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A Clinical Study to Evaluate the Effect of Agnikarma in the Management of Gridhrasi W.S.R. to Sciatica

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Abstract

Gridhrasi (Sciatica) is one of the *Vatavyadhi* caused by aggravated *Vatadoshas*. This disease is characterised 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* is the procedure indicated by *Aacharya* in *Vatavyadhi*. Sushruta mentions *Agnikarma* as superior most than other therapeutic procedures as it gives instant relief in pain. Thus the objective of present study was to evaluate the efficacy of *Agnikarma* in case of *Gridhrasi* & thus improve the daily routine of affected individual. Open study was performed in CSMSS Ayu. College at OPD & IPD level, patient were registered for study after taking written informed consent. 30 cases present with classical features of *Gridhrasi* as given in text were selected from OPD & IPD. Data was collected & observation were made before treatment, on 7th day, on 14th day, & 21st day of treatment. There was a highly significant reduction in the parameters like pain, walking distance, stiffness, SLR test seen in the study. Management of *Gridhrasi* by *Agnikarma* gives instant relief in pain.

Keywords: Agnikarma, Gridhrasi, Sciatica.

Introduction:

Gridhrasi is a *Shulpradhana Nanatmaja Vatavyadhi*¹ which affects the daily routine of patients. Patient suffering from *Gridhrasi* is not capable to walk properly. According to *Acharya Charaka*, *Stambha* (stiffness), *Ruka* (pain), *Toda* (pricking sensation) and *Spandana* (twitching) are the signs and symptoms of *Vataja Gridhrasi*². *Aruchi* (anorexia), *Tandra* (drowsiness) and *Gaurava* (heaviness) are the additional symptoms of *Vatakaphaja Gridhrasi*³. *Gridhrasi* is one of the *Vatavyadhi*. It starts from hip and gradually comes down to waist, back, thigh, knee, shank and foot and affects these parts with stiffness, distress, piercing pain and with frequent quivering.⁴ Sciatica is a major cause of illness among the working population in a developing country. This is the most common disorder which affects the movements of legs, particularly in most productive period of life, with low back pain, many of persons have radicular pain and this comes under the umbrella of Sciatica syndrome. *Ancient Acharyas given the name Gridhrasi* as a disease, it may because of patient's gait become 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. In *Ayurveda* science, various modalities of treatment are explained for the management of *Gridhrasi*⁵. *Agnikarma Chikitsa* is said to be superior⁶ Several researches have shown that *Agnikarma Chikitsa* is more effective compared to the other treatments such as oral drugs or even surgeries etc. The approach of *Agnikarma* has been mentioned in the context of diseases like *Arsha*, *Arbuda*, *Bhagandar*, *Sira*, *Snayu*, *Asthi*, *Sandhigata Vata Vikaras* and *Gridhrasi*.⁷ *Gridhrasi* is seen as a panic condition in the society as it is one of the burning problems. On the basis of symptomatology,

Gridhrasi may be simulated with the disease sciatica in modern parlance. In modern medicine, the disease sciatica is managed only with potent analgesics or some sort of surgical interventions which have their own limitations and adverse effects. Where as in *Ayurveda*, various treatment modalities like *Siravedha*, *Agnikarma*, *Basti Chikitsa* and palliative medicines are used successfully. Among these, *Agni karma* procedure seems to be more effective by providing timely relief. It is a classical fact that this pain is effectively relieved by the *Agni karma* and there is no fear of putrefaction and bleeding. Ultimately it produces balancing effect on vitiated *Vata Dosha*. To perform this procedure, many *Dahana Upkaranas* (devices) like *Pippali*, *Ajashakrit*, *Godant*, *Shara*, *Shalaka*, *Jambavoshtha*, *Madhu*, *Guda*, *Sneha* and different types of metals are used.⁸

Aims and Objectives:

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

Materials and Methods:

The study was performed in the OPD and IPD of P.G. department of *Shalya Tantra*, CSMSS Ayu College Aurangabad. We selected 30 patients of clinically diagnosed *Gridhrasi* on the basis of signs and symptoms given in *Ayurveda* texts.

a) INCLUSION CRITERIA:

- 1) Patients having classical symptoms of *Gridhrasi* like pain over *Sphik*(waist), *Kati* (back), *Prishta* (thigh), *Uru* (hip), *Janu* (knee), *Jangha* (calf region), extending up to *Pada* (foot), *Stambha* (stiffness), *Toda* (pricking pain). Tingling and numbness of limbs, difficulty in walking etc.
- 2) Patients with Straight Leg Rising test positive.
- 3) Age group – 30 to 70 yrs.

b) EXCLUSION CRITERIA:

