



Research Article

A COMPARATIVE STUDY TO EVALUATE THE EFFECT OF MATRA BASTI WITH SHUDDHA BALA TAILA AND KSHEERABALA TAILA IN THE MANAGEMENT OF GRIDHRASI

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ABSTRACT

In present scenario the most common cause of disability in patients under 45years of age is back pain. *Gridhrasi* can be correlated to Sciatica where pain radiates from buttock into thigh, calf, and occasionally the foot. In the surgical treatment of Sciatica may have serious post-operative complications. *Basti* being superior treatment in *Vatavyadhis* and keeping in view of lacunae in medical management and due to the complications caused by modern surgical interventions there is a need of a safe, potent, cost effective, simple and short-term therapy for this condition. So here is an attempt to compare the effect of *Matra Basti* with *Shuddha Bala Taila* (group A) and *Ksheerabala Taila* (group B) in the management of *Gridhrasi*. Where 40 patients who fulfilled the inclusion criteria randomly and distributed into 2 groups of 20 patients each. Clinical symptoms were given grading according their severity. After completion of the treatment result were assessed and statistically analyzed to know the significance. Considering the overall effect of the treatment, comparatively patients in group B showed better results in Parameters Pain (<0.05), *Stambha* (<0.05), and SLR (<0.05). Whereas patients in Group A showed better results in *Spandana* (<0.05) where as both group patients showed equal result in *Toda*. So, the *Ksheerabala Taila* is more effective than *Shuddha Bala Taila* in the management of *Gridhrasi*.

INTRODUCTION

The importance of back pain in world is underscored by the following, Back pain is the most common cause of disability in patients under 45years of age. According to one survey, 50% of working adults, admitted with a back injury every year and approximately 1% of the population is chronically disabled because of back pain. According to another survey, low back pain is extraordinarily common, stands second after common cold. Life time prevalence of low back pain ranges from 60 to 90% with an annual incidence of 5%.

Prevalence of sciatica ranges from 11 to 40%. No one appears immune although physical fitness might maintain the health. Low back pain is the commonest disorder which affects the movement of lower limb particularly in most productive period of life, out of which 40% of persons will have radiating pain and this comes under the umbrella of Sciatica. This type of presentations were common in ancient era too, named it as *Gridhrasi*, which is mentioned in classical text as *Shoola Pradhana Vatavyadhi*^[1]. So many researches were conducted on this disease; still the complete treatment of this is a mirage. The symptoms of *Gridhrasi* can be well correlated with "Sciatica" in modern terminology. Sciatica is a very painful condition in which pain begins in the lumbar region and radiates along the posterolateral aspect of thigh and leg^[2]. Hence, movement of the affected leg is restricted and patient fails to walk properly. In modern medicine, analgesics or surgeries are the only remedies for this disease and it may produce several

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adverse effects. While in *Ayurvedic* texts, the drugs and procedures for the treatment of this *Roga* are described in detail. There are two types of treatment explained in *Ayurvedic* literature known as *Shaman* and *Shodhan*^[3]. But according to Charakacharya, *Doshas* alleviated by fasting and digestion (i.e. *Shaman*) at times may aggravate again but those eliminated by *Shodhan* do not reoccur^[4]. Since *Gridhrasi* is a *Vatavyadhi*^[5], *Basti* is preferred line of treatment in this condition. *Basti* is considered as half of the *Chikitsa*^[6]. Some physicians even go to the extent of suggesting *Basti* as a wholesome treatment. Classical texts have demonstrated the effectivity of *Basti* as an important line of treatment in *Gridhrasi*^[7]. Many formulations related to *Basti* have been mentioned in the classical texts which, are yet to be tried. To fulfil our aim the following regimen has been selected as described in *Sahasrayogama Vatavyadhi Chikitsa*^[8]. As the medical science recognized the severity, a medicament which relieves the pain, improves the clinical condition, and controls the disease with minimal cost is the need of the present era. This need should be systematically evaluated by pathological investigations for efficacy and safety.

MATERIALS AND METHODS

Study design: Randomized comparative clinical study.

Source of data

- Literary source:** All the literatures about the disease will be reviewed and documented for the study.
- Sample source:** Patients will be diagnosed and selected from the OPD and IPD of department of PG studies in Panchakarma of Shri Dhanvantari Ayurveda Hospital, medical camps and other referrals.
- Pharmaceutical source:** *Shuddha Bala taila* and *Ksheerabala tail* prepared at SDAC pharmacy.

Methods of collection of data

Sample size: Minimum of 40 patients between the age group of 20-60yrs will be selected irrespective of sex, religion, occupation and economic status who fulfilled the inclusion criteria and distributed into 2 groups have 20 patients each.

Method of sampling: Convenient method.

Diagnostic criteria: Patients with the signs and symptoms of *Gridhrasi* along with Sciatica will be taken for the study.

