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## Management of *Gridhrasi* with *Shiva Guggulu*, *Rasna Guggula* with *Kati Basti*- A Comparative Study

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### ABSTRACT

According to Ayurveda, *Gridhrasi* is one of the diseases caused by vitiation of *vata*. Sometimes even *kapha* vitiation along with *vata* (*vata kapha*) also causes *Gridhrasi*. The symptoms seen in *Gridhrasi* can be well correlated with sciatica in modern terminology. Sciatica is a very painful condition in which pain begins in lumbar region and radiates along the posteriolateral aspect of thigh and leg. It is defined as a condition where there is intense pain felt all along the course of sciatic nerve, either unilaterally or bilaterally, often associated with other symptoms like inability to walk, numbness of the affected limb etc. Since there is close resemblance to the gait of a vulture, *Gridhrasi* term might have been given to this disease condition. In Ayurveda there has been detailed description about the treatment of *vata vyadhi* but detailed description about the treatment of *gridhrasi* has been mentioned by few experts. So the present study has been taken to compare the efficacy of *Shivaguggulu* and *Rasnaguggulu* with *Katibasti* in the management of *Gridhrasi*.

### KEYWORDS

*Gridhrasi*, *Shiva guggula*, *Rasna guggulu*



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## INTRODUCTION

The disorders affecting the locomotor system is most common in the present era. Due to modernization and advancement of busy professional and social life, more and more young and older population are falling prey to many 'vatika disorders' like lumbago sciatica syndrome. It is due to fast driving, heavy work schedule, night duties, lack of exercise, fast food habits etc.

*Gridhrasi* which is enumerated among the 'Nanathmaja vyadhi of vata' in classics is high on the list<sup>1</sup>. This apparently minor neuro muscular disorder is posing a serious threat to the quality of life of the most productive group of population in today's India. Busy life style, improper sitting postures, continuous and over exertion, jerking movements during traveling, and sports increasing body weight, mental stress, unwholesome diet etc, all are leading to a fertile environment for the occurrence of *Gridhrasi*<sup>2</sup>. It is clinically characterized by intense low backache felt all along the course of the sciatic nerve either unilaterally or bilaterally<sup>3</sup>.

Despite tremendous advancement in the field of medicine, the management of sciatica still is on the palliative lines i.e., administration of analgesics. In contrast Ayurvedic medicines not only relieve pain but also eliminate the root cause of the

disease and treat the person as a whole. In addition to this toxic effects with the routine herbal medicines are significantly less when compared to modern analgesics.

Hence the movement of affected leg is restricted and the patient is notable to walk properly. According to *Susrutha, Kandara* i.e, ligament of heel and toes are affected by vitiated vata in *Ghridhrasi*<sup>4</sup>.

Since it is a *Vata pradhana vatavyadhi* its treatment chiefly includes the administration of substance that possess *Snigdha, Ushnadi gunas* and *Vedana sthapana, Amapachaka, Anulomana, Nadibalyakarmas* either externally or internally. So looking all those things here another attempt has been taken as with *Shiva Guggulu* and *Rasna Guggulu* with *Kativasti*.

## OBJECTIVES

A comparative study to assess the efficacy of Rana guggulu and Shiva guggula with Kati Vasti in the management of Gridhrasi

## MATERIALS AND METHODS

For the present study has been carried out on the 40 patients selected from the O.P.D and I.P.D of A.L.N. Rao Memorial Ayurvedic College Hospital, Koppa. The criteria of selection of patients were based on the classical signs and symptoms



mentioned in the text and confirmed by S.L.R test. The patients of congenital deformity, chronic stage of *Gridhrasi* and with the diseases of other systemic involvement as well as those with the *Upadravas* of the disease were not considered for the present study.

20 patients of *Ghridhrasi* were selected for the Trial group I and were given *Shiva Guggulu* (1gm twice daily before food with hot water) for 30 days and *Kativasthi* with *Ksheerabala tailam* for first 7 days. Total duration of treatment was 30 days. Response to the treatment was documented in the specially prepared case sheet proforma and was analyzed as per the grading given for various complaints.