- 1) Cases of spondylolisthesis, sacroiliac arthritis, Herpes simplex infection causing radiating pain.
- 2) Known cases of tuberculoma, or cyst compressing the nerve root, diabetic neuropathies.
- 3) Patients having multiple wounds, fracture of vertebra, destructed vertebral bodies.
- 4) People of *Paittik* constitution, where *Agnikarma* is contraindicated.

c) STUDY DESIGN:

In this study, 30 patients who satisfied the study criteria included in the study Outcome variables were recorded before treatment, on 7th day, on 14th day, and on 21st day after treatment.

d) DURATION OF TREATMENT:

Four weeks

e) 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

| | |
|---|---|
| <p><u>Ruka(Pain)</u></p> <ol style="list-style-type: none"> 1. No pain reported - 0 2. Occasional Pain - 1 3. Mild pain but no difficulty in walking -2 4. moderate pain but slight difficulty in walking -3 5. Severe pain but severe difficulty in walking – 4 | <p><u>Numbness</u></p> <ol style="list-style-type: none"> 1. No Numbness -0 2. Mild Numbness -1 3. Moderate Numbness – 2 4. Severe Numbness – 3 |
| <p><u>Toda (Pricking Sensation)</u></p> <ol style="list-style-type: none"> 1. No pricking sensation -0 2. Occassionally pricking sensation -1 3. Mild pricking sensation -2 4. Moderate pricking sensation -3 5. Severe pricking sensation -4 | <p><u>Walking distance</u></p> <ol style="list-style-type: none"> 1. Patient can walk upto 1 km without pain -0 2. Patient can walk upto 500m without pain -1 3. Patient can walk upto 250m without pain -2 4. Patient feels pain on standing - 3 5. Patient cannot stand - 4 |
| <p><u>Stambha (Stiffness)</u></p> <ol style="list-style-type: none"> 1. No Stiffness – 0 2. Sometimes for 5-10 mins - 1 3. Daily for 10-30 mins- 2 4. Daily for 30- 60 mins- 3 5. Daily more than 1hr- 4 | <p><u>Tingling sensation</u></p> <ol style="list-style-type: none"> 1. No Tingling sensation -0 2. Occasionally Tingling sensation -1 3. Mild Tingling sensation -2 4. Moderate Tingling sensation -3 5. Severe Tingling sensation -4 |
| <p><u>Spandana (Twitching)</u></p> <ol style="list-style-type: none"> 1. No Twiching – 0 2. Sometimes for 5-10 mins - 1 3. Daily for 10-30 mins- 2 4. Daily for 30- 60 mins- 3 5. Daily more than 1hr- 4 | <p><u>SLR test</u></p> <ol style="list-style-type: none"> 1. Above 90 degree -0 2. Above 75 & Below 90 -1 3. Above 60 & Below 75 -2 4. Above 45 & Below 60 -3 5. Below 45 -4 |

f) PROCEDURE:

The procedure of *Agnikarma* was conducted in the minor OT of P.G. Department of *Shalya Tantra*. The material used for *Agnikarma* was *Panch loha Shalaka*. First of all the procedure of *Agnikarma* was explained to the patients in detail before conducting the treatment and patient was mentally prepared by giving assurance. As a preoperative measure, patient was advised to consume *Snigdha* (unctuous) and *Picchila* (slimy) food before treatment. On the day of procedure, patient was made to lie in prone position, with leg extended. Patient was instructed to relax and slowly made to change his/her leg position to the required side.

Poorva karma:

1. Informed consent to undergo *Agnikarma* treatment was taken.
2. Routine blood investigation's done.
3. Inj. Tetanus Toxoid 0.5 ml I.M. given to patient.
4. Selected site was cleaned with *Triphala Kwath*.

Pradhan Karma:

The selected site was washed with *Triphala Kwath* and it was draped with sterile towel. By using a marker pen, 15-30 points choosed and marked in linear form over lumbo-sacral region and other maximum tender points along the course of Sciatica nerve, giving space 1 cm between each

point. At the same time, the *Shalaka* (metal rod with sharp point) was heated over the burning gas stove until it became red hot. *Agnikarma* was performed with the red hot *Pancha loha shalaka* (metal rod) at the marked points in *Bindu Akrti* (in the form of dot), in such a way that the *Samyakh Dagdha Lakshanas* (signs of proper burning) were looks like appearance of sound, foul smell, constriction of skin. ⁹ Immediately after *Agnikarma*, *Triphala Churna* was applied over the site of *Agnikarma* and a sterile bandage was applied to avoid outside exposure. The patient was advised to rest in the supine position for half an hour and was sent home in case of out-patient, to the ward in case of in-patient. The patient was advised to remove the bandage after 3 hours. He was advised to keep the area clean and free from moisture the second course of *Agnikarma* was conducted on 7th day and similarly, the procedure was repeated for the third sitting after second week that is on 14th day.

