

## EFFICACY OF AGNIKARMA IN THE MANAGEMENT OF GRIDHRASI (SCIATICA): A CLINICAL STUDY

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### ABSTRACT

Due to alteration in people's life style, the disease *Gridhrasi* (Sciatica) is frequently seen in the society as a prominent problem. In this disease, patient becomes incapable to do their daily routine work because of severe pain radiating from *Kati-pradesh* (lumbar region) to *Gulfa-sandhi* (ankle-joint). *Gridhrasi* is such a disease, which carry little threat to life and interfere greatly with living also. The person who suffers from this disease is particularly handicapped, as he can't walk, stand or sit properly and the painful limb continuously draws his attention. *Gridhrasi* (Sciatica) is one of the *Vatavyadhi* caused by aggravated *Vatadoshas*. The disease is characterized by cardinal symptom i.e. Radiating pain (*Ruja*), which makes the patient difficult to walk; hampering the daily routine of the individual. No specific remedy is given in modern medical science, patients depends on painkillers which has temporary action. *Agnikarma* (treatment done with cauterization) is the procedure indicated by *Acharya* in *Vatavyadhi*. *Acharya Sushruta* mentioned *Agnikarma* is more efficacious than other therapeutic procedures as it gives instant relief in pain. The study was undertaken to evaluate the clinical efficacy of *Agnikarma* in the management of Sciatica and the results were very fruitful.

**Keywords:** *Agnikarma*, *Gridhrasi*, Sciatica

### INTRODUCTION

Chronic Low Back Pain (CLBP) is the most common cause contributing to a large

number of disabilities claims. Backache is a global problem with 80% of the world popula-

tion suffering from it. Out of 10, 6 people got affected with backache at some stage of their life. Functional disabilities, fatigue, sleep disturbances and medication abuse are seen in people suffering from CLBP. Backache is the most common reason for people all over the world to seek a doctor. This is the most common disorder which affects the movement of legs, particularly in most productive period of life. Patients having Pain radiating along the sciatic nerve, which runs down one or both legs from the lower back is known as Sciatica. In *Ayurvedic* science, various modalities of treatment are explained for the management of *Gridhrasi*, *Agnikarma chikitsa* is said to have magical results. In *Chakradatta & Yogratnakara*, we find direct reference of *Agnikarma* indicated for *Gridhrasi* which is said to be done over the *Paadakanistakam* (little toe). Acharya Charaka has described *Basti*, *Siravyadha* (Venepuncture) and *Agnikarma* in the management of *Gridhrasi*. According to *Sushrut Samhita*, relapse of the disease is not seen if the patient is treated with *Agni karma* procedure. Several researches have shown that *Agnikarma Chikitsa* is more effective as compared to the other treatment modalities such as oral drugs, *Kshar karma*, *Siravyadha* or even surgeries etc. The process of *Agnikarma* is normally done by using gold, silver, *Pancha Dhatu*, Iron *shalaka* or even with metal coins, ring or with seeds of *bhallatak*, *pippali* etc. There is no recorded side effect of *Agnikarma* if done properly and above it *Aganikarma* prohibits the wound infections and pus formation.

#### AIMS AND OBJECTIVES:

- To evaluate the therapeutic efficacy of *Agnikarma* in patients of *Gridhrasi* w.s.r. to Sciatica.

- To explore the literature of *Aganikarma*.
- To explore the literature of *Gridhrasi* and sciatica in both Ayurvedic and modern texts.
- To evaluate the therapeutic efficacy of *Agnikarma* in patients of *Gridhrasi* w.s.r. to Sciatica.
- To provide cost effective, safe and effective Ayurvedic method of treatment in the patients suffering from *Gridhrasi*.

#### MATERIALS AND METHODS

The study was performed in the Shalya tantra department of Saint Shara Ayurvedic Medical College, Kotshamir, Bathinda (PB). 30 patients were selected who were clinically diagnosed with *Gridhrasi* on the basis of signs & symptoms as given in *Ayurvedic* text.

#### Criteria for Selection of patient

- Patients with classical features of *Gridhrasi*, mainly pain over the *Sphik* (waist), *Kati* (back), *Prisht* (thigh), *Uru* (hip), *Janu* (knee), *Jangha* (calf region), extending upto *Pada* (foot), *Stambh* (stiffness), *Toda* (pricking pain), tingling & numbness of limbs, difficulty in walking etc. were included.
- Patients with SLR test +ve, patients with chronicity of disease over at least 6month.
- *Sakthanakshepananigrahaniyat*, S.L.R. test, Laseuge sign, sitting test in affected leg for diagnosis as well as prognosis of the treatment.
- Local tenderness in lumber region and affected lower limb.
- Knee and ankle jerk.
- Planter flexion test.
- Popliteal compression test.

**Criteria for Exclusion of patient**

- Cases of Spondylolisthesis, Sacroiliac arthritis, Herpes simplex infection causing radiating pain.
- Tuberculoma, or any cyst compressing the nerve root, diabetic neuropathies are excluded.
- People of *Paittik* constitution, where *Agnikarma* is contraindicated.
- Debilitated patients, children below 16 yrs of age, patients affected with multiple wounds, cases with destructed vertebral bodies & fractures of the vertebra were excluded.

