

**A COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFECT OF GUGGULUTIKTAKA GHRITA MATRA BASTI AND BRIHATSAINDHAVADI TAILA MATRA BASTI IN GRIDHRASI WITH SPECIAL REFERENCE TO SCIATICA**

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**ABSTRACT**

*Gridhrasi* is included one among the *Vata nanatmaja* and *samanyaja Vata vikaras*. The cardinal symptom of *Gridhrasi* is *Sakthiutkshepa nigraha* i.e. Restriction in upward lifting of the lower limb which is very much similar to the disease 'Sciatica' in modern parlance. Modern medicine limits the management of the disease by providing a range of analgesic and sedative type of medication, Physiotherapy and lastly surgery which are also not the final answer. Therefore, there is a need to find effective and curative intervention strategies from the Ayurvedic treasure of therapeutics. Among the line of treatment described for *Gridhrasi*, the *Bastikarma* itself occupies most important place. In classics various forms of *Bastis* have been described for the treatment of *Gridhrasi*, amongst which *Matra Basti* therapy was taken for Clinical trial. The therapeutic effect of *Matra Basti* in *Gridhrasi* is known by various studies conducted so far. In this study *Guggulutiktaka ghrita* and *Brihatsaindhavadi taila* were taken to evaluate the efficacy and comparison in *Matra Basti*.

**KEYWORDS:** Gridhrasi, Sciatica, Matra Basti, Basti, Guggulutiktaka Ghrita, Brihatsaindhavadi taila

**INTRODUCTION**

Gridhrasi is a Vata Vyadhi, characterized by Sthamba, Ruja, Toda and Muhur Spandana in Sphik, Kati, Prusta, Uru, Janu, Jangha and Pada<sup>1</sup>. Signs and symptoms of Sciatica are parallel to the Gridhrasi. In the modern parlance Gridhrasi can be correlated with sciatica symptomatically. Sciatica is relatively common condition with a life time incidence varying from 13% to 40%<sup>2</sup> Management of Sciatica in modern science involves administration of NSAIDs and narcotics. These may help to relieve symptoms but these may cause gastritis,

headache, dizziness, liver & kidney dysfunction etc.<sup>3,4,5</sup>

**Matra Basti:** Among the line of treatment described for Gridhrasi, Bastikarma occupies most important place. In classics various forms of Bastis have been described for the treatment of Gridhrasi. Anuvasana Basti is mainly indicated in the line of treatment of Asthi and Majjavaha srotogata vyadhis<sup>6</sup>. Asthi and majja is the seat of vata<sup>7</sup>. Also Asthi and Vata have ashraya ashreyi sambandha. Anuvasana basti nourishes the Asthi dhatu and thereby pacifies its ashrayee

vatadosha<sup>8</sup>. Matra basti is a simplest type of Anuvasana Basti, described in classics. Matra basti is the major and effective treatment modality and is said to be brumhana and Vata rogahara<sup>9</sup> which can be adopted without any restrictions at O.P.D. level without any complication.

**Guggulutikataka Ghrita<sup>10</sup>** : It contains Guggulu as Principle drug along with other tikta rasa pradhan dravyas. It is the best Vatahara drug and is useful in Vatavyadhi. It acts as srotoshodhaka and relieves the sroto sanga. Ghrita is sneha, madhura, sheeta, vata hara, deepana and does tarpana of the asthi dhatu. All other dravyas are balya and having sandhaaneeya properties. Most of these are tikta rasa, ushna guna which are vata-kapha hara. Acharya Vagbhata has explained its indication in ‘Asthi-sandhi-majja gata prabala sameera’ Hence it is effective in Gridhrasi

**Brihat Saindhavadi Taila<sup>11</sup>** :Brihatsaidhavadi Taila contains fourteen important herbs, three types of Lavana and Eranda Taila which are of vatahara and balya properties. Eranda taila and saindhava lavana are excellent vata shamaka. Saindhava lavana mainly acts as sroto-shodhaka, Vedana-shamaka and Vatanulomaka. It has very good results in aamavata, sarva vata vyadhi, parshva shola. It is vata, kapha shamaka, deepana, bhedana, ama-shodhana-prashamana, and anulomaka. Bhaishajya ratnavali-kara has explained that this taila is best in ruja in jangha, uru, paada prishta

bhaga and best vata-kpha hara. Hence it is effective in Gridhrasi.

