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## RESEARCH ARTICLE

### A CLINICAL STUDY TO EVALUATE THE EFFICACY OF SIRAVEDHA IN THE MANAGEMENT OF GRIDHRASI W.S.R. TO SCIATICA

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#### ABSTRACT

*Gridhrasi* is one of the *Vatavyadhi* caused by aggravated *Vatadosha*. It is characterized by radiating pain, tingling sensation & numbness at posterior aspect of leg, which makes the patient difficult to walk. There is no specific curative remedy in modern medical science except pain killers. *Acharya Charaka* and *Sushruta* mentioned *Siravedha* in management of *Gridhrasi* and *Acharya Sushruta* has mentioned *Siravedha* as superior therapeutic procedure among others as it gives instant relief. Thus the objective of present study was to evaluate the efficacy of *Siravedha* in the management of *Gridhrasi*. Study was performed at OPD level in Dept. of Panchkarma Rishikul Govt. Ayurvedic College Haridwar, Uttarakhand. In *Ayurved*, *Acharya Charaka* and *Sushruta* stated *Siravedha* in management of *Gridhrasi*.

**Aims:** To evaluate the efficacy of *Siravedha* in the management of *Gridhrasi* w.s.r. to sciatica.

**Materials and Methods:** it is an open randomized clinical trial. A total of 20 patients suggesting *Gridhrasi* on the basis of sign and symptom and clinical examination were selected from O.P.D. and I.P.D. of Dept. of *Panchkarma* was treated with 3 sitting of *Siravedha* [place four anguls above and below *JanuSandhi* (knee joint) and *AntarakandaraGulfa* (Ankle joint) ] with an interval of 15 days in between. Assessment was done after the completion of therapy on the basis of subjective criteria (pain, stiffness, tingling and pricking sensation, numbness and twitching and objective criteria (SLR, scoliosis, Walking Time).

**Results:** *Siravedha* was found to be significantly effective in reducing pain and other symptoms.

**Conclusion:** *Siravedha* gives instant relief in *Gridhrasi*.

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## INTRODUCTION

Chronic back pain is one of the common causes for disability and disturbed routine. Backache is the global problem with 80% of world population suffers from it. Functional disabilities, sleep disturbances, fatigue and medication abuse are seen in people suffering from chronic low back pain. According to survey, the lifetime incidence of sciatica varies from 30 -40% & has annual incidence of 5% in the world. It is observed that lumbar disc herniation is the common cause of sciatica and early surgery provided faster recovery than prolonged conservative care, but it is also found that 40% of surgeries fail or pain and disability reoccur after variable post-operative period. Due to fear, high cost, post-operative complications patients avoid surgeries and continue having analgesics for pain reduction which eventually produces G.I.T disturbances. In *Ayurvedic* sciences various modalities of

treatment are explained for the management of *Gridhrasi*. *Siravedha chikitsa* be superior. The prevalence of sciatica ranges from 11% -40%.<sup>i</sup> Among such disorders *Ayurvedic* classics have described a severe debilitating disease in the name of *Gridhrasi*. The name itself indicates the way of gait shown by the patient due to extreme pain just like a *Ghradhra* (Vulture). In modern parlance the above condition is described in, as sciatica. Sciatica is a neuralgia along the course of sciatic nerve, most often with pain radiating into the Buttock and lower limb, most common due to herniation of lumbar disc.<sup>ii</sup> *Gridhrasi* described in *Charaka Samhita Samanyaja*<sup>iii</sup> and *Nanatmaja Vatavyadhies*.<sup>iv</sup> It comes under 80 types of *Nanatmaja Vatavyadhies*. According to *Acharya Charaka* the cardinal signs and symptoms are pain in the *Kati*, *Sphik*, *Uru*, *Janu*, *Jangha* and *Pada* in order, stiffness, tingling & pricking sensation, twitching<sup>v</sup> and according to *Acharya Sushruta*<sup>vi</sup> and *Vagbhatta*<sup>vii</sup> the condition where the *Kandara* of heel and *Parsnee* and *Angulees* are affected by vitiated *Vata* causing *Sakthikshepanigraha* i.e. restricted lifting of the leg. *Acharya*

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*Charaka* has mentioned two types of *Gridhrasi*, *Vataj* and *Vatkaphaj*. In *Kaphanubandhi Gridhrasi*, *Tandra*, *Gaurava*, *Arochaka* are present. *Siravedha* described as both the *Acharyas Sushurta* and *Charaka* in reference to management of *Gridhrasi*.<sup>viii, ix</sup> In *Sushruta Samhita* *Siravedha* is also accepted as half of the therapeutic measure in *Shalya Tantra* like *Basti* in *Kaya Chikitsa*.<sup>x</sup> Hence considering above facts this study has been planned with aim and objective to evaluate the efficacy of *Siravedha* in the management of *Gridhrasi* w.s.r. to sciatica.

