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Research Article

A COMPARATIVE CLINICAL STUDY ON *MATRA BASTI* WITH *BILVA TAILA* AND *MAHANARAYANA TAILA* IN *GRIDHRASI* W.S.R.TO SCIATICA

Greeshma.K[1]*, Gautham Shetty[2]

*[1]PG Scholar, [2]Professor & HOD Department of Panchakarma, Karnataka Ayurveda Medical College, Hoigebail, Mangalore, Karnataka, India.

ABSTRACT

Panchakarma is a unique therapeutic procedure explained in Ayurveda because of its preventive, promotive and rejuvenative properties as well as providing a radical cure. *Charaka* and *Vaghbata* have described *Basti* as *Ardha Chikitsa* which itself is self-explanatory about its importance. The cardinal signs and symptoms of *Gridhrasi* are *Sthambha, Ruk, Toda* and *Spandana* starting first in *Sphik* and radiating to *Kati, Prishta, Uru, Janu, Jangha*, and *Pada*. Sciatica, in which neuralgia along the course of sciatic nerve often produces pain, numbness, tingling sensation, radiating from the lower back and upper buttock down the back of the thigh, calf and to the foot. Many of the clinical features of *Gridhrasi* resemble to that of sciatica. It is statistically estimated that four out of five (80%) of the population is exposed to the back pain lasting for more than a day at sometimes during their life. This reaches peak in 25-50 years of age. *Gridhrasi* seems to occur with about same time frequency in patient with sedentary occupation as those doing heavy work. *Mahanarayana Tailam* is considered as one of the best oil to mitigate *Vata*. Due to *Snigdha* and *Ushna Guna* it acts on *Vata* and *Kapha Dosha*. In *Bilva taila, Bilva* having *Katu tiktha, Kashaya rasa* and *Tikshna ushna guna* can mitigate *Vata kapha vikaras* and *Bilva* is told in *Asthapana gana dravya* by *Acharya charaka* and hence can be used in *Gridhrasi*. So this study is planned to know the comparative efficacy of *Bilvataila* and *Mahanarayana taila matra basti* in the management of *Gridhrasi*. *Basti* is considered among one of the important treatment procedures in *Gridhrasi*. *Matrabasti* being a variety of *Sneha Basti*, plays a major role in the management of *Gridhrasi.*

INTRODUCTION

Panchakarma is a unique therapeutic procedure explained in Ayurveda because of its preventive, promotive and rejuvenative properties as well as providing a radical cure.

Charaka and *Vaghbata* have described *Basti* as *Ardha Chikitsa* which itself is self-explanatory about its importance. The cardinal signs and symptoms of *Gridhrasi* are *Sthambha, Ruk, Toda* and *Spandana* starting first in *Sphik* and radiating to *Kati, Prishta, Uru, Janu, Jangha*, and *Pada*.

Sciatica, in which neuralgia along the course of sciatic nerve often produces pain, numbness, tingling sensation, radiating from the lower back and upper buttock down the back of the thigh, calf and to the foot. Many of the clinical features of *Gridhrasi* resemble to that of sciatica.

It is statistically estimated that four out of five (80%) of the population is exposed to the back pain lasting for more than a day at sometimes during their life. This reaches peak in 25-50 years of age. *Gridhrasi* seems to occur with about same time frequency in patient with sedentary occupation as those doing heavy work.

Mahanarayana Tailam is considered as one of the best oil to mitigate *Vata*. Main ingredients of *Mahanarayana Tailam* are *Bilva, Ashwagandha, Brihati, Gokshura, Shyonaka, Bala, Paribhadra, Kantakari, Punarnava, Atibala, Agnimantha, Prasarini, Patala*, sesame oil, goat milk, *Shatavari* juice, *Rasna, Ashwagandha* due to *Snigdha* and *Ushna Guna* it acts on *Vata* and *Kapha Dosha*.

In *Bilva taila,* main ingredients are *Bilva phala majja, Ajaksheera, Jala, Gomutra, Tilataila* in this *Bilva* have *Katu tiktha, Kashaya rasa* and *Tikshna ushna guna* can mitigate *Vata kapha vikaras* and *Bilva* is told in *Asthapanagana dravya* by *Acharya charaka* and hence can be used in *Gridhrasi*. So this study is planned to know the comparative efficacy of *Bilva taila* and *Mahanarayana taila matra basti* in the management of *Gridhrasi. Basti* is considered among one of the important treatment procedures in *Gridhrasi. Matra basti* being a variety of *Sneha Basti*, plays a major role in the management of *Gridhrasi.*

This clinical trial "A Comparative Clinical Study On Effect on *Matra Basti* With *Bilva Taila* and *Mahanarayana Taila* in *Gridhrasi* w.s.r. to Sciatica" is taken for the study.

