



A Comparative Study of *Agnikarma* & *Ajmodadi Vati* in the Management of *Ghridhrasi* w.s.r.to Sciatica

Research Article

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Abstract

The disease *Ghridhrasi* is characterized by *ruk* in the *kati* region which will be radiating towards lower limb with cardinal symptoms like *sakthanshepannigruhat* (S.L.R test). The present study was taken up with the objective of evaluating the efficacy of *Agnikarma*, *Ajmodadi Vati* & combination therapy. 56 patients of *Gridhrasi* were treated in three groups. Group A were treated with *Agnikarma* and consisted of 22 patients, Group B with *Ajmodadi Vati* and consisted of 18 patients and Group C with Combined therapy and included 16 patients. The data was collected & observations were made before and after the treatment. The results obtained were subjected for statistical analysis & conclusions were drawn. The results showed that there was significant reduction in the symptomatic parameters in combined therapy when compared to the other two groups.

Key words - *Gridharsi*, *Agnikarma*, *Ajmodadi Vati*, Sciatic nerve, S.L.R.test

Introduction

80% of population in modern industrial society experience back pain at sometime during their life, fortunately in some of these subsides within a month. But unfortunately as many as 70% of these pains recurs and may get converted diseases like spondylosis, intervertebral disc prolapse (IVDP) etc. *Gridhrasi* (Sciatica) is one of the most common disorders of the back where the compression of the sciatic nerve causes pain in the back and radiates to the posterior aspect of the lower limbs. It causes impairment of the daily activities also (1).

The disease *Gridhrasi* is

characterized by *ruk* (Severe pain) from *Kati* (Lumbar region) *pradesha* which will be radiating towards *Padanguli* (Foot) with cardinal symptoms like *sakthanshepannigruhat* (Straight Leg Raising test) (2). Medically the disease requires anti-inflammatory treatment to reduce the pain. If the compression of the nerve causes disability, then the surgical correction procedures can be adopted for relieving the compression.

Ayurveda mentions *Gridhrasi* as a disease where the patient's gait will be similar to the gait of the *Gridhra* (Eagle). This change in the gait is because of the pain in the back and the lower limbs and the patient starts limping towards the affected side. Various medical and para-surgical methods are indicated for the management of the disease. One of the surgical methods mentioned is the *Agnikarma* (3).

Hence the present study is taken up to know the efficacy of the *Agnikarma* in the management of the disease *Gridhrasi*

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in comparison with the medical management with *Ajmodadi Vati*. The combined efficacy of the two therapies is also studied in the study as follows.

Aims and Objectives:

- To study the role of *Agnikarma* and *Ajmodadi Vati* in the management of Gridhrasi.
- To study the comparative efficacy of both the therapeutic procedures and also the combined efficacy.
- To establish the probable mode of action of *Agnikarma* and *Ajmodadi Vati* in the management of Gridhrasi.

Materials and methods:

For the present study, two therapies have been selected.

- 1) *Agnikarma*
- 2) *Ajmodadi Vati*

Materials for agnikarma:

The *Shalaka*, *Prota* (gauze), *Pichu* (cotton), *Gas stove*, *match box*, *Triphala Kashaya*, Swab holding forceps, *Kumari Swarasa*, *Yashtimadhu churna*.

Composition of Ajmodadi Vati (Chakradatta 25/51-55) (4).

Each Vati of 500 mg Contains :

Ajmoda	1 part
Vidanga	1 part
Saindhava Lavana	1 part
Pippali	1 part
Devadaru	1 part
Vrudhadaru	10 part
Chitraka	1 part
Pippali Mula	1 part
Satahva	1 part
Maricha	1 part
Haritaki	5 part
Sunthi	10 part
Guda	Equal part of the rest of the drug

Dose : 2 (500 mg each) vati three time in a day with lukewarm water.

All above mentioned drugs, *Charaka* have been explained in *Shulaprashamanam* (analgesic) *gana* (5) and *Sushruta* has explained in *Pipalyadi gana*, which acts as a *Deepana*, *Vata-kaphahara*, *Aruchi*, *Amarasa pachana*, *Gulma* and *Shoolaghataka* (6).

Clinical Contribute:

The study is a comparative clinical study. 56 patients attending the OPD and IPD of the Department of *Shalya tantra* of *Ayurved* College, Rahuri were selected irrespective of their age, sex, religion etc were selected for the study and the written consent was taken from each patient.. A detailed research case-sheet was prepared to obtain the proper diagnosis of the disease and assess the parameters of the study.

