ABSTRACT

Gridhrasi is a Nanatamaja Vata Vyadhi, the clinical features simulate with Sciatica. For its management various treatment modalities are employed with variable outcomes. Present clinical study was a prospective and unicentral work designed to assess the efficacy of Raktamokshana Karma in the management of Gridhrasi and to provide a cheap, safe and effective Ayurvedic modality of treatment to the patients of Gridhrasi. It was carried out on a single group with a sample size of 30 patients out of which 7 were dropouts. Ethical clearance from IEC was obtained. In this randomized clinical trial, patients with age ranged from 25-60 years of either sex were selected strictly following the inclusion and exclusion criteria set for the same. Total 90ml blood was withdrawn in three sittings at an interval of 10days (30ml in each sitting). Raktamokshana karma from the Great Saphenous vein of the affected side above the ankle was done by using sterile disposable syringe and needle. Following the standard set criteria for evaluation, the analysis revealed the results to be statistically highly significant on all the variables of assessment criteria, both subjective and objective. Aggregate percentage relief observed after the third sitting was 35.11%. It reveals that Raktamokshana karma has a role in the management of Gridhrasi. However, this therapy should be combined with other measures like oral medication, Kati basti and Matra Basti.

Key words: Gridhrasi, Sciatica, Raktamokshana Karma, Great Saphenous Vein.

INTRODUCTION: Gridhrasi is a well known disease since Samhita Period. The name ‘Gridhrasi’ denotes a peculiar type of gait (simulating with the gait of a vulture called as Gridhra) that victim of the disease shows due to extreme pain with a particular pattern of radiation in his lower limb. It has been enumerated under 80 types of Nanatmaja Vata Vyadhis described in Charaka Samhita and its clinical features simulate with Sciatica. Sciatica is the syndrome characterised by a distinct nature of pain distribution along the course of sciatic nerve. The radiation of pain is from the low back region into the buttock, down into the lower extremity along its posterior or lateral aspect. Acharya Charaka has also described a peculiar radiation pattern of the pain. Owing to the gravity of pain and disability associated with the disease- ‘Gridhrasi’ (Sciatica), its immediate management is necessary. Various conservative measures viz. rest, immobilisation, physiotherapy, analgesics etc. are employed with varying success rates. In recalcitrant cases surgery may be advisable. Despite of intensive management, the recurrence of its
symptoms takes place; necessitating a better, safer, economic and more efficacious approach towards the cure. *Raktamokshana Karma* (therapeutic bloodletting) by Sira Vyadha has been enumerated as the first chikitsa karma in the management of Gridhrasi by Acharya Sushruta and Acharya Charaka. According to *Sushruta Samhita*, the main seat of Gridhrasi Vyadhi is ‘Kandra’. Kandra along with Sira is considered as the Updhatu of Rakta Dhatu. By way of Rakta Mokshana Karma, the vitiated dosha can be directly turned out of the body, thereby providing immediate relief.

**AIMS AND OBJECTIVES:**

- To assess the efficacy of *Raktamokshana Karma* in the management of Gridhrasi.
- To assess the tolerability and acceptability of *Raktamokshana Karma* by the patients.

**MATERIALS AND METHODS**

*Ethical Clearance:* Before beginning the trial, the proposed clinical study was approved by the Institutional Ethical Committee.

*Selection of the Patients:* This trial was conducted in the Dept. of Shalya Tantra and its associated OPD and IPD at R.G.G.P.G Ayu. College and Hospital, Paprola, Dist. Kangra (H.P) -176115. Patients from 25-60 yrs. age of either sex were selected for the trial.

*Study Design and Sample size:* This study was unicentral, Open and prospective clinical trial. This study has been carried out on a single group with sample size of 30 Patients.

*Consent of the patient and Registration:* After counselling; informed, written and witnessed consent was received from the patients. Willing patients then were registered as a trial subject and a trial code was given to each subject. Consent for the procedure of *Raktamokshana* from the patient was received separately prior to each sitting of the procedure.

**INCLUSION CRITERIA:** Patients willing for trial of age group 25-60 years of either sex with the features of Gridhrasi (Sciatica) like Pain (Ruka) started in the back, gluteal region and radiated down one or both of the lower limbs, Pricking sensation(Toda), Stiffness (Stambha), Twisting (Spandana), Anorexia (Aruchi), Torpor (Tandra), Heaviness (Gaurava), (+ve) SLRT (20°– 60°), (+ve) Fajersztajn’s test.

