

A COMPARATIVE STUDY ON DIFFERENT YOGA BASTI SCHEDULES WITH ARDHAMATRIKA BASTI IN GRIDHRASI

Anu S¹, Sethu R²

¹Final year PG Scholar, Dept. of Panchakarma, Alvas Ayurveda Medical College, Moodbidiri, Karnataka, India

²Final year PG Scholar, Dept. of Dravyaguna Vijnana, Alvas Ayurveda medical College, Moodbidiri, Karnataka, India

Email: anuspanicker2007@gmail.com

ABSTRACT

Pain is the important symptom which will be an obstacle in the daily life of a person. *Gridhrasi* is one such syndrome where the pain is a dominant feature. *Basti* is considered as prime line of treatment. *Ardhamatrika Basti* mentioned by *Kaviraja Vangasena* is taken for the study due to its *Vata*, *Kapha* and *Shoolahara* properties. This study was taken to compare the effect with normal (8 days) and modified (5 days) schedule of *Yoga Basti* in *Gridhrasi*. The subjects were allotted in two groups, viz. Group YB having 20 cases and group MYB consisting of 20 cases who were administered *Niruha* with *Ardhamatrika Basti* and *Anuvasana* with *Moorchita Tila Taila*. Both group YB and MYB showed statistically highly significant effect in all the criteria's except *Tandra* in case of group MYB. The percentage of improvement in Group YB on *Ruk* is 30.83%, *Stambha* is 34.16%, *Toda* is 43.33%, *Spandana* is 37.50%, *Tandra* is 27.50%, *Gaurava* is 18.33%, *Aruchi* is 28.33%, SLR test is 38.33% and duration of walking is 42.5%. The percentage of improvement in Group MYB on *Ruk* is 36.67%, *Stambha* is 65.41%, *Toda* is 65.83%, *Spandana* is 41.66%, *Tandra* is 15.83%, *Gaurava* is 45.83%, *Aruchi* is 15%, SLR test is 40% and duration of walking is 40.83%. While comparing statistically insignificant result was observed in all criteria which highlight the efficacy of the treatment on both the groups.

Keywords: *Gridhrasi*; *Basti Karma*; *Ardhamatrika Basti*; *Yoga Basti*; Modified schedule.

INTRODUCTION

In the present era, the lifestyle of the human being is gradually shifting away from healthy living and therefore people fall victim of various diseases. Sedentary lifestyle, stress, improper posture, continuous jerky movements, long travelling etc. put maximum pressure on the spine and lower portion of the pelvis¹. Low back pain is more common among people aged 40-80 years, with the overall number of individual affected expected to increase as population ages². Ap-

proximately 9 to 12% of people have low back pain at any given point in time, and nearly 25% report having it at some point over any one-month period³. About 40% of people have low back pain at some point in their lives, with estimates as high as 80 % among people in the developed world⁴. About 50-70% of people get affected by low back pain with incidence of Sciatica more than 40%⁵.

Basti is the therapy in which the medicine administered through anorectal route travels to the *Nabhi* (umbilical region), *Kati* (lumbar region), *Parshwa* (flanks) and *Kukshi* (abdomen) does the *Vilodana* of *Dosha* and *Shakrit*, and eliminates them easily after nourishing the body⁶. It is mainly indicated in *Vata* predominant diseases. *Basti* administered to *Pakvasaya* helps not only to regulate *Vata* but also controls other *Dosha* involved in pathogenesis of the disease⁷. Hence *Basti* is considered as *Ardhachikithsa*⁸. *Basti Karma* is classified as *Yoga Basti*, *Kala Basti* and *Karma Basti* based on the number of *Basti* administered. *Yoga Basti* comprises of five *Anuvasana Basti* and three *Niruha Basti* which are given alternatively starting and ending with *Anuvasana Basti*⁹.

Ardhamatrika Basti is a variety of *Basti* possess half the dosage of maximum permissible dosage for *Niruha Basti*, hence the name. It can be administer daily even after having food, without any fear of complications, even to *Sukumara*, *Vridha*, *Stree* and those who have fear towards the procedures¹⁰. It is indicated in *Vata-rakta*, *Kshaya*, *Kasa*, *Kushta*, *Vishamajwara*, *Asmari*, *Moothrakrichra*, *Gulma*, *Pleeha*, *Haleemaka*. It also possess benefit as a *Vrushya Basti* increasing the quality and quantity of *Shukra*. Moreover *Ardhamatrika Basti* is indicated in either *Vata*, *Pitta*, *Kapha* or *Sannipata* disorders. It also improves *Bala*, *Varna* and *Agni* of the individual¹¹.