Result –

Effect of Agnikarma on Symptoms of Gridhrasi :

| Sr. no | Symptoms | Mean | | M.D. | S.D. | S.E. | t | p | %age |
|--------|--------------------|-------|-------|-------|--------|--------|--------|---------|-------|
| | | B.T. | A.T. | | | | | | |
| 1 | Ruka (pain) | 3 | 0.61 | 2.39 | 0.572 | 0.119 | 19.659 | <0.0001 | 79.67 |
| 2 | Toda | 2 | 0.10 | 1.89 | 0.737 | 0.169 | 11.199 | <0.0001 | 95 |
| 3 | Stambha | 1.73 | 0.13 | 1.60 | 0.507 | 0.130 | 12.290 | <0.0001 | 92.49 |
| 4 | Spandana | 2 | 0.666 | 1.333 | 0.5164 | 0.2108 | 6.324 | <0.0001 | 66.66 |
| 5 | Tingling sensation | 3.75 | 0.625 | 3.125 | 0.991 | 0.3504 | 8.9188 | <0.0001 | 83.33 |
| 6 | Numbness | 1.875 | 0.5 | 1.375 | 0.5175 | 0.183 | 7.5144 | <0.0001 | 73.33 |
| 7 | Walking distance | 1.7 | 0.6 | 1.1 | 0.3162 | 0.1 | 11 | <0.0001 | 64.71 |
| 8 | SLR test | 2.39 | 0.57 | 1.82 | 0.548 | 0.114 | 16.359 | <0.0001 | 76.15 |

Discussion :

In this study effect of therapy shows highly significant with p value <0.001 results in *Ruka*, *Toda*, *Stambha*, Tingling sensation of lower limb, numbness. There was improvement in SLR test which also gives highly significant with p value < 0.001. It is found that patients were clinically improved with the treatment of *Agnikarma* with no side effect of the therapy. About 79.67 % 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 .95% relief in *Toda*, About 92.49% 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 Vata doshas as it comes under eighty *Vataj Nanatmaj Vyadhi* & may have Kapha anubandh with it. Thus radiating pain from lumber region to the lower extremities may show stiffness in the lower limb & patient got difficulty n walking, or continuous standing even for short period. Ayurveda believes that being *ushna* treatment *Agnikarma* acts against the qualities of *vata* and *kapha doshas* and hence *Agni karma* cures all the *vataja* and *kaphaj* disorders . Pain occuring anywhere in the body is due to *vata*, Agni karma 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 agni karma 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*, Acharya *Sushrut* has given more emphasis on involvement of ligament of heel & toe afflicted with vata dosha which obstruct the movement of leg. In the chapter of *Vaatvyadhi chikitsa Adhyaay* acharya *Charaka* has mentioned process of *Agnikarma* in case of *Gridhrasi* .

Probable mode of action of Agnikarma –

Agni possesses *Ushna, Tikshna, Sukshma* and *Aashukari Gunas*, which are opposite to *Vata* and anti *Kapha* properties. Physical heat from red hot *Shalaka* is transferred as therapeutic heat to *Twakdhatu* by producing *Samyak Dagdha Vrana*. From *Twakdhatu* this therapeutic heat acts in three ways. First, due to *Ushna, Tikshna, Sukshma, Ashukari Guna* it removes the *Srotavarodha*, pacifies the vitiated *Vata* and *Kapha Dosha* and maintains their equilibrium. Secondly, it increases the *Rasa Rakta Samvahana* (blood circulation) to affected site. The excess blood circulation to the affected part flushes away the pain producing substances and patient gets relief from symptoms. Third, therapeutic heat increases the *Dhatwagni*, so metabolism of *Dhatu* becomes proper and digests the *Amadosha* from the affected site and promotes proper nutrition from *Purva Dhatu*. In this way, *Asthi* and *Majja Dhatu* become more stable. Thus result is precipitated in the form of relief from all symptoms of *Gridhrasi*. Further it can be endorsed that the therapeutic heat goes to the deeper tissue like *Mamsa Dhatu* and neutralizes the *Sheeta Guna* of *Vata* and *Kapha Dosha* and in this way vitiated *Doshas* come to the phase of equilibrium and patients got relief from the symptoms.

Thermotherapy –

The use of local heat (thermotherapy) may provide relief of pain and painful muscle spasm by acceleration of metabolic processes whereby the concentration of pain inducing toxic metabolites is reduced. This is accomplished primarily by an increase in local circulation. Acceleration of the inflammatory response to resolution may initially exacerbate discomfort, but will shorten the time course to resolution of inflammation. Thermotherapy is generally soothing and psychologically relaxing, there by favorably modifying emotional response to pain and further reducing painful muscle spasm. Synovial fluid viscosity of joints is known to decrease with increasing temperature. It has been postulated that the joint stiffness may be related to increased synovial fluid viscosity. Relief of joint stiffness may be provided with thermotherapy by a reduction in synovial fluid viscosity.

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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