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

Dr. Vijay D. Jondhale
(M.S. scholar) Shlya Tantra,
CSMSS Ayurvedic College, Kanchanwadi,
Aurangabad.

Dr. Meenal P. Thosar (M.D.)
Asso. Prof. Shlya Tantra,
CSMSS Ayurvedic College, Kanchanwadi,
Aurangabad.

Abstract

Gridhrasi (Sciatica) is one of the Vatavyadhi caused by aggravated Vata Doshas. 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 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. Aruchi (anorexia), Tanda (drowsiness) and Gaurava (heaviness) are the additional symptoms of Vatakaphaja Gridhrasi. 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. 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. Agnikarma Chikitsa is said to be superior. 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. 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 putrification 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.

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 tuberculosis, 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.
**Ruka (Pain)**

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

**Numbness**

1. No Numbness - 0
2. Mild Numbness - 1
3. Moderate Numbness - 2
4. Severe Numbness - 3

**Toda (Pricking Sensation)**

1. No pricking sensation - 0
2. Occasional pricking sensation - 1
3. Mild pricking sensation - 2
4. Moderate pricking sensation - 3
5. Severe pricking sensation - 4

**Walking distance**

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

**Stambha (Stiffness)**

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

**Tingling sensation**

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

**Spandana (Twitching)**

1. No Twitching - 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

**SLR test**

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 Akruti (in the form of dot), in such a way that the Samyak Dagdha Lakshanas (signs of proper burning) were looks like appearance of sound, foul smell, constriction of skin. 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:

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

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. 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 occurring 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, Aacharya 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 aacharya Charaka has mentioned process of Agnikarma in case of Gridhrasi.

Probable mode of action of Agnikarma –
Agni possesses Ushna, Tikshna, Sukhma 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, Sukhma, 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.
Reference:


vii. Dr. Indradeva tripathi, Chakrapanidutta virachit – Chakradutta, edited by Prof.


ix. Shastri ambika Dutta, *Sushrut Samhita, Poorvardha*, Chaukhambha publication,