Basti Karma plays a major role by mitigating the *Vata* and thus produce relief in the signs and symptoms of *Gridhrasi*. *Ardhamatrika Basti* comprising of *Dashamoola* as *Kashaya Dravya* and *Satahva* as *Kalka Dravya* has *Vata Kaphahara* properties¹². Thus it may yield better relief in the signs and symptoms of *Gridhrasi*. It is told that after *Niruha Pratyagamana* patient has to take bath in *Ushna Jala* and take *Drava Pradhana Laghu Ahara*. When it gets digested in the evening hours again *Laghu Bhojana* is given and *Anuvasana* may be administered on the same day of *Niruha* for *Pusti*¹³, thus the duration of *Yoga Basti* can be reduced to 5 days. In the present social scenario reduction in the total duration of the whole procedure is essential, so here is an effort made to rectifying the same by adopting a modified *Yoga Basti* schedule of

five days including five *Anuvasana Basti* and three *Niruha Basti*.

MATERIALS AND METHODS

A Comparative clinical study including 41 patients fulfilling the diagnostic and inclusion criteria of *Gridhrasi* (sciatica) was selected for the study and was randomly assigned into 2 equal Groups YB (*Yoga Basti*) & MYB (*Modified Yoga Basti*) using Lottery Method were selected as per signs and symptoms of *Gridhrasi* (sciatica). The patient was diagnosed based on the clinical signs and symptoms including Radiating pain starting from *Sphik* (buttock) and *Kati* (lumbar region) to *Prishta* (back), *Uru* (thigh), *Janu* (knee), *Janga* (calf region) and *Pada* (feet) and Positive SLR Test.

Inclusion Criteria

- Patient fulfilling the diagnostic criteria like radiating pain starting from *Sphik* (buttock) and *Kati* (lumbar region) to *Prishta* (back), *Uru* (thigh), *Janu* (knee), *Janga* (calf region) and *Pada* (feet).
- Patients between age group 20 – 60 years of either sex.
- Patient who were fit for *Basti Karma*.

Exclusion Criteria

- Traumatic, Infective, Neoplastic, Degenerative conditions of Spine.
- Congenital spinal anomalies.
- Patients unfit for *Basti Karma*.
- Pregnancy and lactating women.

Procedure

Group YB: *Ardhamatrika Basti* as *Yoga Basti* schedule of 8 days.

Group MYB: *Ardhamatrika Basti* as *Yoga Basti* schedule of 5 days.

For *Anuvasana*, *Moorchita Tila Taila* was used for both groups.

Drugs required for the Preparation of *Basti*

MakshikamLavanamSnehamKalkamKwathamItiKramat |

AavapetaniruhenaamHyeshamSanyajaneVidhihi ||
(A. Hr. Su 19/45)

The sequential mixing of *Makshika*, *Saindhava Lavana*, *Sneha Dravya*, *Kalka*, *Kashaya* and *Avapa Dravya* is essential for homogeneous mixture.

TABLE 1: Preparation of medicine

Niruha Basti for Group YB and MYB	
The medicine needed for Niruha Basti is prepared as per following Yoga	
Madhu	100 ml
Saindhava	15 gm
Moorchita Tila Taila	100 ml
Shatahva Choorna	15 gm
Dasamoola Kashaya	400 ml

Study Design**TABLE 2:** Basti Schedule for Group YB

Basti Schedule	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8
	A	N	A	N	A	N	A	A

TABLE 3: Basti Schedule for Group MYB

Basti Schedule	Day 1	Day 2	Day 3	Day 4	Day 5
	A	N	N	N	A
		A	A	A	

Group YB – Total study duration 8 days.

Group MYB – Total study duration 5 days.

Follow Up-Both Groups will be followed once in fifteen days for one month.

Assessment Criteria

Assessment of the condition were done based on detailed Performa adopting standard scoring methods of subjective & objective parameters and were analysed statistically using 't' test.

Subjective Parameters

1. Ruk (pain).
2. Stamba (stiffness).
3. Toda (pricking sensation).
4. Spandana (throbbing).
5. Tandra (weakness).
6. Gaurava (heaviness).
7. Aruchi (anorexia).

Objective Parameters

8. SLR test.
9. Distance of walking (50ft).

SAMPLE SIZE OF ESTIMATION

40 patients fulfilling the diagnostic and inclusion criteria of Gridhrasi (sciatica) was selected for the study

and was randomly assigned into 2 equal Groups YB (*Yoga Basti*) & MYB (Modified *Yoga Basti*) consisting of 20 patients each, using Lottery Method. The 20 patients in control Group YB (8 days) received the treatment as 1st, 3rd, 5th, 7th and 8th days of *Anuvasana Basti* of 80 ml *Moorchitha Tila Taila* in the afternoon after meal and 2nd, 4th and 6th days of *Niruha Basti* in the morning hours in empty stomach. Whereas the 20 patients in trial Group MYB (5 days) received the treatment as 1st, 2nd, 3rd, 4th and 5th days of *Anuvasana Basti* of 80 ml *Moorchitha Tila Taila* in the afternoon after meal and 2nd, 3rd and 4th days of *Niruha Basti* in the morning hours in empty stomach.

