

COMPARATIVE CLINICAL TRIAL ON EFFICACY OF PATHYADI GUGGUL AND ERANDMULADI BASTI IN THE MANAGEMENT OF GRIDHRASI W.R.T LUMBAGO SCIATICA SYNDROME

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ABSTRACT

Sciatica is not a disease; it is a degenerative syndrome of leg pain. It is a very strong pain felt in thighs that starts from the lower back to the whole leg. Hence movement of the affected leg is restricted and patient is not able to walk properly. This problem which evidently has a favourable natural history even then it can be remarkably disabling has challenge health care providers. *Sciatica* is known as ' *Gridhrasi*' in *Ayurveda*. Many medicines are prescribed in *Ayurveda* for treatment of *Grudhrasi* as a *vatarogas*. *PathyadiGuggul* is mentioned in *Bhavprakash samhita* in the palliative treatment of *Grudhrasi* and *Erandamuladi nirooh basti* as mentioned in *Charak samhita* is indicated for pain in *Gridhrasi*. The Clinical Study was conducted to evaluate the efficacy of two different type of treatments in given disease [*Grudhrasi*] diagnosed using modern as well as *Ayurvedic* parameters. For the study, 40 patients were selected from IPD & OPD of Department of *Kayachikitsa* at Smt. K.G. Mittal Ayurved Hospital Mumbai. These patients randomly divided into two groups. Group A –20 patients were administered the *Pathyadi Guggul* as palliative treatment. Group B –20 patients were administered with *Erandamuladi nirooh basti* and *prasarani oil* for *anuvasan basti* with the duration of 32 days. After study, it was observed that group of patients in which *Erandamuladi nirooh basti* and *prasarani oil* for *anuvasan basti* (Group-B) showed better results in sign & symptoms of *Gridhrasi* (*Sciatica*) than those patients treated with *Pathyadi Guggul*(Group-A).

Keywords: *Sciatica, Gridhrasi, Pathyadi Guggul, Erandamuladi nirooh basti, prasarani oil,*

INTRODUCTION

The most common disorder which affects the movement of the leg particularly in most productive period of life is low back pain, out of which 40% of person will have radicular pain and this comes under the sciatic-syndrome.¹ such presentation were common in olden period too and ancient science of life named it as *Gridhrasi*. It is consider as a *shoolpradhana vata vyadhi*.²

Many research conducted on this disease, still the complete cure of this is a mirage. *Gridhrasi* as the term meaning goes indicates the typical gait that resemble of a *Gridhra* or Vulture which is often seen in *Gridhrasi*.³ The symptoms seen in *Gridhrasi* can be well corrected with *sciatica* in modern terminology. *Sciatica* is a very painful condition in which pain begins in lum-

bar region and radiates along the posterolateral aspect of thigh and leg. Hence, movement of the affected leg is restricted and patient is not able to walk properly. This problem which evidently has a favorable natural history even then it can be remarkably disabling, has challenged health care providers. So efforts should be directed to re-establish the measures indicated for *Gridhrasi* in the classic texts of *Ayurveda* by proving its efficacy on the parameters established by recent medical science. Here one group was given *pathyadi guggula* for shaman therapy whereas the other group was given *Basti* treatment that comes under *shodhan* therapy.⁴ The *saman-yachikista siddhant* of *Gridhrasi* includes *siravedha*, *bastikarma* and *agnikarma* for its management. *Basti* karma is very effective on *adhomarga* especially *pakvashaya*. *pakvashaya* is most important *sthan* of *vata*. *Gridhashi* is a *vattavyadhi* and *Basti* is said to be best treatment for *vatadosha* and diseases cause due to it.⁵ So, here we study the effect of *Basti* in the management of the *Gridhrasi*. This *Basti* comprises 1) *Erاندamuladi nirooh basti*⁶. 2) *Prasarni oil anuvasan basti*⁷

AIM: To study the comparative efficacy of *Pathyadi guggul* and *Erاندmooladi basti* in management of *Gridhrasi*.

OBJECTIVES:

1. To study *Ghridhrasi* clinically in the literature of *Ayurveda* and modern science.
2. To study the effect of *Pathyadi guggul* in the management of *Gridhrasi*.
3. To study the efficacy of *Erاندmooladinirooh basti* and *Prasarni oil anuvasanbasti* in management of *Gridhrasi*.