MATERIALS AND METHODS

All the Ayurvedic, modern literatures and contemporary texts including the journals, websites about the disease the disease, drug and formulation will be reviewed and documented for the intended study.

The *Bilva Taila* formulation which is selected for the study will be prepared in pharmacy of Karnataka Ayurveda Medical College and *Mahanarayana Taila* purchased from renowned Ayurveda pharmacy.

Patients visiting OPD and IPD of the Department of Panchakarma, Karnataka Ayurveda Medical College Hospital, and other camps complain of *Gridhrasi* will be included for the proposed study.

40 patients of *Gridhrasi* are randomly selected and equally divided into 2 groups.

Group A: 20 patients will receive *Bilva Taila Matra Basti.*

Group B: 20 patients will receive *Mahanarayana Taila Matra Basti.*

The patients having signs and symptoms of *Gridhrasi* were screened and those who fulfilled the below mentioned inclusion criteria were selected for the study.

Signs and symptoms of *Gridhrasi* which are explained in the texts of Ayurveda and Contemporary texts are the criteria of diagnosis.

a. Exclusion Criteria
- Aged below 25 and above 55 years.
- Suffering from any other chronic systemic diseases.
- *Basti Ayogya* persons.
- Chronic cases of *Gridhrasi* with the history of 5 years.
- Pregnant and lactating women.
- Any injury/trauma etc.
- Congenital spine anomalies.

b. Inclusion Criteria
- Aged between 25 to 55 years.
- Having the classical signs and symptoms of *Gridhrasi.*
- *Basti Yogya* persons.
- Patients of both sexes.

Table 1: *Shoola* in *Kati pradesha*

Shoola in *Kati pradesha*	Grade
Absent	0
Mild	1
Severe	2

Table 2: *Stabdata* in *Kati pradesha*

Stabdata in *Kati pradesha*	Grade
Absent	0
Mild	1
Severe	2

Table 3: Range of movement of lumbosacral (LSR) spine

Range of movement of lumbar spine	Grade
75 to 90 degree	0
30 to 74 degree	1
<30 degree	2

Table 4: Walking time

Walking time	Grade
< 15 sec	0
16-30 sec	1
>30 sec	2

Table 5: Group Allocation

Group	Treatment	Dose	No. of Days
A	*Bilva Taila Taila*	70ml	7 days
B	*Mahanarayana Taila*	70ml	14 days

Plan of Study

The study was a comparative clinical trial on 40 patients of *Gridhrasi* selected using purposive (non-random) sampling technique with pre and posttest design.

40 patients fulfilling the diagnostic and inclusion criteria were selected by convenience sampling method and were treated in two groups of 20 patients each.

Matra Basti with *Bilva Taila* about 70ml will be done for 7 days, from day 1 to day 7. The pre and post therapeutic subjective and objective criteria will be recorded on day 1 before the first sitting of *Matra Basti* and on day 7 after the completion of the treatment.

Matra Basti with *Mahanarayana Taila* about 70ml is done for 7 days, from day 1 to day 7. The pre and post therapeutic subjective and objective criteria will be recorded on day 1 before the first sitting of

Matra Basti and on day 7 after the completion of the treatment.

Data was collected using case report form (CRF) designed for the study. The collected data was tabulated and analysed by SPSS (Statistical Package for Social Sciences) version 22 by using appropriate statistical test. Results were expressed as mean, standard deviation and proportions.

The data is checked for normality and found that it does not follow normality; hence non-parametric tests are used. To compare the effect of treatment, Wilcoxon Sign rank test is used. It is a non-parametric test analogue to paired t-test when data does not follow normality. p-value of <0.05 was considered to be statistically significant, < 0.01 was highly significant and <0.001 was considered.

OBSERVATION AND RESULTS

Table 6: Patient Status

S.No.	Patients	Group A	Group B	Total
1.	Registered	20	20	40
2.	Completed	20	20	40

In the clinical study total 40 patients were registered in both groups. Among them 20 patients were in group A and 20 patients in group B. Total 40 patients had completed the treatment.

