

Effect of Panchamooli Kashaya in the Management of Gridhrasi

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Abstract—Background: Low back pain with radiating leg pain, correlating with Gridhrasi, is a prevalent condition affecting quality of life. Gridhrasi, is characterized by radiating pain from the Sphik region to the Pada, associated with Ruk, Toda, Spandana, Stambha, and Sakthiukshepanigraha movement, clinically it closely resembles Sciatica. Owing to sedentary lifestyle, faulty posture and degenerative spinal changes, its incidence has increased considerably. Panchamooli Kashaya, a classical formulation described in Yogaratnakara, is traditionally indicated in Gridhrasi. **Aim:** To evaluate the clinical efficacy of Panchamooli Kashaya in the management of Gridhrasi. **Methods:** A single-arm, clinical study was conducted on 25 patients diagnosed with Gridhrasi. Participants received Panchamooli Kashaya with Trivrut Churna for 30 days. Assessment was done using subjective and objective parameters before and after treatment. **Results:** Statistical analysis using the Wilcoxon Signed-Rank Test showed highly significant improvement in all parameters. Pain was reduced by 78.8%, and functional disability (RMDQ) decreased by 65.1%. **Conclusion:** Panchamooli Kashaya is an effective, therapeutic intervention for Gridhrasi, providing significant relief in pain and improving functional mobility.

Keywords— Gridhrasi; Panchamooli Kashaya; Sciatica; Vatavyadhi.

I. INTRODUCTION

Low back pain with radiating leg pain has become a common health problem in the modern era due to sedentary lifestyle, prolonged sitting, faulty posture, repetitive occupational strain and degenerative spinal changes. These factors predispose to lumbosacral nerve compression leading to neuropathic pain, functional disability and reduced quality of life. In Ayurveda, this condition is described as Gridhrasi, one of the Nanatmaja Vatavyadhi, characterized by radiating pain from Sphik to Pada, associated with Toda, Stambha, Spandana and Saktiutkshepanigraha.^[1,2] In Vatakaphaja Gridhrasi, additional symptoms such as Tandra, Gourava and Arochaka are observed^[2]. The pathology predominantly reflects aggravated Vata often associated with Kapha resulting in neuromuscular dysfunction and Srotorodha.

In modern medicine, Gridhrasi correlates with Sciatica, commonly resulting from compression or irritation of L4, L5 or S1 nerve roots due to intervertebral disc prolapse, degenerative disc disease or spinal canal stenosis.^[3] It significantly affects mobility, work capacity and quality of life, with reported lifetime incidence ranging between 13–40% and higher prevalence among occupational groups^[4]. Conventional management includes NSAIDs, muscle relaxants, physiotherapy, epidural injections and surgery, but relief is often temporary and long-term use may lead to adverse effect. Ayurveda provides a comprehensive and safer therapeutic approach through Snehana, Swedana, Shodhana and internal medications aimed at Vata pacification and functional restoration. Panchamooli Kashaya, mentioned in Yogaratnakara^[5] Panchamooli Kashaya consists of

Laghupanchamoola drugs possessing Tikta Rasa, Laghu Guna, Ushna Veerya and Katu Vipaka, contributing to Vata-Kapha Shamana, Agnivaradhana, Shoolahara and Shothahara effects. Trivrut Choorna, added as Prakshepa Dravya, enhances Anulomana and Ama Pachana. These properties provide a strong pharmacological rationale for its application in Gridhrasi.^[6] Hence, the present study was undertaken to scientifically evaluate the clinical efficacy of Panchamooli Kashaya in the management of Gridhrasi.

II. AIM AND OBJECTIVES

Aim

To evaluate the therapeutic effect of Panchamooli Kashaya in the management of Gridhrasi.

Objectives

- To assess the effect of Panchamooli Kashaya in reducing the classical signs and symptoms of Gridhrasi.
- To evaluate improvement in functional ability using standard clinical assessment tools.

III. MATERIALS AND METHODS

Study Design

An interventional single-arm pre-test and post-test clinical study without a control group.

Sample Size

Twenty-five patients of either gender, aged 18–70 years, attending the OPD of the Department of Kayachikitsa, Sree Narayana Institute of Ayurvedic Studies and Research Hospital, Kollam, Kerala, were enrolled.