OBSERVATIONS

41 patients of *Gridhrasi* were registered for the series. They were treated in two groups' viz. *Ardhamatrika Basti* as *Yoga Basti* schedule of 8 days (Group YB) & *Ardhamatrika Basti* as *Yoga Basti* schedule of 5 days (Group MYB). The age, sex, religion occupation, education etc., noted in the patients of this series was recorded.

TABLE 4: Observation on Retention Time Of *Basti*

	<i>Ardhamatrika Basti</i>		<i>Anuvasana Basti</i>	
	Maximum Retention Time	Minimum Retention Time	Maximum Retention Time	Minimum Retention Time
Group YB	25 min	1 min	22 hrs 10 min	1 hr 15 min
Group MYB	30 min	2 min	23 hrs 30 min	45 min

RESULTS**Comparative Effect of Both Treatment in Signs and Symptoms on 9th and 6th Day**

There is statistically no significant difference in all signs and symptoms between Group YB and Group MYB as shown in the table.

TABLE 5: Comparative Effect of Both Treatments in Signs and Symptoms on 9th and 6th Day

Signs and Symptoms	Mean Difference	Percentage Relief %		“t” Value	“p” Value
		Group YB	Group MYB		
<i>Ruk</i>	0.0500	30.8333	36.6667	0.277	>0.050
<i>Stambha</i>	-0.200	34.1667	65.4167	-1.648	>0.050
<i>Toda</i>	-0.150	43.3333	65.8333	-1.342	>0.050
<i>Spandana</i>	0.200	37.5	41.6667	1.378	>0.050
<i>Tandra</i>	0.150	27.5	15.8333	0.900	>0.050
<i>Gaurava</i>	-0.300	18.3333	45.8333	-1.763	>0.050
<i>Aruchi</i>	0.200	28.3333	15	1.192	>0.050
SLR test	0.0500	38.3333	40	0.295	>0.050
Duration of walking	0.250	42.5	40.8333	1.561	>0.050

Comparative Effect of Both Treatments in Signs and Symptoms on 16th Day

There is statistically no significant difference between Group YB and Group MYB except in *Stambha* ($P < 0.05$) as shown in the table.

TABLE 6: Comparative Effect Of Both Treatment In Signs And Symptoms On 16th Day

Signs and Symptoms	Mean Difference	Percentage Relief %		“t” Value	“p” Value
		Group YB	Group MYB		
<i>Ruk</i>	0.300	51.25	49.5833	1.788	>0.050
<i>Stambha</i>	0.400	62.5	72.9167	2.430	<0.050
<i>Toda</i>	0.1000	67.0833	80.4167	0.575	>0.050
<i>Spandana</i>	0.250	53.3333	59.1667	0.960	>0.050
<i>Tandra</i>	0.250	42.5	25	1.060	>0.050
<i>Gaurava</i>	-0.1000	27.5	53.3333	-0.418	>0.050
<i>Aruchi</i>	-0.0500	30	25	-0.218	>0.050
SLR test	0.150	52.5	52.9167	0.946	>0.050
Duration of walking	0.250	55.8333	58.3333	1.459	>0.050

Comparative Effect of Both Treatments in Signs and Symptoms on 30th Day

There is statistically no significant difference between Group YB and Group MYB as shown in the table.

TABLE 7: Comparative Effect Of Both Treatment In Signs And Symptoms On 30th Day

Signs and Symptoms	Mean Difference	Percentage Relief %		“t” Value	“p” Value
		Group YB	Group MYB		
<i>Ruk</i>	0.100	60.4167	70.4167	0.497	>0.050
<i>Stambha</i>	0.400	61.25	74.5833	1.949	>0.050
<i>Toda</i>	0.1000	67.0833	80.4167	0.575	>0.050
<i>Spandana</i>	0.250	53.3333	59.1667	0.960	>0.050
<i>Tandra</i>	0.300	45	25	1.227	>0.050
<i>Gaurava</i>	0.000	30	48.3333	0.000	>0.050
<i>Aruchi</i>	-0.0500	25	20	-0.218	>0.050
SLR test	0.250	68.3333	67.5	1.344	>0.050
Duration of walking	0.350	63.3333	42.5	1.543	>0.050

Comparative Effect of the Treatment

On Comparative effect of the treatment, Group YB showed 20% mild improvement, 60% moderate improvement, 15% marked improvement and 5% complete improvement in patients. Group MYB showed 35% mild improvement, 15% moderate improvement,

35% marked improvement and 15% complete improvement in patients.