Table 7: Age Wise Distribution of Patients n=40

Age group (in years)	Number of Patients		Total	%
	Group-A	Group-B		
25-35	10	12	22	55
36-45	04	04	08	20
46-55	06	04	10	25
Total	**20**	**20**	**40**	**100.00**

The above table shows that maximum numbers of patients i.e., 55% belonged to age group of 25-35 years followed by 20% patients to 36-45 years of age group and only 25% patients belonged to 46-55 years of age group.

Table 8: Sex Wise Distribution

Sex	Number of Patients		Total	%
	Group-A	Group-B		
Male	17	14	31	77.50
Female	03	06	09	22.50
Total	**20**	**20**	**40**	**100.00**

Table shows that maximum number of patient's i.e., 82.22% were male and rest of 17.78% were female.

Table 9: Religion Wise Distribution Patients

Religion	Number of Patients		Total	%
	Group-A	Group-B		
Hindu	18	19	37	92.50
Muslim	02	01	03	07.50
Total	**20**	**20**	**40**	**100.00**

It is evident from above table that maximum 92.50% patients were Hindus followed by 07.50% of Muslims.

Table 10: Habitat Wise Distribution

Habitat	Number of patients		Total	%
	Group-A	Group-B		
Urban	15	17	32	80
Rural	05	03	08	20
Total	**20**	**20**	**40**	**100.00**

As per above mentioned data, it can be said that 80 % patients belonged to urban area and 20% patient belonged to rural area.

Table 11: Education Wise Distribution

Education	Number of patients		Total	%
	Group-A	Group-B		
Uneducated	02	00	02	05.00
Primary	13	19	32	80.00
Graduate	05	01	06	15.00
Total	**20**	**20**	**40**	**100.00**

The data of present studies shows that 80.00% patients were having Primary level education, 15% were Graduate and 5% patients were uneducated.

Table 12: Occupation Wise Distribution

Occupation	Number of patients		Total	%
	Group-A	Group-B		
Labour	07	12	19	40.75
Service	05	02	07	17.50
Housewife	02	05	07	17.50
Student	03	00	03	07.50
Business	03	01	04	10.00
Total	**20**	**20**	**40**	**100.00**

On considering the nature of occupation, it was found that maximum i.e., 55% patients were laborers followed by servicemen and housewives i.e., 17.50%, 10 % of business and 7.50% of students.

Table 13: Job Wise Distribution

Job	Number of patients		Total	%
	Group-A	Group-B		
Physical labour	07	12	19	47.50
Manual work	08	05	13	32.50
Sedentary work	05	03	8	20
Total	**20**	**20**	**40**	**100.00**

Table shows that maximum i.e., 47.50% patients were associated with physical labour in day to day life while 32.50% were doing manual work and 20% were associated with sedentary work style.

Table 14: Socio-Economic Status Wise Distribution

Socio-Economic status	Number of patients		Total	%
	Group-A	Group-B		
Poor	00	03	03	07.50
Middle	12	14	26	65
Upper-middle	08	03	11	27.50
Total	**20**	**20**	**40**	**100.00**

Table shows that maximum i.e., 65% patients were belonging to middle class, while 27.50% were from upper middle class and only 7.50% patients were poor.

Table 15: Marital Status Wise Distribution

Marital status	Number of patients		Total	%
	Group-A	Group-B		
Married	18	19	37	92.50
Unmarried	02	01	03	07.50
Total	**20**	**20**	**40**	**100.00**

Maximum 92.50% of the patients was observed married while 7.50% were unmarried.

Table 16: Diet Wise Distribution

Diet	Number of patients		Total	%
	Group-A	Group-B		
Vegetarian	7	9	16	40
Mixed	10	14	24	60
Total	**20**	**20**	**40**	**100.00**

Maximum of patients selected for the present study were having mixed diet i.e., 60% and rest i.e., 40% were having vegetarian diet.

Table 17: Dietetic Habit Wise Distribution

Dietetic habit	Number of patients		Total	%
	Group-A	Group-B		
Samashana	04	07	11	27.50
Vishamashana	06	09	15	37.50
Adhyashana	05	07	12	30
Virrudhashana	01	01	02	5
Anashana	00	00	00	00.00
Total	**20**	**20**	**40**	**100.00**

Observations of dietetic habit showed that majority of patients followed *Vishamashana* (37.50%) and rest followed *Adhyashana* (30%), *Samashana* (27.50%) and *Virrudhashana* (5%).

