A COMPARATIVE CLINICAL STUDY ON THE EFFICACY OF AGNIKARMA AND ERANDA TAILA YOGA IN GRIDHRASI

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ABSTRACT
The method of Agnikarma is prevalent in our country since many centuries. Acharya Sushruta has preached, practiced and documented the details of Agnikarma which is followed by many renowned authorities till date. Most diseases of present day are due to altered life style. Gridhrasi (Sciatica) is one such disease which is gaining prevalence in the present scenario. Sciatica has a life time incidence rate of 13 – 40% and rare in ages below 20, at its peak in the 5th decade and reducing thereafter. Various treatment modalities have been mentioned by Ācharyas for Gridhrasi. Among them Agnikarma has been mentioned as superior. Pain is the main symptom of Gridhrasi and Agnikarma helps in painful conditions. As a part of conservative management Eranda Taila Yoga available in Bharatha Bhaishaja rathnakara is taken for the trial in the form of internal medication (paana) and enema (basti).

Key words: Gridhrasi, Eranda Taila Yoga, Sciatica

INTRODUCTION
Agnikarma is mainly indicated in Ruja pradhana, Vata and Kaphaja vyadhis. It is of 2 types viz Ruksha Agnikarma (performed with dry substances) and Snigdha Agnikarma (performed with oily/sticky substances). Pancha dhatu shalaka has been used on a regular basis for the purpose of Agnikarma irrespective of the structure involved or level of the pathology. But according to the classic, specificity of Dahanopakarana depends on the disease level concerned.

Most of the painful conditions are related to musculoskeletal system which comprises bones, joints, tendons, ligaments etc. The Dahanopakaranas mentioned for the diseases of these locations are Snigdha dravyas such as Kshaudra, Guda, Taila, Vasa, Madhuchista etc., as they have the deep heat penetration capacity with a greater latent heat period. Sushruta has described four types of Agnikarma on the basis of shapes which depend on different location of the body. These include Valaya, Bindu, Vilekha and Pratisarana. Vagbhata adds three more types viz, Ardhachandra, Svastika and Ashtapada.

The word ‘Gridhrasi’ itself suggests the gait of the patient which is similar to Gridhra (vulture) due to pain. All the Ayurvedic classics including those written in medieval period have described the aetio-pathogenesis and symptomatology of Gridhrasi in concise form. Gridhrasi is considered as Shoola Pradhana Vatavyadhi. The cardinal sign and symptoms of Gridhrasi are Ruka (Pain), Toda (Pricking sensation), Stambha (Stiffness) and Muhurspandana.
Various treatment modalities have been mentioned by Ācharyas for Gridhrasi. Among them Agnikarma has been mentioned as superior. Pain is the main symptom of Gridhrasi and Agnikarma helps in painful conditions. Agnikarma using Pancadhātu śālāka has been found to give good effect in this condition.

Gridhrasi being a Snāyugata vikāra use of Tapta dravās are indicated for Agnikarma according to classics. Moreover Tapta dravās are considered to have more penetrating power than Rūksa instruments such as Śālāka. As a part of conservative management Eranda Taila Yoga described in Bhāratha Bhāishajya Rathnakara was selected for the trial. This Yoga is explained in the classical text especially for the disease Gridhrasi. The drug was used in the form of internal medication (paana) and enema (basti).

**AIMS AND OBJECTIVES**

- To compare the therapeutic effect of Agnikarma (using Sneha) and Eranda Taila Yoga (paana and basti) in Gridhrasi.
- To analyze the thermal behavior of Sneha to formulate mode of action of Agni karma.

**MATERIALS AND METHODOLOGY**

Criteria for selection of patient: The clinical trial was performed in patients attending OPD and IPD of Post Graduate Department of ShalyaTantra, National Institute of Ayurveda, Jaipur were. During the course of selection;

a) A separate case proforma according to the protocol were used for documentation

b) Informed written consent from each patient was taken before including in the trial

**Inclusion criteria:**
- Patients with classical symptoms of Gridhrasi (sphik/kati/prishta/uru/ jangha/ paada shoola, stambha, supti) and diagnosed cases of Gridhrasi were included.
- Patients of age limit between 20 - 60 years, irrespective of sex and socio-economic status.
- Positive SLR and Lasegues sign.

**Exclusion criteria:**
- Patients with systemic diseases like Diabetes mellitus, Tuberculosis,
- Traumatic lesion in lumbo-sacral region
- Infective, Neoplastic conditions of spine
- Hip joint arthritis
- Pelvic pathology
- Pregnancy

**Investigations:**
- Blood routine
- X-ray lumbo-sacral spine AP & Lat. view
- MRI if necessary

**Study design:**
The present clinical study comprised of 120 patients. They were divided into three groups as Group-A, Group-B & Group-C

Group A: Agnikarma was done using Sneha
Group B: Eranda Taila Yoga given orally (paana) & enema (basti)
Group C: Agnikarma was done using Panca-Loha śalāka.