Over All Effect of the Treatment

Out of 40 patients, 27.5% got mildly improved relief, 37.5% got moderately improved relief, 25% got markedly improved relief and 10% got completely improved relief which is shown in the table.

TABLE 8: Over All Effect Of The Treatment

Effect of Therapy	No of Patients			Percentage of Relief
	Group YB	Group MYB	Total	
Completely 100 % Relief	1	3	4	15%
Markedly Improved >75% Relief	3	7	10	35%
Moderately Improved 50-75 % Relief	12	3	15	15%
Mildly Improved 25-50 % Relief	4	7	11	35%
No Change <25 % Relief	0	0	0	0%

DISCUSSION

Gridhrasi is a *Rujapradhana Nanatmaja Vata Vyadhi*¹⁴, interfering with the functional ability of low back and lower limbs. It is particularly seen in most active period of life, involving working class people causing hindrance in routine life.

The *Lakshanas* of disease are *Ruk*, *Toda*, *Muhur-spanda*, and *Stambha* in the *Sphik*, *Kati*, *Uru*, *Janu*, *Jangha* and *Pada*¹⁵ which may be co-related to sciatica in which neuralgia along the course of Sciatic nerve often produces radiating pain into the buttock and lower limbs¹⁶. Low back pain is the major cause of morbidity throughout the world affecting mainly the young adults.

Sequential administration of the *Snehana*, *Swedana*, *Basti*, *Siravyadha* and *Agnikarma* are lines of treatment of *Gridhrasi* as explained in the Ayurveda literature¹⁷. In that *Basti Karma* is more effective in most of the *Vata Vyadhi* and is capable of performing multiple therapeutic actions like *Shodhana*, *Shamana*, *Lekhana*, *Brimhana* by virtue of drugs used. So *Basti* is opted for the clinical study. In the present social scenario long term hospitalization is not preferred by the patients, so a necessity of reduction in the time duration of procedure is required.

Considering these points, the present clinical study was conducted on 41 patients of *Gridhrasi*, who were treated in two groups; both received *Ardhamatrika*

Basti as Niruha and Moorchita Tila Taila as Anuvāsana. In Group YB – *Yoga Basti* schedule of 8 days and Group MYB – *Yoga Basti* schedule of 5 days. The results of this study are being discussed here under.

The patients were assessed before treatment for the severity of their symptoms. Thereafter 8 days and 5 days course of *Basti* was given. During follow up period no treatment and internal medicines were given. The follow up was taken on 16th day and on 30th day.

Comparative effect of Group YB and Group MYB: After treatment in both Group YB and Group MYB all criteria were significant except *Tandra* ($P > 0.050$) in Group MYB. During follow up on 16th day and 30th day all criteria were found to be statistically significant in both Groups. The comparison between the groups showed that all the criteria were statistically insignificant on after treatment and during follow up on 16th day and 30th day except *Stambha* ($P < 0.050$) which showed statistically significant effect on 16th day.

Discussion on Result

Ruk, Stambha, Toda and *Spandana* are produced mainly by *Vata Prakopa* and *Basti Karma* is one of the best treatments of *Vata*. *Ardhamatrika Basti* comprise of mainly *Dasamoola Kwatha* and *Moorchita Tila Taila* which are directly act upon *Vata* and *Kapha Dosh*, hence will help in getting improvement on conditions. As both groups received same treatment there were no significant changes seen with statistical analysis. But clinically, the group received the *Ardhamatrika Basti* as modified *Yoga Basti* schedule (5 days) has shown more improvement in *Ruk, Stambha, Toda, Spandana* and *Gaurava*, probably as the effect of the 3 *Niruha* which have been given continuously for 3 days.

CONCLUSION

The study showed significant results on all the symptoms after the treatment assessment for both groups except *Tandra* in the trial group. After follow up study in all the subjective and objective criteria of *Gridhrasi* both groups showed significant result, which highlights the efficacy of each groups as well as the sustained effect. On comparison between the groups, sta-

tistically insignificant result was observed in all criteria which highlight the efficacy of both the groups. Clinically *Ardhamatrika Basti* as modified *Yoga Basti* schedule (5 days) provided comparatively better relief in *Ruk, Stambha, Toda, Spandana* and *Gaurava* when compared to *Ardhamatrika Basti* as *Yoga Basti* schedule (8 days).

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