Table 18: Addiction Wise Distribution

Addiction	Number of patients		Total	%
	Group-A	Group-B		
Smoking	04	05	09	22.50
Tobacco	10	08	18	47.50
Alcohol	00	01	01	02.50
No addiction	06	06	12	30.00
Total	**20**	**20**	**40**	**100.00**

Table shows that 47.50% patients were having addiction of tobacco and 22.50% patients were having smoking as addiction. Only 2.50% patients had addiction to alcohol while rest i.e., 30.00% had not any addiction at all.

Table 19: Dominance of *Rasa* Wise Distribution

Rasa Dominant	Number of patients		Total	%
	Group-A	Group-B		
Madhura	12	10	22	55.00
Amla	03	05	08	20.00
Lavana	04	02	06	15.00
Katu	01	03	04	10.00
Tikta	00	00	00	0
Kashaya	00	00	00	0
Total	**20**	**20**	**40**	**100.00**

It is evident from the table that maximum patients were having *Katu* (55%), *Amla* (20%) and *Lavana Rasa* (15%) dominancy in their diet.

Table 20: Nature of Sleep Wise Distribution

Sleep	Number of patients		Total	%
	Group-A	Group-B		
Sound	18	19	37	92.50
Disturbed	02	01	03	07.50
Total	**20**	**20**	**40**	**100.00**

In this study majority of the patients i.e., 92.50% had sound sleep and only 07.50% patients were having disturbed sleep.

Table 21: Psychological Condition Wise Distribution

Psychological condition	Number of patients		Total	%
	Group-A	Group-B		
Happy	13	14	27	67.50
Worried	07	06	13	32.50
Total	**20**	**20**	**40**	**100.00**

In this study majority of the patients i.e., 67.50% had happy psychological condition and 32.50% patient was having worried psychological condition.

Table 22: Bowel History Wise Distribution

Bowel history	Number of patients		Total	%
	Group-A	Group-B		
Samyaka	14	15	29	72.50
Savibandha	06	05	11	27.50
Atipravritti	00	00	00	00.00
Total	**20**	**20**	**40**	**100.00**

In this study majority of the patients i.e., 72.50% had normal bowel habit and 27.50% patients were having constipated bowel habit. No patient complained of *Atipravritti* of *Mala* (diarrhea).

Table 23: Micturition Wise Distribution

Micturition	Number of patients		Total	%
	Group-A	Group-B		
Samyaka	19	20	39	97.50
Sadaha	01	00	01	02.50
Atipravritti	00	00	00	00.00
Alpa	00	00	00	00.00
Total	**20**	**20**	**40**	**100.00**

In this study majority of the patients i.e., 97.50% had normal maturation but 02.50% patient had burning maturation due to UTI.

Table 24: Effect of Therapy by *Bilva Taila Matra Basti*

Symptoms	Mean Score		% relief	S.D	S.E	T	P
	BT	AT					
Shoola	1.4	0.4	71.42	00.58	0.12	20.86	<0.001
Stabdata	1.35	0.1	92.58	00.71	0.15	06.50	<0.001
Range of Movement	1.6	0.6	62.05	00.56	0.12	08.16	<0.050
Walking time	1.65	0.5	69.69	00.60	0.13	01.73	<0.050

The above table shows that the *Shoola* was decreased 70.00% in *Bilva Taila* group which was found statistically highly significant. *Stabdata* was reduced up to 90.00% which was statistically highly significant also.

The range of movement was 82.35% which was highly significant statistically. Walking time was improved in 76.47% with statistically high significant results.

Table 25: Effect of Therapy by *Mahanarayanatailamatra Basti*

Symptoms	Mean Score		% Relief	S.D	S.E	t	P
	BT	AT					
Shoola	1.5	0.45	70.00	0.43	0.09	29.07	<0.001
Stabdata	1.25	0.05	96.00	0.74	0.16	06.48	<0.001
Range of Movement	1.7	0.3	82.35	0.58	0.12	08.14	<0.001
Walking time	1.7	0.4	76.47	0.47	0.10	01.36	<0.001

This table shows that the *Shoola* was decreased 71.42% in *Mahanarayana Taila* treated group which was statistically highly significant. *Stabdata* was reduced up to 92.53% which was statistically highly significant. The Range of movement was 62.05% which was significant statistically. Walking time was improved in 69.69% with statistically significant results.