Criteria of Selection of Patient

Patients were diagnosed mainly on the basis of signs and symptoms as mentioned in the texts of Ayurveda and modern medical signs like *Ruka*, *Toda*, *Stambha*, *Spandana*, *Sakthanakshepananigrahaniyat*, S.L.R. test (Lasegue sign), sitting test in affected leg for diagnosis as well as prognosis of the treatment.

Criteria for inclusion:

- Patients diagnosed as suffering from the *Grudhrasi* disease based on the symptoms mentioned in the Ayurvedic Texts.
- Patients willing to undergo *Agnikarma*.
- Patients having good tolerance to the procedures.

Criteria for the Exclusion

- The patient suffering with –
- Carcinoma of lumbo-sacral plexus
 - Carcinoma of caudaequina
 - Pregnancy
 - Tuberculosis
 - Uncontrolled Diabetes mellitus etc.



- Chronic diseases etc were excluded from the present study.

Management

After the diagnosis of the disease, 56 patients were selected and randomly categorized into three groups as given below.

Group A: In this group, the treatment procedure adopted is *Agnikarma*.

Group B: In this group, *Ajmodadi Vati* was administered 3 gm/day with lukewarm water for 30 days.

Group C: In this group, both the therapies were adopted.

Procedure of *Agnikarma*(3):

Agnikarma is done to the selected patients in two sittings. In the 1st sitting *agnimarka* is done in the shape of a *Bindu* (drop) type at *Antara Kandara Gulpha Madhya* (In the middle of the posterior aspect of the knee joint). The 2nd sitting is done after 15 days at the same site of the 1st sitting of *Agnikarma*.

The entire procedure consists three parts.

- Purva karma (Pre-operative procedure)
- Pradhana karma (Operative procedure)
- Paschat karma (Post-operative procedure)

Purva Karma (Pre-operative Procedure):

Prior to the procedure the patient's are prepared for the procedure. They were advised to consume *Snigdha*, *Picchila* and light diet on the day before the *Agnikarma chikitsa*. Written consent of the patients was taken.

Pradhana Karma (Operative Procedure):

The patients were made to rest comfortably on the operation table and the diseased side of the limb is washed with *Triphala kashaya* or *Savlon* to avoid any infection. The *Loha dhatu Shalaka* was

heated to red hot on fire. On the affected leg of the patient at the site of 4 *angula* (inches) above of *Gulpha sandhi* (knee joint) on the posterior side *Agnikarma* is done with the heated *shalaka* to form 5 – 30 *bindu* (droplet) sized (*bindu dahana vishesha*) burns in a linear fashion (*Vilekha*), till the *Samyaka dagdha vrana* were produced.

Paschat Karma (Post Operative Procedure):

After producing *Samyaka Dagdha Vrana*, the *Kumari Swarasa* was applied on *samyaka dagdha vrana* to get relief from burning sensation. After wiping the *Kumari Swarasa*, *Avachurnan* (dusting) of *Yashtimadhu churna* was done on *Samyaka Dagdha Vrana* and patient was advised for local application of *Haridra* powder with mixed coconut oil from the second day of the procedure to promote healing and act as disinfectant. *Pathya-pathya* was advised as per *Sushrutacharya's Vrana Rogadhikara* until healing of *Samyaka Dagdha Vrana*.

Criteria for Assessment:

The improvement in the patient was assessed mainly on the basis of relief in the cardinal signs and symptoms of the disease.

Criteria for Assessing the Total Effect:

The overall improvement shown by the patients in sign and symptoms is assessed as follows:

- | | |
|--------------------|---|
| Cured | - 100% relief of presenting complaint |
| Marked improvement | - More than 50% relief in the complaints of the patient |
| Improvement | - 25 – 50% relief in the complaints of the patient |
| Unchanged | - Upto 25% relief in the complaints of the patient |

**Observation & Result**

The following tables mentioned indicate the observations made during the study

Table 1: Occupation wise distribution patients of Gridhrasi

Occupation	No. of Patients			Total	%
	Group A	Group B	Group C		
Business	4	2	2	8	14.28
Service	2	3	3	8	14.28
Labor	7	7	4	18	32.14
Housewife	9	5	6	20	35.71
Others	00	1	1	2	3.57

Table 2: Chronicity wise distribution patients of Gridhrasi

Chronicity	No. of Patients			Total	%
	Group A	Group B	Group C		
0 – 1 year	10	9	10	29	51.78
1 – 2 years	6	1	3	10	17.85
> 2 years	6	8	3	17	30.35

Table 3: Straight Leg Raising (SLR) test wise distribution patients of Gridhrasi

S.L.R.	No. of Patients			Total	%
	Group A	Group B	Group C		
Right	7	10	6	23	41.07
Left	12	8	10	30	53.57
Both	3	00	00	3	5.35