**Criteria for Assessment**

The improvement in the patient was assessed mainly on the basis of relief in the cardinal symptoms of the disease. To assess the effect of therapy objectively, following scoring pattern was used.

**Table1: Ruka (Pain)**

| Symptom  | Grading |
|--|---------|
| No pain reported                               | 0       |
| Occasional Pain                                | 1       |
| Mild pain but no difficulty in walking         | 2       |
| Moderate pain but slight difficulty in walking | 3       |
| Severe pain but severe difficulty in walking   | 4       |

**Table 2: Toda (Pricking Sensation)**

| Symptom                       | Grading |
|-------------------------------|---------|
| No pricking sensation         | 0       |
| Occasional pricking sensation | 1       |
| Mild pricking sensation       | 2       |
| Moderate pricking sensation   | 3       |
| Severe pricking sensation     | 4       |

**Table 3: Stambha (Stiffness)**

| Symptom                 | Grading |
|-------------------------|---------|
| No Stiffness            | 0       |
| Sometimes for 5-10 mins | 1       |
| Daily for 10-30 mins    | 2       |
| Daily for 30- 60 mins   | 3       |
| Daily more than 1hr     | 4       |

**Table4: Spandana (Twitching)**

| Symptom                 | Grading |
|-------------------------|---------|
| No Twitching            | 0       |
| Sometimes for 5-10 mins | 1       |
| Daily for 10-30 mins    | 2       |
| Daily for 30- 60 mins   | 3       |
| Daily more than 1hr     | 4       |

**Table 5: Tingling sensation**

| Symptom                         | Grading |
|---------------------------------|---------|
| No Tingling sensation           | 0       |
| Occasionally Tingling sensation | 1       |
| Mild Tingling sensation         | 2       |
| Moderate Tingling sensation     | 3       |
| Severe Tingling sensation       | 4       |

**Table 6: Numbness**

| Symptom               | Grading |
|-----------------------|---------|
| No Numbness           | 0       |
| Occasionally Numbness | 1       |
| Mild Numbness         | 2       |
| Moderate Numbness     | 3       |
| Severe Numbness       | 4       |

**Table7: Walking distance**

| Symptom                                 | Grading |
|---|---------|
| Patient can walk upto 1 km without pain | 0       |
| Patient can walk upto 500m without pain | 1       |
| Patient can walk upto 250m without pain | 2       |
| Patient feels pain on standing          | 3       |
| Patient cannot stand                    | 4       |

**Table 8:** SLR Test

| Symptom                | Grading |
|------------------------|---------|
| Above 90 degree -0     | 0       |
| Above 75 & Below 90 -1 | 1       |
| Above 60 & Below 75 -2 | 2       |
| Above 45 & Below 60 -3 | 3       |
| Below 45 -4            | 4       |

**AGNIKARMA PROCEDURE:**

**Poorva karma:** Procedure was explained to patient in advance and written consent was taken. The patient was made to lie in prone position over the minor OT table. The affected limb was exposed from lower half of the back to toe, 5 points fixed at low back, mid buttock, mid-thigh, mid-calf and plantar aspect of little toe were marked with the marker.

**Pradhanakarma:** The *Panchaloha Shalaka* was heated to red hot over the flame of the gas stove. The Staff Nurse was advised to hold the affected limb in suitable position. Later *Agnikarma* was performed with Red Hot *Shalaka* in *Binduakriti* at marked points in such a way that *Samyagdagdhalakshanas* were observed.

**Paschat karma:** After *dagdhas*, pulp of *Al-oevera* was applied over treated part & then powder of *Yashtimadhu* & *Haridra* was sprinkled over there. The patient was advised to

**Table 12:** Effect of therapy on Signs & Symptoms

| Sign & symptoms    | Mean score |       | M      | % relief | SD     | SE     | t value | P value |
|--------------------|------------|-------|--------|----------|--------|--------|---------|---------|
|                    | Bt         | At    |        |          |        |        |         |         |
| RUKA               | 3.4        | 0.4   | 3.0    | 88.23    | 0.9428 | 0.2981 | 0.06    | <0.001  |
| TODA               | 3.8        | 0.4   | 3.4    | 89.47    | 0.8944 | 0.4    | 8.5     | <0.01   |
| STAMBHA            | 2.71       | 0     | 2.71   | 100.0    | 0.488  | 0.1844 | 14.71   | <0.001  |
| SAPANDNA           | 2          | .666  | 1.333  | 66.66    | 0.5164 | 0.2108 | 6.324   | <0.01   |
| TINGLING SENSATION | 3.75       | 0.625 | 3.125  | 83.33    | 0.991  | 0.3504 | 8.9188  | <0.001  |
| NUMBNESS           | 1.875      | 0.5   | 1.375  | 73.33    | 0.5175 | 0.183  | 7.5144  | <0.001  |
| WALKING DISTANCE   | 1.7        | 0.6   | 1.1    | 64.706   | 0.3162 | 0.1    | 11      | <0.001  |
| SLR test           | 3.1        | 0.4   | 87.097 | 0.097    | 0.9487 | 0.3    | 9       | <0.001  |

keep away the part from water for 24 hrs & not to take curd, peas, grams, rice, & cold water.