Fig 1 & Fig 2 *Bilva phalamaja*   **Fig 3 & Fig 4: Preparation of *Bilv taila***

Fig 5: Arrangement for *Matravasthi*

DISCUSSION
Discussion on Observation
Age
Maximum numbers of patients i.e., 55% belonged to age group of 25-35 years followed by 20% patients to 36-45 years of age group and only 25% patients belonged to 46-55 years of age group.

Sex
Maximum number of patient's i.e., 82.22% was male and rest of 17.78% were female.

Religion
Maximum 92.50% patients were Hindus followed by 07.50% of Muslims.

Habitat
It can be said that 80% patients belonged to urban area and 20% patient belonged to rural area

Education
Studies shows that 80.00% patients were having Primary level education, 15% were graduate and 5% patients were uneducated.

Occupation
On considering the nature of occupation, It was found that maximum i.e., 55% patients were laborers followed by servicemen and housewives i.e., 17.50%, 10% of business and 7.50% of students.

Job
Maximum i.e., 47.50% patients were associated with physical labour in day to day life while 32.50% were doing manual work and 20% were associated with sedentary work style.

Socio-Economic
Maximum i.e., 65% patients were belonging to middle class, while 27.50% were from upper middle class and only 7.50% patients were poor.

Marital Status

Maximum 92.50% of the patients were observed married while 7.50% were unmarried.

Diet Wise

Maximum of patients selected for the present study were having mixed diet i.e., 60% and rest i.e., 40% were having vegetarian diet.

Dietetic Habit

Majority of patients followed *Vishamashana* (37.50%) and rest followed *Adhyashana* (30%), *Samashana* (27.50%) and *Virrudhashana* (5%).

Addiction

Shows that 47.50% patients were having addiction of tobacco and 22.50% patients were having smoking as addiction. Only 02.50% patients had addiction to alcohol while rest i.e., 30.00% had not any addiction at all.

Dominance of *Rasa*

It is evident from that the maximum patients were having *Katu* (55%), *Amla* (20%) and *Lavana Rasa* (15%) dominancy in their diet.

Nature of Sleep

Majority of the patients i.e., 92.50% had sound sleep and only 07.50% patients were having disturbed sleep.

Psychological Condition

Majority of the patients i.e., 67.50% had happy psychological condition and 32.50% patient was having worried psychological condition.

Bowel History

Majority of the patients i.e., 72.50% had normal bowel habit and 27.50% patients were having constipated bowel habit. No patient complained of *Atipravritti* of *Mala* (diarrhea).

Micturition

Majority of the patients i.e., 97.50% had normal maturation but 02.50% patient had burning maturation due to UTI.

Effect of Therapy by *Bilva Taila Matra Basti*

The present study shows that the *Shoola* was decreased 70.00% in *Bilva Taila* group which was found statistically highly significant. *Stabdata* was reduced up to 90.00% which was statistically highly significant also. The range of movement was 82.35% which was highly significant statistically. Walking time was improved in 76.47% with statistically high significant results.

Effect of Therapy by *Mahanarayanataila Matra Basti*

This present study shows that the *Shoola* was decreased 71.42% in *Mahanarayana Taila* treated group which was statistically highly significant. *Stabdata* was reduced up to 92.53% which was statistically highly significant. The Range of movement was 62.05% which was significant statistically.

Walking time was improved in 69.69% with statistically significant results.

Mode of Action of *Basti*

Eliminative or purificative action of *Basti*, *Basti* enters the *Pakvashaya* which the main site of *Vata Dosha* and destroys it which is the originator of all diseases. By subsiding the *Vata* all diseases located in the other parts of the body also become allayed just as by the eradication of the roots of a plant, the stem, the branches, sprouts. However fruits, leaves etc. also vanish.

Basti administered into the *Pakvasaya* draws the *Dosha/Mala* from all over the body from the foot to the head by virtue of its *Virya*, just as the sun situated in the sky draws the moisture from the earth by virtue of its heat. As the cloth sucks up the pigment only from the water dyed with saf-flower, similarly, *Basti* eliminates only the waste substances (*Mala*) from the body.

Systemic action of *Basti*, the *Virya* of the drugs administered through the *Basti* into the *Pakvashaya* reaches the whole body through the channels (*Srotas*), as the active principles in the water when poured at the root of the tree reaches the whole plant.