## MATERIALS AND METHODS

The study was performed in the Dept. of Panchkarma Rishikul Govt. Ayurvedic College Haridwar, Uttarakhand. We have selected 20 patients of clinically diagnosed *Gridhrasi* on the basis of signs and symptoms given in *Ayurvedic* texts.

### Inclusion criteria

- Patients with typical clinical findings suggestive of *Gridhrasi* were the trial subjects.
- Patients diagnosed of lumbago based upon investigation.
- Age 20 - 60 years.
- History of lumbosacral sprain / strain/ lumbago for more than six months.
- Degenerative Arthritis of lower spine.

### Exclusion criteria

- Age group <20 years and >60 years.
- Infection of spine especially Tuberculosis, Brucellosis and Pyogenic osteomyelitis etc.
- Referred low backache from pelvis, abdomen or thoracic diseases.
- Neoplasm of spine.

### Criteria for assessment

#### Pain locus

kati, sphik, uru, janu, jangha and pada- total 6

#### Severity of pain

- 0-No pain
- 1-occasional pain
- 2-Mild pain & no difficulty in walking
- 3-Moderate pain & slight difficulty in walking
- 4-Severe pain with severe difficulty in walking

#### Stiffness

- 0-No stiffness or stiffness lasting for 5 Min.
- 1-5 min. to one hour
- 2-One hour to two hours
- 3-Two hour to four hours
- 4-More than four hours

#### Tingling and pricking sensation

- 0-Not present
- 1-occasionally tingling and pricking sensation

- 2-Mild tingling and pricking sensation
- 3-Moderate tingling and pricking sensation
- 4-severe tingling and pricking sensation

#### Loss of sensation

- 0-not present
- 1-present

#### Twitching

- 0-no twitching
- 1-sometime for 5-10 min
- 2-daily for 10-30 min
- 3-daily for 30-60 min
- 4-daily more than one hour

#### SLR test

- 0-More than 90°
- 1-71o – 90°
- 2-51o – 70°
- 3-1o – 50°
- 4-Upto 30°

#### Walking time

- 0-upto 20 sec
- 1-21 sec to 40 sec
- 2-41 sec to 60 sec
- 3-more than 60 sec

### Methodology

#### Procedure

#### Poorva Karma

Patients consent was taken after proper counseling prior to *Siravedha*. The patient should be duly anointed (*Sneha*) with oily preparations and fomented (*Svedan*) by *Nadisveda*. Site of *Siravedha* was cleaned by savlone.

#### Pradhana Karma

We had taken needle (no 18) for *Vyadhana Karma*. Site of the *Vyadhna* area was decided as both the *Acharyas Sushurta* and *Charaka* according to venous prominence present in particular patient. During the procedure approximate amount of vitiated blood removed by the *Siravedha* was 70 to 100 ml. The blood letting was being continued until blood itself did not cease. There was no major complication observed after the completion of procedure in any patient.

#### Paschat Karma

After completion of procedure whenever blood flow stops automatically, *Yantrana* (tourniquet) should be removed and instrument should be withdraw. Tight dressing should be applied on the wound. According to demographic data of this study, it is observed that, maximum patients belongs to age

group of 41-50years of age, there were 14 female patients and 6 male patients found in the study.

## RESULTS

In this study effect of *Siravedha* shows highly significant results with p value<0.001 regarding all signs and symptoms. There was improvement in SLR Test which also gives highly significant results with p value<0.001.

Symptom	Mean score		% relief	mean	SD	SE	t	p
	BT	AT						
Pain locus	5.35	1.60	70.09	3.75	1.52	0.34	11.06	<0.001
Severity of pain	2.65	0.65	79.25	2	0.80	0.18	11.26	<0.001
stiffness	1.60	0.27	83.33	1.17	0.62	0.16	8.37	<0.001
Tingling and pricking sensation	1.72	0.33	80.65	1.39	0.70	0.17	8.45	<0.001
Loss of sensation	1	0.29	71.43	0.71	0.49	0.19	3.87	<0.01
twitching	1.88	0.50	73.33	1.38	0.75	0.26	5.23	<0.01