20 patients were selected for Trial group II and were given *Rasna Guggulu* (1gm twice daily before food with hot water) for 30 days and *Kativasthi* with *Ksheerabala tailam* for first 7 days. Total duration of treatment was 30 days. The condition of the patients were also assessed after a follow up period of 30 days to analyze the long lasting effect of both the therapies.

The main criteria for the assessment of the results were the improvement in the symptoms of the disease and SLR test values after 30 days of treatment as well as follow up period. The total effects of the therapy were also assessed in terms of complete relief, marked improvement,

moderate improvement, mild improvement and unchanged

## DISCUSSION

**Age incidence:** The maximum number of patients were obtained in the age group of 30-40 years i.e., 40%, in the age group 40-50 years 27.50% of patients. In the age group of 50-60 years 20.00% of patients and minimum number of patients were in the age group of 20-30 years i.e., 12.50%. These findings clearly show that the age group of 40-50 is mostly affected.

1) **Sex incidence:** In the present study 57.50% were male and 42.50% were female. This may be due to demographic facts.

2) **Religious incidence:** 70% of the selected patients for the study were Hindus as the area of the study was a Hindu dominated area and followed by 22.50% Christians and 10.00% Muslims.

3) **Occupational Incidence:** 37.50% of patients were in house wife category. 27.50% were labour 22.50% were business men and 12.50% were unemployed.

4) **Marital Incidence:** 62.50% of the patients selected for the study were married and the majority of the patients selected belonged to the age group of 30-40, 40-50, and 50-60 years. 37.50% of the unmarried were also sufferers of the disease.



5) Socio Economic Incidence: Majority of the patients were from the middle class families i.e., 50%. 37.50% were from the lower class and only 12.50% were from the upper class families. Middle class people were found to be more affected and it may be due to continuous strenuous work.

6) Family History:- 82.50% of the cases selected for the study had no family history of the disease and 17.50% of the cases had positive family history. This clearly shows that the disease has no genetic predisposition.

7) Habit wise Incidence:- 50% of the patients had the habit of Tea, Coffee followed by alcoholics 32.50%, 10.00% were in the habit of Cigarette or Beedi smoking and only 7.5% had the habit of Tobacco chewing. All these habits decrease the *Vyadhikshamata* and vitiate *vata*.

9) Dietary Incidence:- 72.50% of the patients were in mixed category while only 27.50% of the patients were Vegetarians. It is found to be more common among Non-Vegetarians.

10) *Koshta*:- Maximum number of patients have *krura koshta* i.e., 62.50%, while 25% were of *madhyama koshta* and 12.50% of *mridu koshta*.

11) Chronicity:- Most of the cases selected for the study were either less than 1 year of duration (45.00%) or up to a period of 1 year since manifestation of the disease

(42.50%), those coming under 1-2 years were about 12.50% only.

12) *Prakruti*:- *Vata pittaja prakruti* persons seems to be commonly affected in the present study i.e., 52.50%; 37.50% were of *vata kapha prakruti*, while 10.00% is *kapha pittaja* persons.

13) Symptomatology Incidence:- Symptoms like *Sthamba*, *Ruk*, *Toda*, *Aruchi*, *Gauravam*, *Tandra*, Constipation were seen in all cases which were selected for the present study.

14) SLR Test:- Minimum numbers of patients were found with a positive Right leg SLR test, i.e., 55.55% where as 44.45% came positive in left leg.

Effect of therapies

The net result of the study obtained based on the respective parameter is scrutinized minutely in this section.

1) Effect of Therapies on the symptoms

a) After 30 days of therapy

*Shiva Guggulu* and *Kativasthi* provided highly significant relief ( $P < 0.001$ ) in *Ruk*, *Toda*, *Aruchi*, and constipation by 50%, 50%, 69.23%, 55%, respectively. In *Gauravam* and *tandra* relief was moderately significant ( $P < 0.010$ ) by 38.88%, 42.10%, respectively. In *Sthamba* relief was mildly significant ( $P < 0.020$ ) BY 33.37%.

*Rasna Guggulu* and *Kativasthi* provided highly significant relief ( $P < 0.001$ ) in *Sthamba*, *Gaurava* and Constipation by



55%, 61.53% and 65% respectively. Moderately significant relief ( $P < 0.010$ ) in *Ruk, Toda, Tandra and Aruchi* by 35%, 45%, 58.33% and 46.66% respectively.

b) After Follow-up

*Shiva Guggulu* and *Kativasthi* provided highly significant relief ( $P < 0.001$ ) in *Sthamba, Ruk, Toda, Gaurava, Aruchi* and Constipation by 55.55%, 55%, 55%, 55.55%, 69.23%, and 65% respectively.