Diagnostic Criteria

Diagnosis was based on classical clinical features of Gridhrasi supported by Straight Leg Raise test, Lasègue’s sign, routine blood investigations and lumbosacral spine X-ray (AP and lateral views).

Inclusion Criteria

- Patients presenting with signs and symptoms of Gridhrasi.
- SLR less than 90°.
- Willingness to provide written informed consent.

Exclusion Criteria

- Pregnant and lactating women.
- Sciatica due to post-surgical complications.
- Congenital spinal deformities and vertebral fractures.

Withdrawal Criteria

Participants were withdrawn in case of unwillingness to continue or development of adverse drug reactions.

Intervention

Panchamooli Kashaya was administered orally at a dose of 48 ml twice daily, one hour before food, for 30 days. Trivrut Choorna (1.5 g) was added as Prakshepa.

Composition of Panchamooli Kashaya

Formulation for this study is Panchamooli Kashayam mentioned in Yogaratnakara in Vatavyadhi chikitsa Adhayya. It consist of Salaparni, Prisniparni, Brihati, Kantakari, Gokshura. As Prakshepa Drava: Trivrut. (Table 1: Ingredients of Panchamooli Kashaya). To prepare Kashaya with 48 grams of *Kashaya churna* to be mixed with 16 times of water (768 ml) and reduced to 1/8 part (96 ml) and take the prepared medicine in 2 divided doses of 48 ml during morning and evening one hour before food added with 1.5 g of Trivrut Choorna.

Ingredients	Parts used	Quantity
Salaparni	Root	9.8g
Prisniparni	Root	9.8g
Brhati	Root	9.8g
Kantakarika	Root	9.8g
Gokshura	Root/ Fruit	9.8g
Trivruth	Root	3g



Fig No. 1 Coarse powder Panchamooli Kashaya Churna



Fig No. 2 Prakshepa Chuma - Trivrut Chuma

Criteria for assessment

Participants were assessed on day 0 and day 31 using:
Subjective: Stambha, Ruk, Toda, Spandana, Roland-Morris Low Back Pain and Disability Questionnaire.

Objective: SLR Test (active & passive)

Grading of assessment criteria

RUK (Pain) – Visual Analogue Scale (0 – 10)

No Pain	0
1-3 Mild Pain	1
4-6 Moderate Pain	2
7-9 Severe Pain	3
10 Worst Pain	4

Toda (Pricking sensation)

No Pricking Pain	0
Mild	1
Moderate (Frequent, Not Persistent)	2
Severe (Persistent)	3

Stambha (Stiffness)

No stiffness	0
Mild (can perform daily routine without difficulty)	1
Moderate (difficulty in performing daily routine)	2
Severe (totally unable to perform daily activity)	3

SPANDHANA (Twitching)

No Twitching	0
Mild	1
Moderate	2
Severe	3

Straight Leg Raise Test Scoring

>90°	0
71°-90°	1
51°-70°	2
31°-50°	3
Upto 30°	4

Statistical Analysis

Data were analyzed using the Wilcoxon Signed-Rank Test. Significance was set at $p < 0.05$

Ethical Clearance

The study has been cleared by IEC vide approval reference number IEC/SNIASR23101001. The study is carried out as per international conference of harmonization-good clinical practice guidelines (ICH-GCP)

IV. RESULT

A total of 25 patients diagnosed with Gridhrasi completed the study. The therapeutic effect of Panchamooli Kashaya was assessed using both subjective parameters (Ruk, Toda, Stambha, Spandana) and objective parameters (SLR Active, SLR Passive and RMDQ). Data were analyzed using the Wilcoxon Signed-Rank Test, and the results revealed statistically significant improvement ($p < 0.05$) in all parameters.

Marked improvement was observed in the majority of patients. The reduction in pain, stiffness, pricking sensation and twitching was accompanied by improved limb mobility and functional ability. Patients also reported better gait and relief from radiating pain.

Subjective Parameters

TABLE 1. Effect of Treatment on Subjective Symptoms (n = 25)

Symptom	BT Mean \pm SD	AT Mean \pm SD	% Relief	P-Value
Ruk	3.60 \pm 0.65	0.76 \pm 0.52	78.8%	<0.001
Toda	2.96 \pm 0.78	0.52 \pm 0.51	82.4%	<0.001
Stambha	3.24 \pm 0.72	0.60 \pm 0.50	81.4%	<0.001
Spandana (Twitching)	2.80 \pm 0.64	0.40 \pm 0.49	85.7%	<0.001

Panchamooli Kashaya produced highly significant reduction in Ruk, Toda, Stambha and Spandana, indicating effective Vata-Kapha Shamana and pain-relieving action.