**EXCLUSION CRITERIA:** Patients not willing for trial, below age of 25 yrs. and above 60 yrs, with the evidence of malignancy and co-agulopathy, recent history of trauma, fracture and surgery of the affected lower limb, history of spine injuries, diseases of spine e.g. Pott’s spine, malignancies (both primary and secondary), severe spinal canal stenosis, peripheral vascular disease or peripheral neuropathy or varicose veins or deep venous thrombosis. Intervention delayed for more than 3 days due to any reason or failure of the patients to come for the follow up on the successive visits.

*Subject withdrawal Criteria:* Voluntary withdrawal by the research subject, gross side effects or complications of the procedure or appearance of any ailment/s during the trial requiring medical or surgical intervention.

**Follow-Up:**

On the completion of trial, patients were followed up for one month (after every 10 days) in the OPD. During follow-up proper examination of the patient based on the criteria of assessment in terms of relief and recurrence was done. Site of *Raktamokshana Karma* for swelling,
discoloration, inflammation and infection was also examined.

**METHODOLOGY:** Purva - Karma (Pre-procedure measures)

Local Snehana with Murchhit Til Taila\(^7\) for 15 minutes and local Swedana with Patt Swedana for 5-7 minutes was done. Application of Tourniquet around thigh with pressure a little greater than the systolic Blood Pressure of the patient.

Site of Venepuncture: Within the range of 2.5 - 5cm area, in front and proximal to medial malleolus in the Great Saphenous Vein\(^8\).

Pradhana Karma (Main procedure)

Patient was positioned supine in the bed. Venepuncture with sterile 24 gauze hypodermic needle loaded on 50 ml capacity syringe was done. Total 30 ml blood was withdrawn in one sitting.

Pashchata Karma. The patient was relaxed and in general haematogenic food materials\(^9\) were advised to be given to the patient. The patient was called after ten days for the next sitting. Before going for the next sitting of Rakta Mokshana Karma in the same manner, patient was re-examined on all the assessment criteria and all the findings regarding the effect of therapy were noted down.

**ASSESSMENT CRITERIA:** Assessment was done on Subjective (Pain, Radiation of pain, Stiffness, Pricking Sensations, Visual Analogue Scale (VAS), Verbal Descriptive Scale - VDS) as well as Objective criteria (Passive straight leg raising test and Fajersztajn’s test)\(^10\). Each variable of the criteria was graded according to the severity.

**OBSERVATIONS:** In this clinical study, total 30 patients were registered. Only 23 patients completed the trial which were analyzed statistically to obtain the result of therapy, while 7 patients were drop-outs due to various reasons. Maximum patients were in 36 – 40 yrs age group (11 pts.), males 53.33% (16 pts.), Hindus 100% (30pts.), married 96.67% (29 pts.), educated up to Middle or Matriculation level 46.66% (14 pts.), housewives 43.33% (13 pts.), belonging to lower middle class 83.33% (25 pts.), having moderate / active life styles 56.66% (17). Maximum patients were having habit of taking tea / coffee daily 90% (27 pts.), normal sleep 43.33% (13), normal appetite 63.33% (19), Pitta Pradhana Prakriti 36.66% (11 pts.), normal mental status 53.33% (16 pts.), chronicity 1-8 months 83.33% (25 pts.), Madhyama Sara 53.33% (16 pts.), Madhyama Samhanana 80% (24 pts.), Madhyama Satva 83.33% (25 pts.), Madhyama Satmya 63.33% (19 pts.), Madhyama Ahara Shakti 66.66% (20 pts.) and Rajas Manas Prakriti 86.66% (26 pts.).