*Rasna Guggulu* and *Kativasthi* provided highly significant relief ( $P < 0.001$ ) in *Sthamba, Ruk, Todam, Gauravam, Tandra* and Constipation by 65%, 55%, 50%, 61.53%, 66.66% and 55% respectively whereas in *aruchi*, relief was moderately significant ( $P < 0.010$ ) BY 54.54%.

Effect of Therapies on SLR Test

a) After 30 days of Therapy

*Shiva Guggulu* and *Kativasthi* provided moderately significant improvement ( $P < 0.010$ ) in Right leg SLR test by 44.44%, where as highly significant improvement ( $P < 0.001$ ) was achieved in Left leg SLR test by 61.53%.

*Rasna Guggulu* and *Kativasthi* provided highly significant improvement ( $P < 0.001$ ) in Right leg SLR test 57.89%. Moderately significant relief ( $P < 0.010$ ) in left leg SLR test by 58.35%.

b) After follow-up

*Shiva Guggulu* and *Kativasthi* provided highly significant improvement both in

right and left leg SLR test ( $P < 0.001$ ) by 55.55%, 61.53%.

Comparative Total Effect of Therapies

a) After 30 days of Therapy

In the trial group I, 15% of patients were assessed under marked improvement, 55% were assessed under moderate improvement, 30% were assessed under mild improvement, nobody came under unchanged and complete relief category.

In trial group II 15 % were assessed under marked improvement, 50% were assessed under moderate improvement, 35% were assessed under mild improvement, and nobody came under unchanged and complete relief category.

b) After Follow-up

In the trial group I 60.00% of patients were assessed under moderate improvement category, 20% showed marked improvement, only 10% showed both complete relief and improved category and nobody came under unchanged category.

In the trial group II 60% of patients were assessed under moderate improvement, 20% showed marked improvement, 15% were assessed under improved category, 5% showed complete relief, nobody came under unchanged category.

The above findings reveal that both drugs did not provide complete relief after the treatment. After the follow-up, it is showed



that both drugs are equally effective in each symptoms.

Intra group comparison was done in order to find out the level of significance for the

difference obtained in the efficacy of the drugs of both the groups.

**Table 1** Comparative effect of medicines of both the groups on the symptoms after 30 days of treatment

Sl No.	Groups	Symptoms	't' value	P value	Remarks
1	Trial I v/s Trial II	<i>Sthambam</i>	1.5625	P<0.20	Mildly significant
2	Trial I v/s Trial II	<i>Ruk</i>	1.2419	P>0.20	Insignificant
3	Trial I v/s Trial II	<i>Todam</i>	0	P>0.20	Insignificant
4	Trial I v/s Trial II	<i>Gauravam</i>	1.2780	P>0.20	Insignificant
5	Trial I v/s Trial II	<i>Tandra</i>	0.8519	P>0.20	Insignificant
6	Trial I v/s Trial II	<i>Aruchi</i>	1.6866	P<0.20	Mildly significant
7	Trial I v/s Trial II	Constipation	0.7772	P>0.20	Insignificant

Table no.1 The comparative study of the results obtained from both the groups on the symptoms after 30 days of treatment revealed that none of it had any appreciable

statistical significance. Hence it may be concluded that the effect of both the groups on symptoms after 30 days of treatment were equal.

**Table 2** Comparative effect of medicines of both groups on symptoms after follow-up period

Sl. No	Groups	Symptoms	't' value	P value	Remarks
1	Trial I v/s Trial II	<i>Sthambam</i>	0.6375	P>0.20	Insignificant
2	Trial I v/s Trial II	<i>Ruk</i>	0.2505	P>0.20	Insignificant
3	Trial I v/s Trial II	<i>Todam</i>	0	P>0.20	Insignificant
4	Trial I v/s Trial II	<i>Gauravam</i>	0.6401	P>0.20	Insignificant
5	Trial I v/s Trial II	<i>Tandra</i>	0.7479	P>0.20	Insignificant
6	Trial I v/s Trial II	<i>Aruchi</i>	1.1550	P>0.20	Insignificant
7	Trial I v/s Trial II	Constipation	0.2884	P>0.20	Insignificant

Table no.2 The comparative study of the result by statistical analysis on symptoms after follow-up period revealed that none of

it had any statistical significance. Hence it may be concluded that the effect of both the groups are equal.