- Pain in *Sphik, Uru, Janu, Jangha, Pada* i.e., along the course of sciatic nerve
- Lumbosacral tenderness
- Lumbo sacral stiffness
- Positive SLR test

Inclusion criteria

- Age group - 20 to 60years.
- Presence of classical features of *Gridhrasi* i.e. *Ruk, Toda, Stamba*.
- Pain along the course of Sciatic nerve.
- Straight leg raising test being Positive.
- Matra Basti Yoga* patients.

Exclusion criteria

- Patients with history of major systemic illness which interfere the treatment.
- Patients with traumatic lumbar lesion, cord compression due to lumbar disk prolapse and lumbar Neoplasm.
- Patients having infection like Bone TB.
- Patients not fit for *Matra Basti*.
- Patients have Fissure-in-Ano and Hemorrhoids.

Investigation: Any relevant investigations if needed.

Research Design: Diagnosed *Gridhrasi* patients based on given parameter, subjected for the randomized comparative clinical trial as follows,

Group A: Group A given *Matra Basti* with 72ml of *Shuddha Bala taila*.

Group B: Group B given *Matra Basti* with 72ml of *Ksheerbala taila*.

Treatment schedule

Purvakarma

Preparation of patient: *Stanika Abhyanga* with *Tila taila* followed by *Stanika sweda* by *Ushna Jala*. *Laghu Ahara Sevana* and patient is advised to pass the urges if any.

Preparation of drug: The above mentioned lukewarm oils are mixed with *Shatapushpa Churna* 2gms and *Saindhava Lavana* 2gms and kept ready in syringe.

Pradhanakarma: *Basti Karma* performed in left lateral position by following all precautionary measures as mentioned in classics.

Paschatakarma

- After administration of the *Basti* the patient will be laid in supine position for hundred counts and both lower limbs will be lifted for three times.
- Gluteal region will be struck with palm.
- Mardan* of soles and palms.

Observation period: 1st, 9th and 18th day of the treatment.

Follow up: 18th day

Total study Duration: 18 days.

Assessment criteria

Assessment will be done on basis of following subjective and objective parameters before and after treatment.

a) Subjective Parameters

Table 1: Grading of Subjective Parameters

<i>Ruja - Pain</i>	No pain	0
	Painful, walks without limping	1
	Painful, walks with limping but without support	2
	Painful, can walk only with support	3
	Painful, unable to walk	4
<i>Stamba</i>	No stiffness	0
	Mild stiffness	1
	Moderate stiffness	2
	Severe stiffness	3
<i>Spandana</i>	Absent	0
	Present	1
<i>Toda</i>	Absent	0
	Present	1

b) Objective Parameters:

Table 2: Grading of Objective Parameters

SLR Test	75-90°	0
	60-74°	1
	45-59°	2
	30-44°	3
	Up to 30°	4

OVER ALL ASSESSMENT OF CLINICAL RESPONSE

The overall effect of the clinical trial was assessed by considering all the parameters of assessment before and after treatment as follows;

Table 3: Overall Assessment of Clinical Response

Completely relieved	100 % relief
Marked response	More than 60% relief
Moderate response	40 to 60 % relief
Mild response	20-40 % relief
No change	Below 20 % relief

Statistics Analysis: For the statistical analysis “t” testis applied to assess the significance within the group and between the group.

RESULT AND DISCUSSION

Comparative analysis of effect of treatment on *Ruk* (Pain) between Group A and B, with ‘t’ value 1.8, the result is statistically insignificant ($p>0.0.828$). However, there was 78.33% improvement in Group A and 83.06% improvement in the Group B individually. *Toda* (Pricking Sensation) between Group A and B, is statistically insignificant. Both groups have same improvement. *Stambha* (Stiffness) between Group A and B, with ‘t’ value 1.831, the result is statistically insignificant ($p>0.082$). However, there was 75.61 % improvement in Group A and 83.73% improvement in the Group B individually. *Spandana* (Involuntary movement/ Twitching) between Group A and B, the result is statistically significant. However, there was 57.9% improvement in Group A and 55.56% improvement in the Group B individually. SLR Test between Group A and B, with ‘t’ value 2.179, the result is statistically insignificant ($p>0.042$). However, there was 75% improvement in Group A and 81.97% improvement in the Group B individually. In Group A, out of 20 patients after the completion of treatment 4 (20%), 5 (25%), 8 (40%), 3 (15%) shows cured, marked improvement, moderate improvement and mild improvement respectively.