Nutritive action of *Basti*, Just as a tree fed with water at its roots, puts forth green leaves and delicate sprouts, and in due time grows into a big tree, full of blossom and fruit, similarly does a man grow strong by means of *Anuvasana Basti.* The fact that *Basti* introduced into *Pakvashaya* reaches all over the body, is well explained by *Chakrapani*. He has quoted the reference of *Parasara* that *Guda* is the *Mula* of the body where all the *Siras* located. The *Sneha* administered through *Guda* reaches up to head giving the nutrition to the body.

Though *Basti* drug quickly comes out alone or with stool, its effect took place all over the body with the help of *Vayu*. This action takes place just like as sun draws moisture from the earth. As firstly the *Virya* of the *Basti* drugs reaches the *ApanaVayu*, then it is handed over to *Samana Vayu*. After nourishing *Samana Vayu* it reaches the *Vyana Vayu*, thereafter it acts on *UdanaVayu* and *Prana Vayu.* When all these five types of *Vata* get their normal state, they promote health. Then these *Virya* of *Basti* drug acts on the *Pitta* and *Kapha* to bring them in normal states and provides them nourishment. Just as whole farm gets its nourishment by water supplied to it through channels, the whole body gets nourishment by the *Virya* of *Basti* drugs carried by five types of *Vata* through *Srotasa*.

The same action of *Basti* drugs has been described by *Acharya Charaka* as the *Basti*, when lying in the *Pakvashaya*, draws by its *Virya* and morbid *Dosha* lodged in the entire body from the foot to the head, just as the sun situated in the sky sucks up the moisture from the earth.

Basti performs the function of *Apananulomana* hence increases the *Jatharagni* ultimately normalize the *Agni* which is said to be the main cause of any disease. Thus *Basti* has its effect on two important factors viz., *Vata* and *Agni* which are responsible for proper formation of *Dhatu* and thereby establish their normal functions. Active principles of the ingredients used in the *Basti* gets absorbed and then through general circulation reaches at the sites of the lesion and relieves the disease. That is why *Acharya Sushruta* has mentioned that by using the different ingredients, *Basti* can cure *Paitika, Kaphaja, Raktaja, Sansargaja* and *Sannipatika* disorders through it is the best treatment for *Vata Dosha.*

Mahanarayanataila is a well-known *Vata* balancing herbal oil formula used in Ayurvedic medicine for centuries. *Mahanarayana Taila* has been selected as the trial drug in the present study. The drugs of *Mahanarayana Taila* have *Prajasthapana, Rasayana, Balya* properties. The drugs of *Mahanarayana Taila* possess antioxidant, adaptogenic, immunomodulatory effects. It is a rich combination of Ayurvedic herbs, produce no irritation on skin and arrest further progress of chronic arthritic changes of joints, pain, stiffness, restricted movement, distortion and restores normal joint function. In the present case, *Matrabasti* with *Mahanarayana taila* improved the condition of the patient. Perhaps it enhances the blood flow over low back area and helps it to get the nutrients and pain relieving bio chemicals to the affected area. Additionally the process of local *Snehana* might help to restore the local damage of ligaments, tendons, muscles, bones and inter vertebral discs and disc spaces. The *Sthanikswedan* might support to increase the vasodilatation of the body and it facilitates elimination of the bio toxins and waste materials and pain producing biochemical from the affected area.

CONCLUSION

- The presence of pain at the *Kati* region (low back) and to leg through the posterior aspect of *Uru, Janu, Jangha* and *Pada* is called as *Gridhrasi.*

- Sciatica, in which neuralgia along the course of Sciatic nerve often produces pain, numbness, tingling sensation, radiating from the lower back and upper buttock down the back of the thigh, calf and to the foot. Many of the clinical features of *Gridhrasi* resemble to that of sciatica.

- The symptoms of *Gridhrasi* were decreased with *Bilvataila Matra Basti.*

- The effect of treatment statistically shows significant good results in group *Mahanarayana Taila Matra Basti* when compared to group *Bilva taila Matra Basti.*

- Both the groups are having effect on reducing the symptoms statically. Among the subjective and objective parameters, Group B showed better reduction 71.41% *Shoola, Stabdata* was reduced up to 92.53%. The range of movement was improved 62.05% and walking time was improved 69.69%

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*Address for correspondence
Dr. Greeshma.K
PG Scholar
Department of Panchakarma,
Karnataka Ayurveda Medical College, Mangalore, Karnataka
Email: geemaknair@gmail.com
Mobile: 9481547748