MATERIALS AND METHODS:

Study Design: Type of study: Open Randomized Comparative study. The study was exclusively based on clinical trials. A well detailed case record from was prepared to study the patient as well as the disease. The patients attending the O.P.D. and I.P.D. of Department of *Kayachikitsa* at Smt. K.G. Mittal P. Ayurved Hospital and Research institute were selected irrespective of their age, sex etc. The selected patient of *Gridhrasi* were subjected to clinical examination. Thus the assessment of *Gridhrasi* was done by Clinical and classical features of *Gridhrasi* and similarly the follow up assessment.

Ethical Clearance: The study was approved by Ethics Committee for Human Research of PG section, Smt. K.G.M.P. Ayurvedic College & Hospital, Mumbai. Patient confidentiality was ensured at all times during the study. Patients were treated under two groups.

Group-A]: 20 patients were administered the treatment of *Pathyadi guggul*, 250 mg twice a day with warm water as *anupana* before food for 4 weeks (32 days); whereas in **Group-B]:** 20 patients were administered *Erاندmooladi nirooh basti* and *Prasarni oil anuvasan basti* alternate day for 4 weeks (32 days) with *Snehan* and *Swedan* as a *purvakarma*. The protocol of this clinical study includes the Study Design, Inclusion- Exclusion Criteria & Criteria for Clinical Assessment, as follows.

A) Inclusive criteria:

1. Patients of age limit between 20 - 70 years, irrespective of sex and socio-economic status.
2. Patients with classical symptoms of *Gridhrasi* and diagnosed cases of *Gridhrasi* were included.

3. Patient with positive SLR test.
4. Patient willing to give informed written consent.

B) Exclusive criteria:

1. Patients with age below 20yrs. and above 70yrs.
2. Bone tumors, carcinoma of spine, tuberculosis of the vertebral column, fibrosis of sacral ligaments.
3. Patient suffering from infectious diseases, pregnant women.
4. Patients contraindicated for basti treatment as per classical texts of *Ayurveda*.

Consent: Patients fulfilling criteria for selection were included under study after receiving their written consents.

Withdrawal from the Study:

- Discontinuation of treatment during trial.
- Development of any complication at any point of time when treatment is continuing.

Period of Study - 4weeks (32dyas),

Follow Up - Weekly follow up.

Statistical Analysis: Statistical analysis was done on all details obtained from case record form. Statistical test as per requirement statistical test was applied. Level of significance at 5% level. A special proforma was designed which included all the important and relevant data related to *Gridhrasi*. The following sign and symptoms of *Gridhrasi* (Sciatica) were assessed before and after treatment in both the groups.^{8,9}

Kati Rukka(Low backradiating pain), *Stambha*(Stiffness), *Toda* (pricking sensation), *Tandra*(Lethargy), *Arochak*(Tastelessness), *Janusandhisphuran*(Twitching Sensation in knee joint), *Agnimandya*(Diminished Appetite), SLR (Straight Leg Raising), La-

segue's Sign. Following grading pattern were adopted for the subjective as well as objective parameters for the assessment of clinical condition of patients before treatment (BT) and after treatment (AT).

1] *Kati Rukka*(Low backradiating pain):

- 0- No pain
- 1- Mild pain complained by patient when asked
- 2- Patient frequently complained of pain and has painful look
- 3- Excrucitation pain associated with painful cries and agonizing look

2] *Stambha*(Stiffness):

- 0- SLR 90⁰
- 1- SLR 61⁰-80⁰
- 2- SLR 31⁰-60⁰
- 3- SLR 0⁰-30⁰

3] *Toda* (pricking sensation):

- 0- No pricking sensation
- 1- Mild pricking sensation sometimes
- 2- Frequent pricking sensation
- 3- Severe pricking sensation all the time

4] *Tandra*(Lethargy):

- 0- *Notandra*
- 1- Mild *tandra*
- 2- Moderate *tandra*
- 3- Severe *tandra*

5] *Arochak*(Tastelessness):

- 0- No complains
- 1- 1-2 times weekly complains of no desire to eat anything
- 2- 3-4 times weekly complains of no desire to eat anything
- 3- Always complains of no desire to eat anything

6] *Janusandhisphuran*(Twitching Sensation in knee joint):