**Observational period:** The total duration of the study was 2 weeks with periodical observations done once in a week.

**Follow up period:** 2 weeks after the completion of treatment

**Assessment criteria:** Effect of therapies was evaluated by using parameters as stated below with standard grading.

**Procedure of Agnikarma:** The procedure of Agnikarma consisted of Poorva Karma, Pradhaana Karma and Paschaath Karma.

**Poorva Karma:** Informed consent of the patient was taken. The patient was put on liquid diet before Agnikarma. For Group A ste-
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tile Sponge holding forceps, Cotton pieces, Drape, Sneha dravya, Steel dish, Borosil glass pippette, Yasti Madhu choorna, Ghrita Kumari were kept ready. For Group C sterile sponge holding forceps, Cotton pieces, Drape, Panca Loha shalaka, Steel dish, Yashimadhu choorna or Ghrita Kumari were kept ready. The area of Agnikarma was cleaned with antiseptic solution and draped. The area of maximum tenderness or pain on the spine was palpated and determined.

**Pradhūna Karma:** For Group A, a small amount of Eranda Taila Yoga was taken in a sterile dish, Kept over water bath and heated. For Group C the Shalaka was heated directly over the heat source until red hot. The patient was put in prone position. Agnikarma was done over the spine, covering the area of maximum tenderness. Bindu Dahana Visheshya was adopted. Hot oil was used in Group A. The Hot Eranda taila yoga was sucked using a Borosil glass pippette, poured on the pre – determined site and wiped off after a 1 minute. The consistency of Eranda taila yoga was helpful in adopting this procedure.

Method adopted in Clinical Practice: Dattura leaves are cut into pieces, fried in a pan. This mixture is taken in Dattura leaf and wrapped. This bolus is used for Agnikarma. A coin is used to support the bolus and prevent from direct heat contact. It is more acceptable for the patient as it doesn’t cause any cosmetic disturbance. This procedure is practically fruitful in Tila taila based oil preparations and principle of indirect heat method is followed.

For group C Heated Pancha Loha Shalaka was used. At least ½ cm gaping was maintained between the Daggha Stāna.

**Paschat karma:** Yastimadhu choorna or Ghrita kumari was applied.

**Administration of Eranda Yoga:**
*Eranda Taila Yoga Paana* - 5ml at bedtime with warm water for 7 days

*Eranda Taila Yoga Matra Basti* 30ml after following dietary regimens for 7 days.

Procedure: Patient was made to lie in left Lateral position, anal orifice was lubricated. A red rubber catheter was inserted slowly into the anal orifice; Luke warm Eranda taila yoga 30ml was pushed. Mild patting was done over the Gluteal region. Patient is made to lie in Supine position for 10 min.

**Subjective criteria**
1. Pain: Pain visual analogue scale

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>No pain</td>
<td>Mild pain</td>
<td>Discomforting</td>
<td>Distressing</td>
<td>Horrible</td>
<td>Excruciating</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Stiffness:
- No stiffness - 0
- Mild stiffness - 1
- Moderate stiffness - 2
- Severe stiffness - 3

**Objective criteria**
3. Tenderness:
- No tenderness - 0
- Patient says joint is tender - 1
- Patient winces - 2
- Patient winces & withdraws - 3
- Patient won’t allow to touch - 4

4. SLR test:
- $90^\circ - 76^\circ$ - 0
- $75^\circ - 61^\circ$ - 1
- $60^\circ - 46^\circ$ - 2
- $45^\circ - 31^\circ$ - 3
- Below $30^\circ$ - 4

5. Lassegues sign:
- Positive - 1
- Negative - 0

6. Deep tendon Reflexes:
- Ankle jerk:
  - Absent - 0
  - Normal - 1
  - Diminished - 2
  - Exaggerated - 3
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Knee jerk:
- Absent
- Normal
- Diminished
- Exaggerated
7. Sensory impairment:
- Present
- Absent
8. Muscle wasting
- Present

OBSERVATIONS AND RESULTS

Table 1: Showing the distribution of patients according to Symptomatology

<table>
<thead>
<tr>
<th>Symptomatology</th>
<th>Group A</th>
<th>Group B</th>
<th>Group C</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Pain</td>
<td>40</td>
<td>100</td>
<td>40</td>
<td>100</td>
</tr>
<tr>
<td>Stiffness</td>
<td>35</td>
<td>87.5</td>
<td>32</td>
<td>80</td>
</tr>
<tr>
<td>Tenderness</td>
<td>40</td>
<td>100</td>
<td>40</td>
<td>100</td>
</tr>
<tr>
<td>SLR test</td>
<td>40</td>
<td>100</td>
<td>40</td>
<td>100</td>
</tr>
<tr>
<td>Lasségue’s Sign</td>
<td>40</td>
<td>100</td>
<td>40</td>
<td>100</td>
</tr>
<tr>
<td>Sensory Impairment</td>
<td>35</td>
<td>87.5</td>
<td>32</td>
<td>80</td>
</tr>
<tr>
<td>Deep Tendon Reflex D/K/J</td>
<td>29</td>
<td>72.5</td>
<td>27</td>
<td>67.5</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Deep Tendon Reflex A/J</td>
<td>6</td>
<td>15</td>
<td>5</td>
<td>12.5</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>Muscle wasting</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>7.5</td>
</tr>
<tr>
<td>Gait</td>
<td>35</td>
<td>87.5</td>
<td>32</td>
<td>80</td>
</tr>
</tbody>
</table>

