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An Open Randomized Comparative Clinical Study on *Kamsa Guggulu* and *Rasna Guggulu* in the Management of *Gridhrasi*

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ABSTRACT

Objective: To evaluate the therapeutic efficacy of *Kamsa Guggulu* in the remission of the symptoms of *Gridhrasi*/Sciatica. To evaluate the therapeutic efficacy of *Rasna Guggulu* in the remission of the symptoms of *Gridhrasi*/Sciatica and to compare the effect of *Kamsa Guggulu* and *Rasna Guggulu* in bringing symptomatic relief and functional improvement in the patients of *Gridhrasi*/Sciatica. **Design:** Open randomized comparative clinical-study with pre and post-test design. **Setting:** O.P.D. and I.P.D. of Sri Dharmasthala Manjunatheshwara College of Ayurveda & Hospital, Udupi. **Interventions:** The patients selected were randomly divided into 2 groups of 15 each by adapting the permuted block randomization method. Selected patients were treated with oral administration of *Kamsa Guggulu* for a period of 14 days with the anupana of warm water in one group and another group was administered with *Rasna Guggulu*. **Main outcome measures:** Pain – Greenough and Fraser Scoring method; Stiffness, Pricking type of pain, Twitching, Functional ability by Sugarbaker and Barofsky Clinical Mobility Scale; Functional Disability by Oswestry Disability Assessment Questionnaire; Restricted Limb Movement/SLR Tests; Neurological Deficit - Herron and Turners Rating. **Results:** *Kamsa Guggulu* and *Rasna Guggulu* are effective in the remission of the symptoms of *Gridhrasi* as evidenced by statistically significant reduction in the symptom score of various subjective and objective parameters. **Conclusion:** The effectiveness of the *Kamsa Guggulu* is supreme comparing to that of *Rasna Guggulu* as evidenced by the various outcome measures and the statistical analysis shows that it is significant.

KEYWORDS

Gridhrasi, Kamsa Guggulu, Rasna Guggulu, Sciatica



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INTRODUCTION

Gridhrasi is a condition where the patient experiences pain primarily in the *sphik pradasha* which later radiates to *kati* and to leg through the posterior aspect of *uru*, *janu*, *jangha* and *pada* where the patient finds difficulty in extending the leg¹. The typical diagnostic method mentioned for the sciatica, straight leg raising test (SLR), is explained as *sakthi utkshepa nigraha* in the classics². The line of management depends upon the *dosha* and *dushya* involved in the pathogenesis of the ailment which in turn depends upon the *nidana*. *Atyadhva*, *ati yana*, *vyayama*, *vyavaya*, *dhavana*, *pidana*, *plavana*, *bharavahana* are some of the causative factor for this disease. *Vataja Gridhrasi* is characterized by the symptoms like *stambha*(stiffness), *ruk* (pain), *toda* (pricking sensation) and *muhurspandana* (twitching), while, *Vata kaphaja Gridhrasi* has features of *tandra* (drowsiness), *gaurava* (heaviness in the legs) and *arochaka* (tastelessness) along with the above symptom³. Identical to this Sciatica is characterized by low back ache radiating down to legs and anterolateral aspects of foot, hence is equated to *Gridhrasi*.

Various treatment modalities like *Snehana*, *Swedana*, *Virechana*, *Basti* etc are said to be efficacious. Even specific treatments

like *siravyadha*, *agnikarma*, *basti* are also emphasised⁴. From the foregoing clinical trials on *Gridhrasi* are mostly centered on *bahiparimarjana chikitsa* like *Kati basti*, different combination of *basti* and oral administration of herbo mineral formulations. Most of these treatment plan require hospitalization. Contrary to this, less is explored about the drug of choice, Many *shamana yoga* are mentioned in our classics which are proved to be efficacious. *Guggulu* is the best among the *shamana oushadies* for vitiated *vata*. In *Vatavyadhi* in most of the occasions the use of *Guggulu* is mentioned for the purpose of *vatashamaka* as well as *shulahara*. So also many *shamana yoga* indicated in *Gridhrasi* contains *Guggulu* as a major ingredient. *Kamsa Guggulu* comprises of *triphala* and *Guggulu* which possess *tridosahara*, *anulomana* and *shulahara* effect⁵. With this view in mind, *Rasna Guggulu*⁶ and *Kamsa Guggulu* are selected in this study which contains *Guggulu* as the main ingredient. Oral medication is conveniently continued as domiciliary treatment and this is the additional benefit.