Table 4 : Lasegue's sign wise distribution patients of Gridhrasi

Lasegue Sign	No. of Patients			Total	%
	Group A	Group B	Group C		
Right	12	9	7	28	50.00
Left	10	9	9	28	50.00
Both	00	00	00	00	00

Table 5 : Popletial compression wise distribution of 56 patients of Gridhrasi

Popletial compression	No. of Patients			Total	%
	Group A	Group B	Group C		
Positive	17	13	14	44	78.57
Negative	5	5	2	12	21.42

Table 6 : Tenderness wise distribution of patients of Gridhrasi

Tenderness	No. of Patients			Total	%
	Group A	Group B	Group C		
Lumbar	13	7	10	30	53.57
Gluteal	4	2	3	9	16.07
Thigh	2	1	2	5	8.92
Calf	12	7	6	25	44.64

**Table 7 : Length of leg (Scoliosis) wise distribution of patients of Gridhrasi**

Length of Leg	No. of Patients			Total	%
	Group A	Group B	Group C		
Normal	17	13	13	43	76.78
Shorting	5	5	3	13	23.21

Table 8 : Neurological findings wise distribution of patients of Gridhrasi

Neurological Findings	No. of Patients			Total	%
	Group A	Group B	Group C		
Hyperaesthesia	4	1	1	6	10.71
Hypoesthesia	9	11	8	28	50
Loss of sensation	5	3	4	12	19.64

Table 9 : Muscles wasting wise distribution of patients of Gridhrasi

Muscle Wasting	No. of Patients			Total	%
	Group A	Group B	Group C		
Present	2	1	3	6	10.71
Absent	20	17	13	50	89.28

Table 10 : Effect of therapy on symptoms of Gridhrasi in Group A : Agnikarma

Cardinal symptoms	Means score		±SD	±SE	't'	P	%
	B.T.	A.T.					
Ruka	2.52	1.11	0.60	0.14	10.07	<0.001	50
Toda	2.45	0.90	0.68	0.20	7.7	<0.001	63
Stambha	2.28	0.57	0.72	0.19	9	<0.001	75
Spandana	1.75	0.5	0.49	0.24	5.20	<0.02	71
Aruchi	2.2	1	0.74	0.33	3.63	<0.05	54
Tandra	n =0	-	-	-	-	-	-
Gaurava	2.6	1	0.54	0.25	6.66	<0.01	61
S.L.R. Test	2.11	0.76	0.60	0.14	9.64	<0.01	63
Sciiosis	2	1.25	0.49	0.24	3.12	<0.10	37
Shohta	1	0	-	-	-	-	100

Table 11: Effect of therapy on symptoms of Gridhrasi in Group B: Ajmodadi Vati

Cardinal symptoms	Means score		±SD	±SE	't'	P	%
	B.T.	A.T.					
Ruka	1.53	1.92	0.50	0.13	4.69	<0.001	24
Toda	2	1	0.56	0.17	5.29	<0.001	50
Stambha	2.22	1.55	0.49	0.17	3.88	<0.01	30
Spandana	1.57	0.42	0.53	0.20	5.7	<0.01	73
Aruchi	2	0.25	0.70	0.24	7.29	<0.001	87
Tandra	1	0.5	-	-	-	-	25
Gaurava	2	0.81	0.60	0.18	6.55	<0.001	59
S.L.R. Test	2.30	1.69	0.5	0.13	4.69	<0.001	26
Sciiosis	2	1.8	0.44	0.19	1.05	>0.10	10
Shohta	1	1	-	-	-	-	0



Table 12: Effect of therapy on symptoms of Gridhrasi in Group C : Combined Therapy

Cardinal symptoms	Means score		±SD	±SE	‘t’	P	%
	B.T.	A.T.					
Ruka	2.33	0.83	0.52	0.15	10	<0.001	65
Toda	1.77	0.33	0.72	0.24	6	<0.001	81
Stambha	2.08	0.41	0.77	0.22	7.18	<0.001	80
Spandana	3.5	1.5	-	-	-	-	57
Aruchi	2.33	0.16	0.74	0.30	7.2	<0.001	93
Tandra	1	0	-	-	-	-	100
Gaurava	2.33	0.66	0.81	0.33	5.03	<0.01	71
S.L.R. Test	2.41	1.08	0.65	0.18	7.38	<0.001	51
Sciiosis	2	0.6	0.77	0.34	4.11	<0.02	70
Shohta	1	1	0	-	-	-	0