**OBSERVATIONS:**

**Demographic data**

**Table 9:** Age of Patients

| Age of Patients |    |
|-----------------|----|
| 31-40           | 8  |
| 41-50           | 12 |
| 51-60           | 4  |
| 61-70           | 6  |

**Table 10:** Sex of Patients

| Sex of Patients |    |
|-----------------|----|
| Male            | 11 |
| Female          | 19 |

**Table no. 11:** Effected limb of Patients

| Effected Limb |    |
|---------------|----|
| Right limb    | 14 |
| Left limb     | 16 |

According to demographic data of this study, it is observed that, maximum patient belongs to age group of 41-50 yrs of age, there were 11 male patients & 19 female patients found in the study. Maximum patients show left sided affected limb but there may not be a specific reason behind it.

## DISCUSSION

In this study effect of therapy shows highly significant with p value <0.001 results in *Ruka*, *Stambha*, Tingling sensation of lower limb, numbness. There was improvement in SLR test which also gives highly significant with p value < 0.001. Moderately significant results with p value <0.01 seen in case of *Toda* & *Spandan*. It is found that patients were clinically improved with the treatment of *Agnikarma* with no side effect of the therapy. About 88.23% relief found in case of pain immediately after the treatment which is one of cardinal symptom due to which patient became very comfortable & mentally satisfied by the treatment .89.47% relief in *Toda*, about 100% relief was seen in case of stiffness after the therapy. *Gridhrasi* is one of painful condition which hampers the daily routine of the patient. This disease having predominancy of *Vatadoshas* as it comes under eighty *vataj nanatmaj vyadhi* & may have *kaphaanubandh* with it. Thus, radiating pain from lumber region to the lower extremities may show stiffness in the lower limb & difficulty in walking, or continuous standing even for short period. Ayurveda believes that being *ushna* treatment, *Agnikarma* acts against the qualities of *vata* and *kaphadoshas* and hence *Agni karma* cures all the *vataja* and *kaphaj* disorders. Pain occurring anywhere in the body is due to *vata*, *Agnikarma* being *ushna* chikitsa pacifies *vata*, and thus the pain is relieved immediately after *Agnikarma*. Similarly, *kaphaj* disorders also get cured by the *ushna* i.e hot qualities of *Agnikarma*. According to *Ayurveda*, every *dhatu* (tissue) has its own *dhatvagni* (tissue Agni) which is responsible for the nourishment, Increase & decrease of *dhatu*. When this *dhatvagni* becomes *manda* diseases begin to

manifest. Thus, in this condition *Agnikarma* works by giving external heat there by increasing the *dhatvagni* which helps to digest the aggravated *doshas* and hence cures the disease. While describing the *Gridhrasi*, *Aacharya Sushrut* has given more emphasis on involvement of ligament of heel & toe afflicted with *vatadosha* which obstruct the movement of leg. In the chapter of *Vaatvyadhi chikitsa Adhyaay*, *Acharya Charaka* has mentioned process of *Agnikarmain* case of *Gridhrasi*. So as to discontinue the recurrence & for *samprapti vighatan hetu*, patient should be given oral *vatshamak* medication.

## MODE OF ACTION:

*Gridhrasi*, a pain and disability dominant disease needs an energetic treatment. The line of management depends on *dosha* and *dhatu* involved in the pathogenesis which in turn depends on the *nidana*. *Dhatukshaya*, *vataprakopa* are the inevitable conditions and involvement of *asti*, *sandhi*, *upadhatus* are evident in any pathogenesis of *Gridhrasi*. *Ayurvedic* principles state that being *Ushna* treatment it acts against the qualities of *vata* and *kapha doshas* and hence cures all the *Vataja* and *Kaphaj* disorders. Even it helps to remove *Srothasangha* and *avarana* by *Ushna guna*. According to scientist Dr Ven Hanff, the place where heat burns the local tissue metabolism is improved, thus various metabolic and rejuvenating changes takes places at the site of heat burns, and it leads to increase demand of oxygen and nutrients of the tissues at the site of heat burns. It also excretes the unwanted metabolites and toxins. Due to increased local metabolism, the waste products (metabolites) which are produced gets excreted, which normalize the blood circulation thus resulting in

reduction in intensity of pain. There may be generalizing dilatation of the heated blood vessels on the centers concerned with regeneration of the body temperature. Heating affect the vasomotor centers causing general rise in temperature. Due to increased local metabolism, the waste products (metabolites) which are produced gets excreted, which normalize the blood circulation thus resulting in reduction in intensity of pain.

### CONCLUSION

- *Gridhrasi* (Sciatica) is commonly seen in society as a prominent problem.
- Number of sittings of *Agnikarma* depends upon the chronicity and severity of the disease.
- Overall, *Agnikarma* is simple modality of treatment, having no complication.
- *Gridhrasi* can be absolutely cured by *Agnikarma chikitsa*.

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