Table 2: Showing the results of group A

<table>
<thead>
<tr>
<th>Sl.</th>
<th>Parameter</th>
<th>Mean of difference</th>
<th>SD</th>
<th>SE</th>
<th>'t' value</th>
<th>'p' value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Pain</td>
<td>4.35</td>
<td>1.98</td>
<td>0.31</td>
<td>13.886</td>
<td>0.028</td>
</tr>
<tr>
<td>2.</td>
<td>Stiffness</td>
<td>0.75</td>
<td>0.58</td>
<td>0.09</td>
<td>8.06</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>3.</td>
<td>Tenderness</td>
<td>1.20</td>
<td>0.51</td>
<td>0.08</td>
<td>14.69</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>4.</td>
<td>SLR test</td>
<td>1.35</td>
<td>0.42</td>
<td>0.07</td>
<td>5.36</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>5.</td>
<td>Lasségue’s sign</td>
<td>0.42</td>
<td>0.50</td>
<td>0.07</td>
<td>5.36</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>6.</td>
<td>Sensory impairment</td>
<td>0.05</td>
<td>0.22</td>
<td>0.03</td>
<td>1.43</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>7.</td>
<td>Deep tendon reflex</td>
<td>Knee jerk</td>
<td>0.6</td>
<td>0.49</td>
<td>0.07</td>
<td>7.649</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ankle jerk</td>
<td>0.3</td>
<td>0.49</td>
<td>0.07</td>
<td>4.08</td>
</tr>
<tr>
<td>8.</td>
<td>Gait</td>
<td>0.6</td>
<td>0.49</td>
<td>0.07</td>
<td>7.649</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Table 3: Showing the results of group B

<table>
<thead>
<tr>
<th>Sl.</th>
<th>Parameter</th>
<th>Mean of difference</th>
<th>SD</th>
<th>SE</th>
<th>'t' value</th>
<th>'p' value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Pain</td>
<td>3.52</td>
<td>1.46</td>
<td>0.23</td>
<td>15.193</td>
<td>0.028</td>
</tr>
<tr>
<td>2.</td>
<td>Stiffness</td>
<td>0.57</td>
<td>0.63</td>
<td>0.1</td>
<td>5.718</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>3.</td>
<td>Tenderness</td>
<td>1.07</td>
<td>0.61</td>
<td>0.09</td>
<td>11.04</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>4.</td>
<td>SLR test</td>
<td>1.02</td>
<td>0.61</td>
<td>0.09</td>
<td>11.04</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>5.</td>
<td>Lasségue’s sign</td>
<td>0.42</td>
<td>0.50</td>
<td>0.07</td>
<td>5.36</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>6.</td>
<td>Sensory impairment</td>
<td>0.04</td>
<td>0.49</td>
<td>0.07</td>
<td>5.09</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>7.</td>
<td>Deep tendon reflex</td>
<td>Knee jerk</td>
<td>0.8</td>
<td>0.54</td>
<td>0.08</td>
<td>9.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ankle jerk</td>
<td>0.2</td>
<td>0.46</td>
<td>0.07</td>
<td>2.72</td>
</tr>
<tr>
<td>8.</td>
<td>Muscle wasting</td>
<td>0.05</td>
<td>0.22</td>
<td>0.01</td>
<td>1.41</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>9.</td>
<td>Gait</td>
<td>0.37</td>
<td>0.49</td>
<td>0.07</td>
<td>4.83</td>
<td>&gt;0.05</td>
</tr>
</tbody>
</table>
As per the result of the group A, group B and group C, Analysis of variance within the groups and between the groups was highly significant in Pain and Sensory impairment. The relief in pain indicates reduced nerve irritation and hence there is positive response in relieving sensory impairment in concerned dermatomes. Analysis of Variance Within the groups was significant in Stiffness, Tenderness, SLR, Lasegues sign and Gait. Analysis of Variance was insignificant within and between the groups in Deep tendon reflexes and Muscle wasting. The trial revealed that the treatment modalities incorporated were successful in relieving pain and sensory impairment which troubles the individuals suffering from Gridhrasi. The maximum relief in Pain has in turn showed result in reducing the symptoms such as stiffness, tenderness, Change in SLR degree, Lasageues sign. The relief of all these symptoms clinically has shown Gait improvement in maximum patients.

The present study showed a promising result in the management of Gridhrasi. Agnikarma using sneha can be used as an alternative method to Agnikarma using Panchaloha shalaka as it produces minimum discomfort to patients. The non palatability of Eranda taila yoga can be better modified with preparing Gelatinous capsules and made comfortable for oral intake. Matra basti using Eranda yoga can be a treatment of choice as a shamana sneha. In ancient classics eranda taila proves its efficacy in palliating the symptoms of Gridhrasi.

REFERENCES

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