**Table 3** Comparative effect of medicines of both the groups on the SLR Test after 30 days of treatment

Sl. No.	Groups	SLR Test side	't' value	P value	Remarks
1	Trial I v/s Trial II	Right	0.7096	P>0.20	Insignificant
2	Trial I v/s Trial II	Left	0.1484	P>0.20	Insignificant

Table no.3 The comparative study of the results obtained from both the groups in the SLR Test after 30 days of treatment revealed that none of it had any appreciable

statistical significance. Hence it may be concluded that the effect of both the groups in the SLR Test after 30 days of treatment were equal.

**Table 4** Comparative effect of medicines of both the groups on SLR test after follow-up period

Sl. No.	Groups	SLR Test side	't' value	P value	Remarks
1	Trial I v/s Trial II	Right	0.3202	P>0.20	Insignificant
2	Trial I v/s Trial II	Left	0.2521	P>0.20	Insignificant



Table no.4 The comparative study of the results obtained from both the groups in the SLR Test after follow-up period revealed that none of it had any appreciable statistical significance. Hence it may be concluded that the effect of both the groups in the SLR Test after follow-up period were also equal.

#### **Probable mode of action of trial drug I:**

Breaking down the process of *samprapti* is the main step involved in the treatment. So the drugs used in the study should be effective in attaining this objective. The medicines used in our system acts through various streams to break down the process of *samprapti*. The compound preparation mentioned in our classics are so well organized that the properties of individual drug do not contradict each other but mutually interacts in a beneficial manner. *Triphala* and *Guduchi kwatha* which is useful in the *shodhana* of *Guggulu* also have some contributions in the management of disease. *Guduchi* – it increases digestive capacity, nourishes *dhatu* and have laxative effect. *Hareethaki* – it is laxative, increases digestive capacity, reduces excessive fat, *Tridosahara*, increases *agni* also *ruchyam*. *Vibheethaki* – it is *Tridosahara*. *Amalaki* has the actions like *rochana*, *deepana*, *anulomana* and nervine tonic. Also, it acts as *rasayana*.

In trial drug I out of 14 drugs, 3 drugs are having *madhura rasa*, 7 are having *katu rasa*, 4 are having *kashaya rasa*, 3 are having *tikta rasa*, i.e., almost all drugs are *vatakaphahara*. While considering the *guna*, 5 are having *laghu ruksha*, 4 are *laghusnigdha*, *guru ruksha*, *snigdha tikshna*, *ushnasnigdha*, *laghutikshna* and *guru tikshna* one. Out of 14, 9 drugs are having *katu vipaka*, and 5 are having *madhura vipaka*. *Ushna veerya* drugs are 11, *sita veerya* drugs are 2. Considering all these things almost all the drugs are *vata kaphahara* in action. In this way, the trial dry which is the combination of the above mentioned drugs might have acted collectively based on their pharmacological action in Gridhrasi of both

*Shiva guggulu* also contains *trikatu* which is *deepana pachana* and *srotho vishodhaka*. *Devadaru* is having *vatahara* property. All the other drugs are having *vatakaphahara* property and *vedanasthapaka* in action.

Basically all compound formulations are having two major components:

- Pharmacological compounds
- Pharmaceutical compounds

The pharmacological compounds consists of two parts-

- Pharmacodynamic compounds
- Pharmacokinetic compounds



Pharmacodynamic compounds include mainly Bio-availability enhancers. These are the compounds which when added along with the active ingredients aid in its better absorption and assimilation in to the system.

Pharmacokinetic compounds are the main ingredients present in the compound drug. It includes activators, potentiators and antidotes.

Activators are the active components responsible for the action of a compound preparation. Potentiator drugs are those that potentiates or facilitate the action of the active ingredients. The anti dotes are those which prevents the ill effects or side effects of the harmful ingredients in the compound preparation. These actions can be very well appreciated when a compound drug is taken in to consideration.