### **AIMS & OBJECTIVES**

-To evaluate the effect of Guggulutiktaka Ghrita & Brihatsaindhavadi Taila Matra Basti in Gridhrasi

-To compare the effect of Guggulutiktaka Ghrita and Brihat Saindhavadi Taila Matra Basti in Gridhrasi

### **TREATMENT METHODOLOGY**

Two groups were made A & B each of 15 Patients.

#### **Inclusive Criteria:**

- Diagnosed case of Gridhrasi (Sciatica)
- Patients between age group of 20 to 60 years of either sex
- Patients who are fit for Basti Karma
- Positive Straight Leg raising test

#### **Exclusion criteria:**

- Patients with Neoplastic condition and Pott’s spine, HIV, HbsAg
- History of any trauma to spine or Any structural spinal deformity such as Scoliosis, Kyphosis, Fracture of Pelvis, Femur, Ankylosing Spondylitis
- Neurological conditions like Hemiplegia, Parkinson’s disease etc.
- Pregnancy and lactation period
- Patients suffering from any other systemic disorders which will interfere with the study

SAMPLE SIZE	GROUP "A"	GROUP "B"
	15 Patients	15 Patients
<b>Method</b>	<i>Guggulutiktaka Ghrita Matra Basti</i>	<i>Brihatsaindhavadi Taila Matra Basti</i>
<b>Purva Karma</b>	<i>Sthanika Abhyanga with Murchita Tila Taila, Sthanika Swedana(Nadi sweda),Laghu Bhojana</i> was advised	<i>Sthanika Abhyanga with Murchita Tila Taila, Sthanika Swedana(Nadi Sweda) ,Laghu Bhojana</i> was advised
<b>Pradhana Karma</b>	<i>Matra Basti with GTG Matra-80ml (72ml<sup>12</sup>+ 8ml wastage) Kala – After bhojana at noon</i>	<i>Matra Basti with BST Matra-80 ml (72ml+ 8ml wastage) Kala – After bhojana at noon</i>
<b>Paschat Karma</b>	<i>Tadana Karma,massage over abdomen,head low position and rest</i>	<i>Tadana Karma,massage over abdomen, head low position and rest</i>
<b>Duration</b>	8 days	8 days
<b>Follow up</b>	On 17 <sup>th</sup> day	On 17 <sup>th</sup> day

**Assesment criteria:**

1. Subjective Criteria:

<b>RUK(Pain)</b>	<b>STAMBHA (Stiffness)</b>	<b>TODA (Pricking Sensation)</b>	<b>SPANDANA (Twitching)</b>	<b>GRADE</b>
No Pain	No stiffness	No pricking sensation	No twitching	0
Occasional Pain	Some times for 5-10 minutes	Occasionally pricking sensation	Some times for 5-10 minutes	1
Mild pain (No difficulty in walking)	Daily for 10-30 minutes	Mild pricking sensation	Daily for 10-30 minutes	2
Moderate Pain (Slight difficulty in walking)	Daily for 30-60 minutes	Moderate pricking sensation	Daily for 30-60 minutes	3
Severe Pain (Severe difficulty in walking)	Daily more than 1 hour	Severe pricking sensation	Daily more than 1 hour	4

2. Objective Parameters

1	SLR Test <sup>13</sup>	Leg raise angle	Grade
		71-90	0
		51-70	1
		31-50	2
		Up to 30	3

2	Bragard's Sign <sup>14</sup>	Pain increases with dorsi-flexion	Positive
		Pain does not increases with dorsi-flexion	Negative

### OBSERVATIONS & RESULTS:

- AGE:** Out of 30 patients, 11 patients, that is 53.3% were aged above 50yrs, and minimum of 10% belonged to the age of below 40yrs.

Age in Years	Group A	Group B	Total
<40	0(0%)	3(20%)	3(10%)
40-50	8(53.3%)	3(20%)	11(36.7%)
>50	7(46.7%)	9(60%)	16(53.3%)
Total	15(100%)	15(100%)	30(100%)
Mean ± SD	49.8±7	50.33±9.93	50.07±8.45

Samples are age matched with P=0.866, student t test

- GENDER:** Among the 30 patients majority were females (63.3%) and the rest of the patients (36.7%) were males.

Gender	Group A	Group B	Total
Female	9(60%)	10(66.7%)	19(63.3%)
Male	6(40%)	5(33.3%)	11(36.7%)
Total	15(100%)	15(100%)	30(100%)

P=1.000, Not Significant, Chi-Square Test

- EDUCATIONAL STATUS:** 43.3% patients were graduates, 36.7% could read and write, and 20% were illiterate.