MATERIALS AND METHODS

- To compare the therapeutic efficacy of *Kamsa Guggulu* and *Rasna Guggulu* in the remission of the symptoms of *Gridhrasi*/Sciatica.



Study design: A randomized comparative clinical study with pre-test and post-test design.

Source of data: Thirty patients diagnosed as Gridhrasi w.s.r Sciatica were taken for study from OPD and IPD of SDM Ayurveda Hospital, Udupi, Karnataka.

Diagnostic criteria

1. Presence of symptoms of *Gridhrasi* that include stiffness, pain, pricking sensation, twitching in waist, buttocks & then radiating to back of the thigh, leg, ankle, foot suggestive of *Vataja Gridhrasi*. The additional symptoms like heaviness in the legs, drowsiness and tastelessness may be present.
2. Presence of radicular pain of Sciatica that includes sudden/gradual onset of low back ache radiating to buttock, thigh, calf and foot.

Inclusion Criteria

1. Patients of *Gridhrasi* w.s.r Sciatica between the age of 16 to 70 years.
2. Patients with or without radiological evidence of Lumbar Spondylosis.
3. Patients of with or without radiological evidence of Disc Prolapse.
4. Patients with *pratyatma laxanas* of *Gridhrasi*.

Exclusion Criteria

1. Sciatica with congenital deformities of spine
2. Neoplastic conditions of the spine with radicular pain.
3. Infections of the spine with Sciatica.
4. Patients with any other systemic illness associating Sciatica.
5. Patients with wedge compression.

Assessment Criteria

Subjective Parameters

1. Pain(*Ruk*)-Greenough and Fraser Scoring method
2. Stiffness(*Sthambha*)
3. Pricking type of pain(*Toda*)
4. Itching(*Spandana*)
5. Functional Ability- Sugar baker and Barofsky Clinical Mobility Scale
6. Functional Disability - Oswestry Disability Assessment Questionnaire.

Objective parameters

1. Restricted limb movement/SLR Test (*Sakthikshepa nigraha*)
2. Neurological Deficit- Herron and Turners Rating

INTERVENTION

Group A – KAMSA GUGGULU GROUP

15 patients were treated with *Kamsa Guggulu* for a period of 14 days. Following are the details of the medication:

DOSAGE: 500mg 2TID

Anupana- ushna jala

Duration of study: 14 days



Follow up Period: 28 days.

Group B –RASNA GUGGULU GROUP

15 patients were treated with *Rasna Guggulu* for a period of 14 days. Following are the details of the medication:

DOSAGE: 500mg 2TID

Anupana- ushna jala

Duratin of study: 14 days

Follow up Period: 28 days

INVESTIGATIONS:

Complete Haemogram, ESR, RBS, X-Ray,

Lumbosacral spine.

