.83	0.547	0.102	1.96	<0.05

## The overall effect of treatment

OVERALL EFFECT OF TREATMENT		
Grading	Relief in Percentage	Relief in Patients
No Improvement	0%	0
Mild Improvement	1-30 %	15
Moderate Improvement	31 – 60%	15
Marked Improvement	61 – 99 %	0
Complete Remission	100%	0

In the Overall effect of treatment in *gridhrasi*, out of 30 patients in this study, 15 patients (50%) got Mild effectiveness in shoola, and 15 patients (50%) got Moderate effectiveness in shoola. The overall effect of the treatment is 30.19%.

## DISCUSSION

### Discussion on Disease

*Gridhrasi* was known since the *Samhita kala* which is caused due to the vitiation of *Vatadosha*. The causes of *Gridhrasi* are not described in the Classics, but the factors about *Vatavyadhi* are the *nidanas*.

*Rukshaaaharasevana*, *Vegadharana*, *Atiyaanadi viharas*, *Agantuja* and *shokadi manasika hetus* are responsible for the provocation of *Vatadosha* which leads to *Vatavyadhi* like *Gridhrasi*. Among the 5 types of *vata*, *Apana vata* and *Vyana vata* play an important role in the causation of disease. The vitiated *vata* afflicts the *snayu* and *kandara* resulting in difficulty in walking and restricted movement of the spine. Occasionally *Kaphaanubandhatva* may be seen with additional symptoms of *tandra*, *gaurava* and *aruchi*.

Sciatica or Sciatica Syndrome - a condition described in modern medicine resembles *Gridhrasi*. In Sciatica, there is pain along with the distribution of the Sciatic nerve which begins in the lower back and radiates through the posterior aspect of the thigh and calf and to the outer border of the foot. This illness is named so because of its complexing symptoms as well as etiological factors with numbness and paraneesthesia in lower extremities favours the diagnosis. Herniation and degenerative changes in the disc are the most common causes. There is often a history of trauma as twisting of the spine lifting heavy weights or expo-

sure to cold. The disability caused by the disease hampers day to day activity of the patients and make the patient crippled.

There is no need to state that modern medical treatment has its limitation in managing this type of disease. Modern medical treatment is either conservative or surgical and is highly symptomatic and with troublesome side effects. This suggests a special need for ayurvedic management for this type of condition.

For all *Vatavyadhis*, the principal line of treatment is *Snehana*, *Swedana* and *Mrudushodhana*. *Snayu* and *Rakta* are involved as *Dushya*. *Kandara* of *parshni* and *pratyanguli* have been stated as *adhishtana* of disease *Gridhrasi*. *Agni karma* and *Siravyadha* are the chief lines of treatment. *Mrudu shodhana* in the form of *Basti* forms the major treatment of *Gridhrasi*. The *Shamanaushadhis* are also having some role in the management of symptoms of *Gridhrasi*.

### DISCUSSION ON RESULTS:

In the Overall effect of treatment in *Gridhrasi*, out of 30 patients in this study, 15 patients (50%) got Mild Improvement and 15 patients (50%) got Moderate Improvement. The overall effect of the treatment was 30.19%. The obtained results were to be considered as insignificant if  $P > 0.05$ , significant if  $P < 0.05$ .

### Probable mode of action of *Bruhatyadi*

#### *kashayam* and *Trivruth choornam*:

The ingredients of *Bruhatyadi kashaya* are *Brihati*, *Kantakari*, *Gokshura*, *Shalaparni* and *Prisnaparni* all these drugs are *ushnavirya pradhana* which is the opposite quality of *vata* and at the same time due to *tikta* rasa suppresses *kapha*. *Trivruth* due to its *ruksha* and *tikshna guna* pacifies the *vata*, at the same time due to its *katu* rasa it will suppress the *kapha*. Thus, *Bruhatyadi kashaya* with *trivruth choorna* has va-

takaphahara karma and also due to its *deepana pachana kriya* helps remove the *ama* and thereby remove the *srotoavarodha* and thus effective in treating both *vataja* and *vataka phaja* type of *Gridhrasi*.

## CONCLUSION

At the end of the study, the following conclusions were drawn based on observations made, results achieved and after thorough discussions in the present context, *Laghupanchamoola kwatha* with *Trivruth choornam* was having more effect on symptoms of *Gridhrasi* and shows the long-lasting result. In the Overall effect of treatment in *gridhrasi*, out of 30 patients in this study, 15 patients (50%) got Mild effectiveness in shoola, and 15 patients (50%) got Moderate effectiveness in shoola. The overall effect of the treatment was 30.19%. Thus, the alternate hypothesis H1 is accepted i.e. There was a significant effect of *Laghupanchamoola kashaya* with *Trivruth choornam* as *prakshepa dravya* in the management of *Sadyoshoola in Gridhrasi (sciatica)*.

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