- 0- No twitching
- 1- Sometimes for 5-10 minutes
- 2- Daily for 10-30 minutes

- 3- Daily for 30-60 minutes
- 7] Agnimandya(Diminished Appetite):
 - 0- No complains
 - 1- 1-2 times weekly complains of anorexia
 - 2- 3-4 times weekly complains of anorexia
 - 3- Always complains of anorexia
- 8] SLR (Straight Leg Rising)
 - 0- SLR 90⁰
 - 1- SLR 61⁰-80⁰
 - 2- SLR 31⁰-60⁰
 - 3- SLR 0⁰-30⁰
- 9] Lasegue’s Sign:
 - 0- Nopain when ankle is dorsiflexed in supine position with hips flexed
 - 1- Mild pain when ankle is dorsiflexed in supine position with hips flexed.
 - 2- Moderate pain when ankle is dorsiflexed in supine position with hips flexed
 - 3- Sever pain when ankle is dorsiflexed in supine position with hips flexed

ric as well as nonparametric tests could be applicable. But after treating this data by Statistical Software, it was found that Distribution of Data was not according to Normal Distribution [Gaussian distribution]. That is why “t” test was not applicable [as for application of “t” test requires data to be have normal distribution]. After taking expert advice of Statistician, data was treated with first Wilcoxon Match Paired Test for every symptom of each group to check whether given treatment makes any changed in disease or not.

The Score magnitude where treated as sign & rank given accordingly.

Where,

S.D.: Standard Deviation

S.E.: Standard Error

E.S.: Extremely significant

V.S.: Very Significant

N.S.: Not Significant

S.: Significant

Data when treated with Wilcoxon assuming

OBSERVATIONS AND RESULTS:

Criteria for selection of test:

Though the data collected in this study was 'Rating Scale' data; both paramet-

Table no. 1] Application of Wilcoxon matched pairs sign rank test for each symptom of Group-A:

Symptoms	Mean		S.D.		Wilcoxon two-tailed 'p' value	Significance	Spearman's co-efficient 'r'
	BT	AT	BT	AT			
KatiRukka (Low back radiating pain)	2.350	0.7500	0.4894	0.4443	<0.0001	ES	0.1816
Stambha (Stiffness)	2.000	1.500	0.4588	0.8272	0.0078	VS	0.5579
Toda (pricking sensation)	2.250	0.7500	0.4443	0.4443	<0.0001	ES	0.3333
Tandra(Lethargy)	1.950	1.050	0.9987	0.6863	<0.0001	ES	0.7515
Arochak(Tastelessness)	1.250	0.6500	0.7684	0.4894	0.0020	VS	0.5038
Janusandhisphuran (Twitchingin knee joint)	1.000	0.9000	0.7255	0.7881	0.5000	NS	0.9152
Agnimandya(Diminished Appetite)	1.200	0.5000	0.7678	0.5130	0.0002	ES	0.6708
SLR (Straight Leg Raising)	2.000	0.6500	0.4588	0.4894	<0.0001	ES	0.4688
Lasegue’s Sign	2.050	0.8500	0.5140	0.4894	<0.0001	ES	0.2282

Table no. 2] Application of Wilcoxon matched pairs sign rank test for each symptom of Group-B:

Symptoms	Mean		S.D.		Wilcoxon two-tailed 'p' value	Significance	Spearman's co-efficient 'r'
	BT	AT	BT	AT			

KatiRukka (Low back radiating pain)	2.350	0.7000	0.4894	0.5712	<0.0001	ES	0.1793
Stambha (Stiffness)	2.200	0.6000	0.5231	0.5982	<0.0001	ES	0.2179
Toda (pricking sensation)	1.950	0.9500	0.6048	0.3940	<0.0001	ES	0.1917
Tandra(Lethargy)	1.450	0.4000	0.6863	0.5026	<0.0001	ES	0.5371
Arochak(Tastelessness)	1.200	0.4500	0.7678	0.5104	0.0010	ES	0.2604
Janusandhisphuran (Twitching in knee joint)	1.100	0.5000	0.7881	0.6070	0.0005	ES	0.7187
Agnimandya(Diminished Apetite)	1.150	0.3500	0.6708	0.4894	0.0002	ES	0.3039
SLR (Straight Leg Raising)	2.200	0.5500	0.5231	0.6048	<0.0001	ES	0.2502
Lasegue's Sign	2.150	0.7500	0.3663	0.6387	<0.0001	ES	0.5595

The two-tailed P value is < 0.0001, for many symptoms, in both the groups. This concludes that difference between values Before & After treatment is considered to be extremely significant. But in some symptoms like *Stambha* (Stiffness) and *Aro-*

chak(Tastelessness) of Group- A it is very significant whereas in symptoms *Janusandhisphuran* (Twitching in knee joint) of Group-A it is not significant.