<table>
<thead>
<tr>
<th>Sr.no.</th>
<th>Signs and Symptoms</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ruka (pain)</td>
<td>30</td>
<td>100%</td>
</tr>
<tr>
<td>2.</td>
<td>Toda (pricking sensation)</td>
<td>27</td>
<td>90%</td>
</tr>
<tr>
<td>3.</td>
<td>Radiation of pain</td>
<td>30</td>
<td>100%</td>
</tr>
<tr>
<td>4.</td>
<td>Stambha (stiffness)</td>
<td>27</td>
<td>90%</td>
</tr>
<tr>
<td>5.</td>
<td>Visual analogue scale</td>
<td>30</td>
<td>100%</td>
</tr>
<tr>
<td>6.</td>
<td>Verbal descriptive scale</td>
<td>30</td>
<td>100%</td>
</tr>
<tr>
<td>7.</td>
<td>Passive SLRT</td>
<td>30</td>
<td>100%</td>
</tr>
<tr>
<td>8.</td>
<td>Fajersztajn’s test</td>
<td>25</td>
<td>83.33%</td>
</tr>
</tbody>
</table>

**RESULTS:** Paired T test\(^11\) was used for the statistical analysis of the observations.
Table No. 2 Effect of Raktamokshana karma after completion of the trial i.e. after 10 days of 3rd sitting in Gridhrasi

<table>
<thead>
<tr>
<th>S. No</th>
<th>Name of the feature</th>
<th>N</th>
<th>Mean</th>
<th>M.D.</th>
<th>+ SD</th>
<th>+ SE</th>
<th>‘t’</th>
<th>‘P’</th>
<th>%age Relief</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ruka (pain)</td>
<td>23</td>
<td>2.60</td>
<td>2.00</td>
<td>0.60</td>
<td>0.58</td>
<td>0.12</td>
<td>5.00</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>2.</td>
<td>Toda (pricking sensation)</td>
<td>23</td>
<td>1.60</td>
<td>1.13</td>
<td>0.47</td>
<td>0.51</td>
<td>0.10</td>
<td>4.49</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>3.</td>
<td>Radiation of pain</td>
<td>23</td>
<td>3.52</td>
<td>2.69</td>
<td>0.82</td>
<td>0.83</td>
<td>0.17</td>
<td>4.75</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>4.</td>
<td>Stambha (stiffness)</td>
<td>23</td>
<td>2.39</td>
<td>1.65</td>
<td>0.73</td>
<td>0.86</td>
<td>0.18</td>
<td>4.10</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>5.</td>
<td>Visual analogue scale</td>
<td>23</td>
<td>6.39</td>
<td>5.00</td>
<td>1.39</td>
<td>1.26</td>
<td>0.26</td>
<td>5.25</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>6.</td>
<td>Verbal descriptive scale</td>
<td>23</td>
<td>2.26</td>
<td>1.65</td>
<td>0.60</td>
<td>0.72</td>
<td>0.15</td>
<td>4.04</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>7.</td>
<td>Passive SLRT</td>
<td>23</td>
<td>3.04</td>
<td>1.56</td>
<td>1.47</td>
<td>0.66</td>
<td>0.13</td>
<td>10.6</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>8.</td>
<td>Fajersztajn´s Test</td>
<td>23</td>
<td>2.00</td>
<td>0.47</td>
<td>0.52</td>
<td>0.79</td>
<td>0.16</td>
<td>9.23</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

Completely Cured-0, markedly Improved-1, Improved-14, No relief-8 patients.

DISCUSSION: Gridhrasi is a Vata predominant disorder and is mentioned under Nanatmaja Vatika disorders. It has been observed that in all the Vata Vyadhis, some kind of nerve disorder is usually present. Though Vata is the prominent Dosha, sometimes Kapha is an Anubandhi Dosha, but independently cannot produce Gridhrasi. Pitta is the least involved Dosha. The symptoms of Gridhrasi appear after vitiation of Gridhrasi Nadi (Sciatic Nerve). The clinical features simulate with the syndrome termed as ‘Sciatica’ in the modern medical science. Sciatica (si-at’i – ka) [L] is a syndrome characterized by pain radiating from the back into buttock upto the lower extremity along its posterior or lateral aspect. Low back pain is the second most common cause of missed work days. It is leading cause of disability between ages of 19-45 years and number one impairment in occupational injuries.

Raktamokshana is a type of Shodhan Chikitsa that aims at elimination of the vitiated Dosha out of the body. Gridhrasi is a Vata predominant disorder and its management is described under Mahavata Vyadhis by Acharya Sushruta, owing to the intense pain and crippling associated and difficulty to get immediate relief. According to Sushrut Samhita the diseases that are not cured by other measures, should be treated by Sira Vyadha to get immediate relief. Also the disease is not localised, as it involves a large area of the body; so Raktmokshana by Sira is preferred as per Sushrut Samhita.