In the trial drug Shiva Guggulu the ingredients are *Guggulu*, *Eranda taila*, *Gandhaka*, *Haritaki*, *Vibhitaki*, *Amalaki*, *Devadaru*, *Jatamamsi*, *Danti*, *Shunti*, *pippali*, *maricha*, and *vidanga*.

Here *Guggulu* in this formulation has the main therapeutic action as *Vedanasthapana* and *Shothahara*. Hence it may be assigned the role of Activator function when administered along with other drugs. Besides it also possess *Kaphavata Samana* and Anti inflammatory property.

*Erandataila*, one of the main ingredients may be having the role of Potentiator in the compound formulation. It possesses qualities like *Snigdha*, *Tikshna*, *Sukshma*, *Ushna Virya*, *Madhura vipaka*, *Vatanulomaka*, *Sothahara* and *Vedanasamaka*. By virtue of these qualities, it effectively helps in the *Samprapthi Vightana* of the disease.

*Ksheerabala Kativasthi* fulfils the local *snehana* and *swedana* and supplements the nourishments to nerves as well as the muscle tissue. The contents of it, i.e., *Ksheera* is *balya* and *brhumana*, *bala* is *vatahara* and *vedanasthpaka*.

In short all these drugs individually or in combination is an effective remedy in the management of *Gridhrasi*.

### **Probable mode of action of trial drug II**

Normally, *vata* gets vitiated either due to *Margavarodha* or *Dhatukshaya*. *Gridhrasi* is a disease in which *vata* gets vitiated due to *sroto rodha* and *dhatukshaya*. The trial drug II contains more *tikta* and *katu rasa dravyas*. *Tikta* relieves *aruchi*, *daha* and *trishna*. Also it reduces excessive *medas*, *pitta* and *kapha*. It is also *deepana*, *pachana* and *lekhana*. *Katu rasa* reduces *kleda*. It acts as *rochana*, *pachana*, *deepana*, *lekhana* and *sodhana* and also cleanses the *srotases* and reduces excessive *kapha*.

*Madhura rasa* helps in the nourishment of *dhatu*s, reduces *vata*, *pitta*, *trishna* and



*daha*. Thus, these *rasas* which are predominant in the drug combination there by reduces *daha*, *trushna*, *aruchi*, *kleda*, excessive *meda*, *srotorodha* and *dhatukshaya* which were mainly observed in the patients.

*Kashaya rasa* cleanses the *Srothas* due to *Lekhana* property. It is also having *Kaphahara* and *ropana* property. The *laghu* and *ruksha guna* has the property of pervading in to the minute channels there by cleansing them.

*Ushna veerya* attributes for the *dahana* and *pachana* properties along with *vata kapha shamana*. *Sheeta veerya* helps for the *rakta-pitta prasadana*. It also increases the *ojas* and thus leads to *dhatuposhana*. In this way, these predominant *rasas* might have acted in the treatment of *Gridhrasi* of both types.

## CONCLUSION

- As *Susrutha* says, *Nidana parivarjana* is the first line of management, it has a major role in controlling the progression of *Ghridhrasi*, i.e., avoid hard work, continuous sitting etc.
- Eventhough the incidence of *Ghridhrasi* were more in the age group of 40-50 years it may affect any age.

- Chronicity of the disease was definitely affecting the strength of the patient as well as the prognosis.
- The trial drug I *Shiva Guggulu* and *Kati vasthi* have a prime role in the management of *Ghridhrasi* by *Srothovishodhana*, *Pachana*, *Vedana sthapana*, and *Dhatuposhana*.
- The medication with the trial drug I *Shiva Guggulu* and *kati vasthi* and trial drug II *Rasna Guggulu* and *Kativasthi* showed significant improvement in the SLR test and did not have any untoward effect on the patients.
- *Shiva Guggulu* and *Kati vasthi* provided long lasting result on almost all the complaints which was well appreciated during the follow-up period.
- During the research work the patients who did not follow the *pathya* strictly have less reduction in symptoms.

The study revealed that both the groups are statistically significant. In comparison to trial group II trial group I i.e, *Shiva Guggulu and Kativasthi* showed a better result in reducing Constipation, *Aruchi*, Pain etc<sup>5</sup>.



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