Table 2. Associated Symptoms

Symptom	n	Mean score		% Relief	mean	SD±	SE±	t	P
		BT	AT						
Aruchi	20	1.29	0.43	66.67	0.86	0.38	0.14	6	<0.001
Tandra	4	1.43	0.14	60	0.9	0.49	0.19	7	<0.05
Gaurav	16	1.40	0.60	57.14	0.80	0.45	0.20	4	<0.05

Table 3. Objective parameter

	n	Mean		% relief	mean	SD±	SE±	t	P
		BT	AT						
SLR	20	2.60	1.10	57.69	1.50	0.83	0.19	8.10	<0.001
Scoliosis	4	1	1	0	0	0	0	0	0
Walking time	16	1.24	0.35	71.42	0.88	0.33	0.08	10.96	<0.001

It is found that patients were clinically improved with the treatment of *Siravedha* with no side effects of the therapy. About 88.23% relief found in case of pain immediately after the treatment which is one of the target symptoms due to which patients became very comfortable and mentally satisfied by the treatment. In subjective parameter relief in pain locus 70.09%, severity of pain 79.25%. Relief observed in stiffness was 83.33%, tingling & pricking sensation 80.65%, numbness 71.43%, Twitching 73.33% result was observed. All these result were statistically highly significant (P < 0.001). In associated symptoms relief in *Aruchi* 66.67%, *Tandra* 60%, *Gaurav* 57.14%. In objective parameter relief in SLR 57.69%, Scoliosis 0% Walking-time 71.42%.

Relief	No of patients	%
Complete relief (100%)	0	0
Marked improvement (76% to 99%)	8	40%
Moderate improvement (51% to 75%)	3	15%
Mild improvement (25% to 50%)	4	20%
No improvement (<25%)	5	25%

## DISCUSSION

*Gridhrasi* is one of the painful condition which disturbs the daily routine of the patient. This diseases having predominance of *vata dosha* as it comes under 80 *Vataj Nanatmaj Vyadhi* and may have *kaphaanubandha* with it. The radiating pain from lumbar region to the lower extremities may show stiffness in the lower limb and hence patient got difficulty in walking or

continuous standing even for short period. *Ayurveda* believes that being while describing the *Gridhrasi Acharya Sushruta* has given more emphasis on involvement of ligament of heel and toe afflicted with *Vata dosha* which obstruct the movement of leg. In the chapter of *Vatavyadhi Chikitsa, Acharya Charak* has mentioned process of *Siravedha* in case of *Gridhrasi* so as to discontinue the reoccurrence.

In *Panchkarma Chikitsa*, the vitiated *Doshas* are purified whereas in *Siravedha* to let out *Rakta Dhatu* along with vitiated *Doshas* where *Rakta Dhatu* is predominant. The susceptibility of *Rakta* towards impurity is so versatile that the classics were compelled to agree upon *Rakta* as fourth *Dosha*. Therefore vitiated *Rakta* from the related *Siras* (veins) should be let out to protect the health or to remove the disease. Because *Kandara* is *Updhatu* of *Rakta* and *Kandara* is *Dushya* in *Gridhrasi*. So by correction of *Dosha*, *Dushya* will also correct. *Siravedha* relief in the pain, may be due to *Nirharana* of *Dusta Rakta*, which results in *Anulomana* of *Vata* or *Vata* will get its proper *Gati*. According to *Harita*, *Gridhrasi* is due to *Vyana Vayu Prakopa* and *Vyana Vayu* is related to blood circulation. Elimination of *Ama* by *Siravedha* which obstructs the *srotas* or channels and *Vayu* gets *Anuloma*. According to *Acharya Vagbhatta Purva Karma* is indicated for liquefaction of *Dosha* and mobile them into blood circulation. *Siravedha* remove that *Dosha* from circulation thus its act on removal of disease.<sup>xi</sup> *Siravedha* is *Sarvanga Shodhana* procedure so without doing proper *Purvakarma* it does not work for removal of disease. By the *Siravedha* alone, all the diseases will be cured from their roots, just like rice and other crops in the field dry out completely by removing the bunds of field. The diseases which are not cured by *Sneha, Lepa* etc. are cured by instantaneously by *Siravedha*.<sup>xii</sup>

## Conclusion

- *Siravedha* therapy shows highly significant results in all signs and symptoms of *Gridhrasi*.

- The entire treatment was tolerated comfortably by the patient. There were no side effects noticed in any of the patients.
- The procedure was simple and can be done in OPD level gives instant relief to most of the patients. But still to avoid the reoccurrence of the disease and to break the *Samprapti*. The patient has to continue on oral medication.

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