Table 13: Chronicity wise effect of therapy

Chronicity	Cured			Markedly improved			Improved			Unimproved		
	Group			Group			Group			Group		
	A	B	C	A	B	C	A	B	C	A	B	C
0 – 1 year	0	0	0	4	1	9	4	5	0	0	0	0
1 – 2 year	0	0	0	5	0	0	1	1	1	0	0	0
> 2 year	0	0	0	2	0	2	1	6	0	0	0	0

Table 14: Comparative study of overall effect of therapy in all groups

Effect	Group A	Group B	Group C
Cured	0%	0%	0%
Markedly improved	64.70%	7.69%	91.66%
Improved	35.30%	92.30%	8.33%
Unimproved	0%	0%	0%

Table 15: Comparative study of Results in all groups

Cardinal Symptoms	Group A	Group B	Group C
Ruka	50.00%	24.00%	65%
Toda	63.00%	57.00%	81.00%
Stambha	75.00%	30.00%	80.00%
Sapandana	71.00%	73.00%	57.00%
Aruchi	54.00%	87.00%	93.00%
Tandra	-	25.00%	100%
Gaurava	61.00%	59.00%	71.00%
S.L.R. Test	63.00%	26.00%	55.00%
Sciiosis	37.00%	10.00%	70.00%
Shohta	100%	-	100%

Discussion:

Gridhrasi (Sciatica) is one of the commonest causes of the low back ache.

Treatment of the disease is a challenge to the medical profession. It may also lead to



severe disability to walk and do the normal routine works.

Gridhrasi comes under *Nanatmaja vata vyadhi vikara*, according to *Ayurveda* (7), that is it is caused by the vitiation of the *vata*, which is the prime factor for the control of the neurological tissues. Ayurvedic texts have mentioned the different types of procedures like *Agnikarma* etc for the treatment of the disease. Based on the same principle the present study has been designed.

Agnikarma is a procedure mentioned in the *Ayurveda*, in which a *Shalaka* (metallic rod) having different shaped tipped are used to burn the superficial tissues of the body at different sites depending on the disease condition of the patient. It is indicated that in the disease *Gridhrasi Agnikarma* is done 4 inches above or below the knee joint on the posterior aspect of the leg. The number of sitting depends upon the chronicity and severity of the disease(8). Thickness of *Agnikarma Shalaka* plays an important role in the procedure. A thick *Shalaka* gets heated well and does not cool easily and helps for the desirable effect. Thick *Lauha Shalaka* is used to maintain the constant temperature to produce *Samyaka Dagdha Vrana*. Tip of *Shalaka* should not be more than 1 mm to 2 mm to produce the *Samyaka dagdha vrana* in *Agnikarma chikitsa*. Precaution must be taken to produce a *samyak dagdha vrana* only and do not hurt the deeper tissues of the body.

To compare the effect of the *Agnikarma* procedure with the medical management of the disease one group of the patients are treated only with *Ajmodadi Vati*. It contains drugs like *Ajmoda*, *Vidanga*, *Sunthi* etc. that have the properties like *Deepana*, *Pachana*, *Ushna*, *Tikshna guna* and *Vatanulomana*. As per *Chakradatta*, *Ajmodadi Vati* is indicated for diseases like *Gridhrasi*, *Amavata* and *Vishwachi*.

Charakacharya mentioned most of the ingredients of *Ajmodadi vati* in a

shoolaprashamana gana and *Sushrutacharya* explained in *Pipalyadi gana*, which acts as a *Deepana*, *Vata-kaphahara* *Aruchi*, *Amarsa* *Pachan*, *Gulma* and *shoola ghataka*.

Ajmoda is having good property of *Vatanulomana*. This property of *Ajamoda* is helpful for eliminating the *vata* out of the body and reducing the pain and other symptoms of the disease virtue of its properties like *Tikshna*, *Ushna guna*. Other drugs like *Chitraka*, *Pippali*, *Maricha* etc also help to pacify the vitiated *vata*.

From the above observations it has been identified that the housewives and people doing laborious work are the most affected of the disease, because they work continuously without having proper rest to the back.

From the results it was observed that the group treated with the *Agnikarma* has shown marked improvement in about 65% of the case and about 92% of the cases treated with *Ajmodadi Vati* got improved with the treatment. The combined therapy of the *Agnikarma* along with the *Ajmodadi Vati* has shown marked relief in the symptoms in 91% of the cases. Thus from the study it can be understood that the combination therapy has given good results to reduce the symptoms of the disease.

Conclusion

From the above study it can be concluded that *Agnikarma* is effective in the management of the disease *Gridhrasi* and if the same is done with the oral administration of the *Ajmodadi Vati*, it gives much relief to the patient. As the study is done on a small number of patients, it can be further extended to a considerable volume of the patients to understand the effect and utilize in the treatment of the disease.



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