Table no. 3] Showing comparison between total score in both Groups:

(N=20)	Group-A	Group-B
Mean	10.05	12.000
SD	3.576	2.772
SEM	0.7996	0.6198
Min.	5.000	7.000
Max.	18.000	17.000
Passed normality	No	No
Mann-Whitney U statistic=127.50, One tailed 'p' value = 0.02495, considered Significant		

Result:The Results were obtained by considering the difference in total score for before and after treatment between two groups, the value for U is 127.50 with One tailed 'p'

value = 0.02495, which indicates significant difference between two groups.

Table no. 4] Showing difference between total score of two Groups symptomatically:

(N=20)	Group-A	Group-B
Mean	17.091	21.909
SD	10.084	8.154
SEM	3.040	2.459
Min.	2.000	12.000
Max.	32.000	33.000
Passed normality	Yes	Yes
Test applied unpaired 't' test, Two tailed 'p' value = 0.2329, considered NotSignificant		

Result: The Results were obtained by considering the difference in symptoms of total score for the two groups; the p value is

0.2329 which indicates not significant difference between two groups.

DISCUSSION

Gridrasi is 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. The chances of occurrence is expected to be increasing through the coming years due to the increasing tendency for computerization and also because of hectic routines resulting in postural abnormalities, increasing body weight, mental stress, unwholesome diet etc., all of which leads to a fertile condition for the occurrence of *Gridrasi*,

Gridrasi is a painful condition in which the person can't sit and walk properly that hampers normal activity. Almost of all signs and symptoms of *Gridrasi* resemble with the condition of Sciatica described by modern text. Group- A showed statistically significant results in subjective parameters, however, there is no significant result in *Janusandhisphuran* (Twitching in knee joint). Group- B showed extremely significant results in all subjective parameters Thus Group- B are better than Group- A, in all parameters. Difference between both groups, makes it clear that clinical efficacy of Group-B [*Erandmooladi nirooh basti* and *Prasarani oil anuvasan basti*] were better than that of Group-A [*Pathyadi guggul*].

Mode of action of Pathyadi guggul:

Pathyadi guggul due to its *katu, tiktarasa* and *ushnaveerya* causes *panchan* of *sampitta* and *agnideepan*, thus curing the *vikruti* of *pachakpitta* and *samanvayu* respectively. Also due to its *laghuguna* it act as *stroto-shodhi* and *kaphashamak* which cures the symptoms like: *shotha stambha*(stiffness) *gaurav* etc.

Pathyadi guggul due to its *madhur veepaka* and *ushna veerya* will cause *vatanuloman*, *bruhan* and *poshan* of *Gridrasi nadi*, as a result of which the symptoms like: *ve-*

dana(Pain), *stambha*(Stiffness) etc. subside.¹⁰

Mode of action of Erandmooladi nirooh and Prasarani oil anuvasan basti:

Erandmooladi nirooh basti acts mostly on *vyan*, *apan*, and *samanvayu*, *pachak pitta*, *kledak bodhak* and *shleshak kapha*. *Erandmooladi nirooh basti* enters the *pakvashaya* via anal canal, *pakvashaya* is the main site of *vata*. This *basti* having *tikta rasa* causes *amapachan*, *agnideepan* and *rochan*. Thus in *Gridrasi Erandmooladi nirooh basti* will work on sign and symptoms mentioned in *Ayurved* text. *Prasarani* oil due to its *snigdha guna* reduces the *dhatu kshayajanya vata prakopa* and causes *bruhan* and *poshan Gridrasi nadi*.^{11,12}

CONCLUSION

Gridrasi can be equated with Sciatica or Lumbago Sciatica Syndrome in modern parlance. *Pathyadi guggul* and *Erandmooladi nirooh basti* and *Prasarani oil anuvasan basti* have both shown encouraging results in management of *Gridrasi*. *Gridrasi* can be effectively managed by giving *Pathyadi guggul* and *Erandmooladi nirooh basti* and *Prasarani oil anuvasan basti*. On comparison it was found that patients given *Erandmooladi nirooh basti* and *Prasarani oil anuvasan basti* showed better result than those given *Pathyadi guggul*. *Pathyadi guggul* if given to patients for a longer period of time might show better results, nevertheless, it can be concluded that both these treatment plans improve the life style of *Gridrasi* patients by giving them very good relief.

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