Table 1 Effect of Kamsa guggulu and Rasna guggulu on the symptoms of gridhrasi

Group N=15	BT Mean	AT Mean	Diff D	% OF BT- Reli ef AT	Wilcoxon Signed rank test (Within the group)					Mann Whitney U Test (Between the group)		
					SD	SEM	MEDIAN	Z value	P value	T value	U value	P value
Effect of Treatment on Stambha												
Group-1 Kamsa	2.80	0.33	2.46	87.8	BT:0.414 AT:0.488	BT:0.107 AT:0.126	BT:3.000 AT:0.000	-3.508	<0.00 01	287	58	0.014
Group-2 Rasna	2.80	1.13	1.66	59.2	BT:0.414 AT:0.640	BT:0.107 AT:0.165	BT:3.000 AT:1.000	-3.493	<0.00 01			
Effect of Treatment on Toda												
Group-1 Kamsa	2.800	0.667	2.13	76.07	BT:0.676 AT:0.724	BT:0.175 AT:0.187	BT:3.000 AT:1.000	-3.464	<0.00 01	287	56	0.012
Group-2 Rasna	2.733	1.333	1.40	51.28	BT:0.594 AT:0.816	BT:0.153 AT:0.211	BT:3.000 AT:1.000	-3.391	<0.00 01			
Effect of Treatment on Spandana												
Group-1 Kamsa	2.53	0.86	1.66	65.61	BT:0.640 AT:0.915	BT:0.165 AT:0.236	BT:3.00 AT:1.00	-3.219	<0.00 01	279	66	0.040
Group-2 Rasna	2.53	1.60	0.93	36.76	BT:0.640 AT:0.632	BT:0.165 AT:0.163	BT:3.00 AT:2.000	-3.276	<0.00 01			

As in table no.2 shows that Neurological deficit was improved by 12.22% with P < 0.001, Functional ability was increased by 23.61% and functional disability was decreased by 33.73%. In table no-3 shows that changes in SLR test Active and Passive occurred by 94.78 % and 74.63%,

RESULTS

Kamsa Guggulu Group – The study proved that (table no1) there was 87.8% improvement in *stambha*, 76.07% improvement in *toda* and 100% in *Aruchi* (n=1), 65.61 % improvement in *spandana*, 35.56% improvement in the pain which were statistically highly significant with P value < 0.001.

respectively with P value <0.001, 34.56 % was the improvement seen in the Schober’s test. The outcome measures like walking for 30 feet, duration of 10 sit ups, time taken to climb 10 steps, and distance between finger and floor showed an improvement of 39.09%, 38.70%, 34.54 %, and 36.27 %,



respectively, each having a P value < 0.001. It was found that 46.67% % of patients had complete improvement, 46.67% had moderate improvement and 6.66 patients

had the mild improvement and none of the patients had the symptoms unchanged.

Rasna Guggulu Group - The study proved that as in table no1 there was 59.2 %

Table 2 Effect of kamsa guggulu and rasna guggulu on Various Outcome measures

BT Mean	AT Mean	Diff D BT-AT	% OF Relief	Wilcoxon Signed rank test					Mann Whitney U Test			
				SD	SEM	MEDIA N	Z value	P value	T value	U value	P value	
Effect of Treatment on Pain												
Group-1 Kamsa	12.93 (19.59%)	36.4 (55.15%)	23.4 (35.5%)	35.56 %	BT:5.83 AT:4.94	BT:1.50 AT:1.27	BT:13.0 AT:36.0	3.410	<0.001	277.5	67.5	0.063
Group-2 Rasna	12.93 (19.59%)	32.7 (49.59%)	19.8 (30%)	30%	BT:5.83 AT:5.10	BT:1.5 AT:1.31	BT:13.0 AT:31.0	3.418	<0.001			
Effect of Treatment on Neurological Deficit												
Group-1 Kamsa	23 (19.16%)	8.33 (6.94%)	14.67 (12.22%)	12.2	BT:6.49 AT:8.38 1	BT:1.6 AT:2.16	BT:20.000 AT:10.00	-3.508	<0.001	270	75.0	0.053
Group-2 Rasna	21 (17.5%)	9.66 (8.05%)	11.33 (9.44%)	9.44	BT:6.60 AT:7.66 9	BT:1.7 AT:1.9	BT:20.000 AT:10.00	-3.690	<0.001			
Effect of Treatment on Functional Ability												
Group-1 Kamsa	15.06 (62.78%)	20.73 (86.38%)	5.67 (23.61%)	23.6	BT:1.387 AT:1.486 8	BT:0.358 AT:0.38	BT:15.000 AT:21.00	3.42	<0.0001	292.5	52.500	0.011
Group-2 Rasna	15.46 (64.4%)	19.26 (80.27%)	3.80 (15.83%)	15.83	BT:1.642 AT:1.624 19	BT:0.424 AT:0.419	BT:15.000 AT:19.00	3.46	<0.0001			
Effect of Treatment on Functional Disability												
Group-1 Kamsa	33.46 (66.93%)	16.6 (33.2%)	16.86 (33.7%)	33.73	BT:3.58 AT:3.88 8	BT:0.92 AT:1.00 4	BT:35.00 AT:17.00	-3.415	<0.0001			
Group-2 Rasna	33.6 (67.2%)	18.2 (36.53%)	15.33 (30.67%)	30.67	BT:4.61 AT:3.71	BT:1.19 AT:0.95	BT:35.00 AT:17.00	-3.428	<0.0001	254	91	0.37