Probable Mode of Action: Chikitsa (management) of an ailment aims at breaking the chain of its aetiopathogenesis (Samprapti-Vighatana). As a main treatment modality of the disease,
Raktamokshana Karma may be having the same mode of action. Gridhrasi is a Nanatmaja Vata Vyadhi, the main Dosha involved is Vata. According to Ch. Chi.28/88, like other Nanatmaja Vata Vyadhis, although there is predominance of Vata Dosha, yet Pitta and Kapha Dosha are also involved as Anubandhi Dosha. All the Siras (veins) due to their ‘Sarva-vaha’ property are said to carry all the three Doshas. Thus by applying a single modality of treatment i.e. Raktamokshana Karma by Sira Vyadha (Vene-puncture) alone alleviates the vitiation of all the three Doshas.

The Dushya involed are Rakta, Mamsa, Meda. Medo-Dhatu is produced from Mamsa Dhatu which in turn is a product of Rakta Dhatu in the sequence of production i.e. ‘Uttarottar Dhatu Nirmana Krama’ (Ch.Chi.15/16). So for the proper production of successive Dhatus, firstly the vitiation of Rakta should be dealt with. According to Sushrut Samhita, the main seat of Gridhrasi Vyadhi is ‘Kandra’. (Su.Ni.1/74) Kandra along with Sira is considered as the Updhatu of Rakta Dhatu (Ch.Chi. 15/16). By way of Raktamokshana Karma, the vitiated Dosha are directly turned out of the body.

The entire body is nourished by Siras (SuSha.7/3). To alleviate vitiation of Dosha involving a large area of body, Raktmokshana from Sira is the only way as it exerts its effects on the entire body Sushrut Samhita (SuSha.8/26). Though Gridhrasi is not a Vyapaka-Vyadhi, yet considerably large area of the body is affected i.e Adhishthana (the main seat affected) of Gridhrasi extends from Kati to Pada and thus benefitted by it.

Raktamokshana Karma provides ‘Ashu Vyadhya Shanti’(Su. Sha.8/22). As mentioned in the Samprapti of Gridhrasi (Kaya Chikitsa, 3rd Part, Chapter-1, Vata Vyadhi Prakarana- By Prof. Ajay Kumar Sharma), it is mentioned to have Ashukari Swabhava. The intense pain and crippling requires immediate relief. Raktamokshana Karma provides immediate relief probably due to its Prabhava (Achintya Shakti i.e. therapeutic potency that cann’t be explained). It is rendered as a Dushchikitsiya Vyadhi and Mahagada i.e. difficult to cure. According to Sushruta Samhita the diseases that are not cured by other measures, should be treated by Sira Vyadha to get immediate relief (SuSha.8/22). Two types of Sroto-Dushti is present in Gridhrasi i.e. Sanga and Sira-Granthi.
CONCLUSION: Raktamokshana Karma has shown statistically significant results in all the variables of assessment criteria, both subjective and objective. It reveals that Raktamokshana karma has a definitive role in the management of Gridhrasi.

REFERENCES:


Chaukhambha Sanskrit Sansthana, Varanasi 2012, p78-79.

Corresponding Author: Prof. Sanjeev Sharma, Professor, P.G. Deptt. of Shalya Tantra, R.G.G.P.G. Ayu. College, Paprola (Kangra) H.P. - 176115
E-mail: sumanhp2006@gmail.com

ACKNOWLEDGEMENT
Authors are highly indebted to Prof. Y.K. Sharma, Principal of R.G.G.P.G. Ayurvedic College - Paprola, for his administrative and technical help in providing all the necessary facilities for this trial. We are sincerely thankful to Prof. Ramesh Chand Arya, H.O.D, P.G. Dept. of Shalya Tantra for his encouragement, blessings and unprecedented support. We are also grateful to the Medical Superintendent of R.G.G.P.G. Ayurvedic Hospital - Paprola, for his unstinted support. We pay our gratitude and thanks to all the Departments of the institution for their timely cooperation and generous support throughout the work. Lastly, we feel a profound sense of gratitude to all the patients who have participated in this trial and made this study possible.