Education	Group A	Group B	Total
Graduate	7(46.7%)	6(40%)	13(43.3%)
Read & Write	3(20%)	8(53.3%)	11(36.7%)
Illiterate	5(33.3%)	1(6.7%)	6(20%)
Total	15(100%)	15(100%)	30(100%)

P=0.075+, Signiant, Fisher Exact Test

- OCCUPATION:** Maximum numbers of patients were sedentary now (50%) (most of them not able to work due to pain), about 46.7% were had an active occupation.

Occupation	Group A	Group B	Total
Active	8(53.3%)	6(40%)	14(46.7%)
Physical Labor	1(6.7%)	0(0%)	1(3.3%)
Sedentary	6(40%)	9(60%)	15(50%)
Total	15(100%)	15(100%)	30(100%)

P=0.466, Not Significant, Fisher Exact Test

5. **DIET:** In this study, 83.3% patients were of vegetarians and remaining (16.7%) were of mixed diet.

Food habits	Group A	Group B	Total
Mixed	2(13.3%)	3(20%)	5(16.7%)
Vegetarian	13(86.7%)	12(80%)	25(83.3%)
Total	15(100%)	15(100%)	30(100%)

P=1.000, Not Significant, Fisher Exact Test

6. **SOCIO-ECONOMIC STATUS:** Majority of the patients belonged to middle class (43.3%), (33.3%) were poor and (23.33%) were in higher middle class category.

SES	Group A	Group B	Total
Higher Middle Class	5(33.3%)	2(13.3%)	7(23.3%)
Middle Class	5(33.3%)	8(53.3%)	13(43.3%)
Poor	5(33.3%)	5(33.3%)	10(33.3%)
Total	15(100%)	15(100%)	30(100%)

P=0.427, Not Significant, Fisher Exact TEST

7. **RUK/PAIN:** Both Group A and B showed significant improvement in Ruk/Pain. About 46% of patients did not have any pain (grade 0), and about 53% of patients had occasional pain (grade 1)

RUK	Before Treatment	After Treatment	After Follow up	% Difference
GROUP A				
• 0	0(0%)	4(26.7%)	7(46.7%)	46.7%
• 1	0(0%)	8(53.3%)	8(53.3%)	53.3%

• 2	0(0%)	3(20%)	0(0%)	0.0%
• 3	6(40%)	0(0%)	0(0%)	-40.0%
• 4	9(60%)	0(0%)	0(0%)	-60.0%
<b>GROUP B</b>				
• 0	0(0%)	3(20%)	7(46.7%)	46.7%
• 1	0(0%)	9(60%)	8(53.3%)	53.3%
• 2	0(0%)	3(20%)	0(0%)	0.0%
• 3	7(46.7%)	0(0%)	0(0%)	-46.7%
• 4	8(53.3%)	0(0%)	0(0%)	-53.3%
Total	15(100%)	15(100%)	15(100%)	-
P Value	1.000	0.874	0.718	

Chi-Square Test/Fisher Exact Test

- 8. TODA/PRICKING PAIN:** Group B showed better improvement in toda as about 93% of patients had no toda, and 6.7% had occasional toda .As compared to 86% with no toda and 13.3% with ocasionala toda in group A

Toda	Before Treatment	After Treatment	After Follow up	% Difference
<b>GROUP A</b>				
• 0	0(0%)	12(80%)	13(86.7%)	86.7%
• 1	1(6.7%)	3(20%)	2(13.3%)	6.6%
• 2	11(73.3%)	0(0%)	0(0%)	-73.3%
• 3	3(20%)	0(0%)	0(0%)	-20.0%
<b>GROUP B</b>				
• 0	0(0%)	14(93.3%)	14(93.3%)	93.3%
• 1	7(46.7%)	1(6.7%)	1(6.7%)	-40.0%
• 2	4(26.7%)	0(0%)	0(0%)	-26.7%
• 3	4(26.7%)	0(0%)	0(0%)	-26.7%

Total	15(100%)	15(100%)	15(100%)	-
P Value	0.020*	0.597	1.000	-

Chi-Square Test/Fisher Exact Test

- 9. STAMBHA/STIFFNESS:** Group A showed better improvement in sthamba as 60% patients had no stambhana and 40% had minimal stambha. Whereas in group B Only 26% of patients showed complete reduction in sthamba and 73% still had minimal sthamba.