improvement in *stambha*, 51.28 % improvement in *toda* and 100% improvement in *Aruchi* (n=1) and *tandra*,

36.76 % improvement in *spandana*, 30% improvement in the pain which were statistically highly significant with P value



< 0.001. As in table no.2 shows that Neurological deficit was improved by 9.44% with P < 0.001, Functional ability scale increased by 15.83% and functional disability scale decreased by 30.67%. In

table no-3 shows that changes in SLR test Active and Passive occurred by 79.30% and 68.65 % respectively with P value <0.001. 25.30% was the improvement seen in the Schober's test. The outcome measures as in

Table 3 Effect of Kamsa guggulu and Rasna guggulu on Various Tests for Sciatica

Effect treatment on SLR Test Active										
	BT Mean	AT Mean	Diff D BT-AT	% OF Relief	Paired t test				Unpaired t test	
					SD	SEM	t VALUE	P VALUE	T VALUE	P VALUE
Group-1 Kamsa	38.33	74.66	36.33	94.78	BT:9.386 AT:10.60	BT:2.423 AT:2.737	-11.563	<0.0001	1.209	P = 0.237
Group-2 Rasna	38.66	69.33	30.66	79.30	BT:9.722	BT:2.510	-8.812	<0.0001		
Effect of Treatment SLR Test Passive										
Group-1 Kamsa	44.66	78	33.33	74.63	BT:10.43 AT:11.46	BT:2.69 AT:2.96	-12.140	<0.0001	0.670	P = 0.508
Group-2 Rasna	44.66	75.3	30.66	68.65	BT:10.43 AT:13.02	BT:2.69 AT:3.36	-10.644	<0.0001		
Effect of Treatment on Lasegue's test										
Group-1 Kamsa	38.66	74.66	36	93.11	BT:9.722 AT:11.25	BT:2.51 AT:2.90	-11.636	<0.0001	1.145	P = 0.262
Group-2 Rasna	38.66	69.33	30.66	79.15	BT:9.72	BT:2.51	-8.812	<0.0001		
Effect of Treatment on Schober's test										
Group-1 Kamsa	16	21.53	5.53	34.56	BT:2.777 AT:2.850	BT:0.71 AT:0.73	-12.721	<0.0001	2.579	P = 0.015
Group-2 Rasna	16.6	20.8	4.20	25.30	BT:2.898 AT:3.098	BT:0.74 AT:0.80	-15.029	<0.0001		

table no.3 like walking for 30 feet, duration of 10 sit ups, time taken to climb 10 steps, and distance between finger and floor showed an improvement of 38.19 %, 35.26 %, 29.04 %, and 27.87 % respectively, each having a P value < 0.001. It was found that none of patients

had major improvement, 46.67 % had moderate improvement, 53.34 % had mild improvement and none of the patients had the symptoms unchanged. **Comparison between the groups** using Mann whitney U test showed that the results were statistically significant with



$p < 0.001$ and percentage of relief showed that *kamsa Guggulu* benefitted better.