There was no patient found unchanged. In Group B, out of 20 patients after the completion of treatment 6 (30%), 10 (50%), 2 (10%), 2 (10%) shows cured, marked improvement, moderate improvement and mild improvement respectively. None of the patient was found unchanged. (Table no.7)

Effect on Pain: Pain is the cardinal symptom of *Gridhrasi*. All the 40 patients presented with Pain. Significant improvement was seen in both the groups. Group B was 83.06% and Group A was 78.33%. **Effect on Toda:** 100% reduction is seen in both groups. **Effect on Stambha:** In present study significant reduction in *Stambha* was seen in both the groups. In which Group B was (83.73%) more potent to reduce *Stambha* than Group A (75.61). **Effect on Spandana:** with respect to *Spandana* same result in both groups i.e., Group A is 57.9% and Group B is 55.56%. **Effect on Straight leg raising test:** There was significant improvement seen after the treatment across two groups. Both the groups showed highly significant improvement after treatment whereas Group A was 75% and Group B was 81.97%. (Table no.6)

Table 4: Individual study of the parameters in Group A

Parameter	Mean		M.D.	Reduction	S.D.	S.E.	Df	T value	P value	Sig.
	B.Rx	A.Rx								
Pain	3.00	0.65	2.35	78.33%	0.81	0.18	19	12.931	<0.005	HS
Toda	0.85	0.0	0.85	100%	0.00	0.00	19	10.38	<0.0001	HS
Stambha	2.05	0.5	1.55	75.61%	0.74	0.86	19	13.58	<0.001	HS
Spandana	0.95	0.4	0.55	57.9%	0.48	0.69	19	4.819	0.0001	HS
SLR test	3.0	0.75	2.25	75.0%	0.65	0.80	19	11.05	<0.0001	HS

Table 5: Individual study of the parameters in Group B

Parameter	Mean		M.D.	Reduction	S.D.	S.E.	Df	T value	P value	Sig
	B.Rx	A.Rx								
Pain	2.95	0.5	2.45	83.06%	0.92	1.01	19	11.60	0.0001	HS
Toda	0.95	0.00	0.95	100%	0.00	0.00	19	19.00	<0.0001	HS
Stambha	2.15	0.35	1.80	83.73%	0.65	0.80	19	13.08	<0.0001	HS
Spandana	0.9	0.4	0.50	55.56%	0.48	0.69	19	4.359	0.0003	HS
SLR test	3.05	0.55	2.50	81.97%	0.78	0.88	19	13.52	<0.0001	HS

Table 6: Comparative effect of treatment b\w group A & B

Parameter	Mean		M.D.	Reduction	Df	T value	P value	Sig.
	Group A	Group B						
	A.Rx	A.Rx						
Pain	0.65	0.5	0.15	23.08%	19	1.8	0.828	NS
Toda	-----	-----	-----	-----	19	-----	-----	NS
Stambha	0.5	0.35	0.15	30%	19	1.831	0.082	NS
Spandana	0.4	0.4	0.00	100%	----	-----	-----	NS
SLR test	0.75	0.55	0.20	26.67	19	2.179	0.0421	NS

Discussion on overall response of patients

In Group A, out of 20 patients after the completion of treatment, 4 (20%), 5 (25%), 8 (40%), 3 (15%) patient were got cured, had marked improvement, had moderate improvement and mild improvement respectively. No one was found unchanged. (Table no.4)

In Group B, out of 20 patients after the completion of treatment, 6 (30%), 10 (50%), 2 (10%), 2 (10%) cured, marked improvement, moderate improvement and mild improvement respectively. There was no one found unchanged.

Considering the overall effect of the treatment, comparatively patients in group B (*Matrabasti* with *Ksheerabalataila*) showed better results in Parameters Pain, *Stambha*, and SLR (Table no.5). Whereas patients in

Group A (*Matrabasti* with *Shuddha bala taila*) showed better results in *Spandana* where as both group patients showed equal result in *Toda*. (Table no.6)

Table 7: Overall response of the treatment

Group	Overall Response									
	Cured		Marked improvement		Moderate improvement		Mild improvement		No Change	
	No. of patients	%	No. of patients	%	No. of patients	%	No. of patients	%	No. of patients	%
A	04	20	05	25	08	40	03	15	00	00
B	06	30	10	50	02	10	02	10	00	00

CONCLUSION

The following conclusion can be drawn by the present clinical trial as, '*Gridhrasi nadi/dhamni*' can be correlated with Sciatic nerve and '*Gridhrasi*' with the condition Sciatica in Contemporary science. *Basti karma* is the one of the prime treatment modalities in *Gridhrasi*. *Matra Basti* is a subdivision of *Sneha Basti* which acts as *Brimhana* and *Vatarogahara*. *Matra Basti* is an effective and easy procedure, can be followed at O.P.D. level. *Matrabasti* with *Ksheerabala taila* is more effective in Pain, *Stambha*, and SLR. *Matrabasti* with *Shuddha Bala Taila* more effective in *Spandana*. Both *Taila* are equal potent to reduce *Toda*. There is no significant difference in result of both *Taila* in the management of *Gridhrasi*. Statistically the overall response of the treatment was significant in both the groups and non-significant across the two group (Table no.7). The qualitative data shows that the *Ksheerabala Taila* is more effective than *Shuddha Bala Taila* in the management of *Gridhrasi*.

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