Sthamba	Before Treatment	After Treatment	After Follow up	% Difference
GROUP A				
• 0	0(0%)	2(13.3%)	9(60%)	60.0%
• 1	0(0%)	11(73.3%)	6(40%)	40.0%
• 2	0(0%)	2(13.3%)	0(0%)	0.0%
• 3	8(53.3%)	0(0%)	0(0%)	-53.3%
• 4	7(46.7%)	0(0%)	0(0%)	-46.7%
GROUP B				
• 0	0(0%)	1(6.7%)	4(26.7%)	26.7%
• 1	0(0%)	10(66.7%)	11(73.3%)	73.3%
• 2	0(0%)	4(26.7%)	0(0%)	0.0%
• 3	7(46.7%)	0(0%)	0(0%)	-46.7%
• 4	8(53.3%)	0(0%)	0(0%)	-53.3%
Total	15(100%)	15(100%)	15(100%)	-
P Value	1.000	0.002**	0.139	-

Chi-Square Test/Fisher Exact Test

- 10. SPANDANA/TWICHING :** Both group A and B showed good improvement in spandana with about 86% of patients completely recovered and 2% with minimal spandana,

Spandana	Before Treatment	After Treatment	After Follow up	% Difference
GROUP A				

• 0	0(0%)	11(73.3%)	13(86.7%)	86.7%
• 1	0(0%)	4(26.7%)	2(13.3%)	13.3%
• 2	2(13.3%)	0(0%)	0(0%)	-13.3%
• 3	12(80%)	0(0%)	0(0%)	-80.0%
• 4	1(6.7%)	0(0%)	0(0%)	-6.7%
<b>GROUP B</b>				
• 0	0(0%)	10(66.7%)	13(86.7%)	86.7%
• 1	0(0%)	5(33.3%)	2(13.3%)	13.3%
• 2	6(40%)	0(0%)	0(0%)	-40.0%
• 3	9(60%)	0(0%)	0(0%)	-60.0%
• 4	0(0%)	0(0%)	0(0%)	0.0%
Total	15(100%)	15(100%)	15(100%)	-
P Value	0.214	1.000	1.000	-

Chi-Square Test/Fisher Exact Test

**11. SLR :** Both group A and B showed 100% improvement in SLR test

SLR	Before Treatment	After Treatment	After Follow up	% Difference
<b>GROUP A</b>				
• 0	0(0%)	12(80%)	15(100%)	100.0%
• 1	0(0%)	3(20%)	0(0%)	0.0%
• 2	1(6.7%)	0(0%)	0(0%)	-6.7%
• 3	14(93.3%)	0(0%)	0(0%)	-93.3%
<b>GROUP B</b>				
• 0	0(0%)	13(86.7%)	15(100%)	100.0%
• 1	0(0%)	2(13.3%)	0(0%)	0.0%
• 2	1(6.7%)	0(0%)	0(0%)	-6.7%



• 3	14(93.3%)	0(0%)	0(0%)	-93.3%
Total	15(100%)	15(100%)	15(100%)	-
P Value	1.000	1.000	1.000	-

Chi-Square Test/Fisher Exact Test

**12. BRAGARD'S SIGN** : Both group A and B showed 100% improvement in Bragard's Sign.

Bragrad's sign	Before Treatment	After Treatment	After Follow up	% Difference
<b>GROUP A</b>				
• Negative	2(13.3%)	14(93.3%)	15(100%)	86.7%
• Positive	13(86.7%)	1(6.7%)	0(0%)	-86.7%
<b>GROUP B</b>				
• Negative	4(26.7%)	15(100%)	15(100%)	73.3%
• Positive	11(73.3%)	0(0%)	0(0%)	73.3%
Total	15(100%)	15(100%)	15(100%)	-
P Value	0.651	1.000	1.000	-

Chi-Square Test/Fisher Exact Test

**OVERALL RESPONSE:** In group A out of 15 patients, 11patients, about 73% had completely recovered, And 4 patients about 26% had minimal complaints after the completion of the test. In group B aout of 15 patients, 13patients, about 86% had completely recovered, And 4 patients about 13% had minimal complaints after the completion of the test.