DISCUSSION

Kamsa Guggulu is mentioned in the context of *vatavyadhi* which has seventeen drugs in which five are *kashaya* drugs where as twelve drugs are *prakshepaka dravya* like *Haritaki*, *Vibhitaki*, *Amalaki* are in *kwatha* as well as *prakshepaka dravya*. Individual drugs are also effective in *vata vyadhi*. *Kamsa Guggulu* is a Herbal compound with ingredients like *Haritaki*, *Vibhitaki*, *Aamalaki*, *Guggulu*, *Jala*, *Vidanga*, *Dantimoola*, *Guduci*, *Pippali*, *Trivrut*, *Maricha*, *Pippali*, *Shunti*, *Chitraka*. As the drugs are having *Tridoshaghna* and dominantly *vatakaphahara* qualities, which help in alleviating both *vata* and *kapha dosha*. Due to *ushna veerya* of *Haritaki*, *Vibhitaki* it pacifies *vata*^{7,8} and by *deepana* and *amapachana* property of drugs like *nagara*, *maricha* and *pippali* it is able to rectify the *amatva*, other by giving relief like symptoms *triphala* is a well known drug for *mridu virechana* thus it also helps in *vata anulomana*⁹⁻¹¹. *Guggulu* is also having *kapha vata shamaka* and anti inflammatory property by its *ushna veerya* and is proved to be *vedana Shamaka*¹².

Rasna Guggulu is a Herbal compound with ingredients like *Rasna*, *Shudha Guggulu* in equal quantities. As the drugs are having *Tridoshaghna* and dominantly *vatakaphahara* qualities, they help in alleviating both *vata* and *kapha Dosha*. Due to *the snigdha*, *guru guna* and *ushna veerya*, *Rasna* pacifies *vata* and *kapha*. *Rasna* is a well known drug for *vayasthapana* and *kaphavatahara*¹³. Thus it also helps in *vata anulomana* and also *Rasna* contains *agalanga* as chemical component which acts as anti-inflammatory and analgesic. *Guggulu* is also having *Kaphavata Shamaka* and anti inflammatory property by its *Ushna Veerya* and is proved to be *vedana shamaka*. *Rasna guggulu* to relieve the symptoms like *Toda*, *Suptata*, *Ruk* like symptoms from the affected parts of the body. During the whole course of the treatment all patients were extremely comfortable with no undesirable effects.

Gridhrasi is caused due to the morbid *vata dosha* afflicting the *Gridhrasi nadi* or *kandara* that is, entrapment phenomenon sciatic nerve. For different etiologies as the stress on the intervertebral disc increases, it's likely to be ruptured or gets displaced. The displaced disc material may impinge on the emerging spinal routes causing the radicular pain. Desiccation of the disc material is the major phenomenon that clears the impingement on the nerve route



thereby clearing the signs and symptoms of the nerve entrapment. *Rasna* has the *Acetoxychavicol acetate* as its content. The administration of the medicine for a period of fourteen days gives the symptomatic relief thus owing to the fact that the local inflammation is being cleared by its anti-inflammatory action along with speeding up of the disc desiccation. Remission of the pain also indicates clearance of the inflammation of the sciatica nerve.

Meanwhile the treatments adopted in this study will negate the effect of *margavarana* and also rectify the *dhatukshaya* by reducing the symptomatology of the illness. Corroborating the same, *Gridhrasi* is rendered to the specific *nidana* like that of the excessive *vyayama* and *abhighata* which can in turn result in the *dhatukshaya* to the *Gridhrasi nadi* or *kandara* and also the presentation is that the *Gridhrasi shula*. On the other hand, during the course of the illness affliction of the same *snayu* by any of the pathological factors entraps the *Gridhrasi nadi* leading to the *avarana* pathology. From the present study it is evident that irrespective of the etiology and the pathology, all the patients showed best response in remission of the functional disability and neurological deficits and different symptom parameters in conjunction with the improvement within the functional ability. This proves the

efficacy of *kamsa guggulu* beyond doubt in rectifying the etiopathogenesis of *Gridhrasi* irrespective of its cause as *dhatukshaya* or *margavarana*. Similar is the outcome related to *Rasna Guggulu*.

CONCLUSION

Kamsa Guggulu and *Rasna Guggulu*, both have shown improvement in almost all the parameters, but comparatively *Kamsa Guggulu* showed better results. A maximum 46.67% and minimum 6.66% of patients showed complete and average remission in *kamsa guggulu* group respectively. Whereas in *Rasna* group moderate and average remission has been seen equal to 46.67%, 53.34% respectively and complete remission patients have not seen in *Rasna Guggulu* group.



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