Overall Response	Before Treatment	After Treatment	After Follow up	% Difference
<b>GROUP A</b>				
• 0	0(0%)	0(0%)	4(26.7%)	26.7%
• 1	0(0%)	9(60%)	11(73.3%)	73.3%
• 2	0(0%)	5(33.3%)	0(0%)	0.0%
• 3	0(0%)	0(0%)	0(0%)	0.0%
• 4	15(100%)	1(6.7%)	0(0%)	-100.0%

GROUP B				
• 0	0(0%)	0(0%)	2(13.3%)	13.3%
• 1	0(0%)	8(53.3%)	13(86.7%)	86.7%
• 2	0(0%)	7(46.7%)	0(0%)	0.0%
• 3	1(6.7%)	0(0%)	0(0%)	-6.7%
• 4	14(93.3%)	0(0%)	0(0%)	-93.3%
Total	15(100%)	15(100%)	15(100%)	-
P Value	1.000	0.710	0.651	-

Overall Response	Group A	Group B	Total	P Value
Before Treatment	3.08±0.25	2.88±0.32	2.98±0.30	0.073+
After Treatment	0.47±0.19	0.45±0.20	0.46±0.19	0.764
After Follow up	0.20±0.16	0.24±0.15	0.22±0.15	0.456

## DISCUSSION

**Age:** Out of 30 patients, 11 patients, that is 53.3% were aged above 50yrs, and minimum of 10% belonged to the age of below 40yrs. Sciatica can be due to a number of age-related changes, such as spinal disc changes and to a lesser extent, spinal stenosis and bone spurs, and other degenerative change.

**Gender:** Among the 30 patients majority that is 19 were females that's about 63.3% and the rest of the patients 11(36.7%) were males. As female patients are more prone to the disease with multiple pregnancies, heavy household work can be the triggering factors.

**Educational Status:** 43.3% patients were graduates, 36.7% could read and write, and 20% were illiterate. There is no specific

contribution of educational status on the study.

**Occupation:** Numbers of patients were sedentary and active patients is equal in this study. The sedentary or non-active patients contributed to about 50%, that is 15 patients. Most of them not able to work due to pain and some have retired due to age. Remaining patients are having an active occupation.

**Diet:** In this study, 83.3% patients were of vegetarians and remaining (16.7%) were of mixed diet. But there was no specific incidence of disease with diet. As nutritional deficiency can cause nerve /bone weakness, vegetarians may be considered more prone to the disease than non vegetarians.

**Socio-Economic Status:** Majority of the patients belonged to middle class (43.3%),

(33.3%) were poor and (23.33%) were in higher middle class category. There is no specific contribution of socioeconomic status on the study.

**Ruk/Pain:** Both Group A and B showed significant improvement in Ruk/Pain. There was no difference in the reduction of pain in both the groups. About 46% of patients did not have any pain (grade 0), and about 53% of patients had occasional pain (grade 1)

**Toda/Pricking Pain** Group B showed better improvement in toda as about 93% of patients had no toda, and 6.7% had occasional toda. As compared to 86% with no toda and 13.3% with occasional toda in group A

**Sthamba/ Stiffness:** Group A showed better improvement in sthamba as 60% patients had no stambhana and 40% had minimal stambha. Whereas in group B only 26% of patients showed complete reduction in sthamba and 73% still had minimal sthamba

**Spandana /Twitching pain:** Both group A and B showed good improvement in spandana with about 86% of patients completely recovered and 2% with minimal spandana,

**SLR :** Both group A and B showed 100% improvement in SLR test

**Bragarda's Sign:** Both group A and B showed 100% improvement in Bragard's.

**Overall Response:** In group A out of 15 patients, 11 patients, about 73% had completely recovered; And 4 patients about 26% had minimal complaints after the completion of the test.

In group B out of 15 patients, 13 patients, about 86% had completely recovered, And 4 patients about 13% had minimal complaints after the completion of the test. Both groups had showed significant improvement,

patients of Group B had slightly better in overall response.

## CONCLUSION

'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 modality in Gridhrasi. Matra Basti is a subdivision of Sneha Basti acts brimhana and vatarogahara. Matra Basti is an effective and easy procedure, can be followed at O.P.D. level. Guggulutiktaka Ghrita Basti was very effective in ruk and aspandana. It showed better results in the sthamba than brihatsaidhavadi taila, Brihatsaindhavadi Taila Basti was also very effective in ruk spandana, But better in relieving toda as compared to guggulutiktaka ghrita.. As per the statistical analysis, comparatively the overall response of the treatment Both groups had significant effect, group b showed slightly better results.

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