Objective Parameters

TABLE 2. Effect of Treatment on SLR and Functional Ability

Objective Parameter	BT Mean \pm SD	AT Mean \pm SD	% Improvement	P-Value
SLR – Active (Degrees)	30.40 $^{\circ}$ \pm 8.2	68.80 $^{\circ}$ \pm 10.6	\uparrow 126%	<0.001
SLR – Passive (Degrees)	34.20 $^{\circ}$ \pm 9.1	74.60 $^{\circ}$ \pm 11.3	\uparrow 118%	<0.001
RMDQ Score	12.04 \pm 2.36	4.20 \pm 1.44	65.1% \downarrow Disability	<0.001

Significant reduction in RMDQ score reflects better functional ability and improved daily activity performance.

V. DISCUSSION

Gridhrasi is a Nanatmaja Vatavyadhi caused by vitiated Vata Dosha involving the Kandaras of the lower limb. It presents with radiating pain starting from the Sphik and extending through Kati, Uru, Janu, Jangha, and Pada along the nerve course. Based on doshic involvement, it is classified into Vataja and Vatakaphaja types. Core features include pain, stiffness, restricted movements, and Saktiutkshepanigraha.

The pathogenesis involves Dhatukshaya and Margavarodha due to improper Ahara, Vihara, trauma, or external factors.^[7] Early symptoms include low back pain and limb discomfort from Vata Prakopa, progressing through

Apatarpana or Santharpana, with Kapha aggravation in Vatakaphaja Gridhrasi.

Management emphasizes Vata Shamana using Sneha, Sweda, and mild Shodhana therapies such as Basti, Nasya, and Abhyanga, supported by Snigdha–Ushna diet and appropriate lifestyle measures. A combined etiological and symptomatic approach ensures effective management.

Gridhrasi closely resembles Sciatica, a radicular syndrome caused by nerve root compression, most commonly due to lumbar disc herniation. It is characterized by radiating pain, sensory disturbances, and motor weakness along the sciatic nerve. Sciatica typically affects adults aged 30–60 years, with a slight male predominance. About 90% of cases result from disc prolapse, often triggered by trauma or heavy lifting. Pain usually radiates below the knee, worsens with activity, and may resolve spontaneously or require intervention if persistent

Panchamooli Kashaya is described in Yogaratnakara under Vatavyadhi Chikitsa Adhyaya, specifically for Gridhrasi. The formulation comprises Laghu Panchamoolasuch as Salaparni, Prishniparni, Brihati, Kantakari, and Gokshura—with Trivrut as Prakshepa Choorna

Salaparni contains hypaphorine, hordenine, candicine, and desmocarbin and, due to its Guru Guna, Ushna Virya, and Madhura Vipaka, acts as a Tridoshahara drug exhibiting anti-inflammatory, analgesic, antioxidant, immunomodulatory, Balya, and Rasayana properties.^[5,8]

Prishniparni is rich in amino acids, fatty acids, flavonoids, phenolics, sterols, and terpenoids and, with its Madhura–Tikta Rasa and Madhura Vipaka, demonstrates Tridoshahara activity along with anti-inflammatory, antioxidant, hepatoprotective, diuretic, and tissue-healing properties.^[5,8]

Brihati contains solasonine, diosgenin, β -sitosterol, and solamargine and, by virtue of its Laghu, Ruksha, Tikshna Guna, Ushna Virya, and Katu Vipaka, exhibits Vata-Kapha Shamaka action with analgesic, anti-inflammatory, antipyretic, CNS-modulating, and antimicrobial properties.^[5,8]

Kantakari comprises solasonine, solanocarpine, coumarins, and related alkaloids and, with its Tikta–Katu Rasa, Ushna Virya, and Ruksha Guna, acts as a Vata-Kapha Shamaka drug possessing anti-inflammatory, analgesic, antioxidant, antimicrobial, expectorant, and immunomodulatory activities.^[5,8]

Gokshura is rich in steroidal saponins such as diosgenin, gitogenin, campesterol, β -sitosterol, and stigmasterol and, owing to its Madhura Rasa, Guru-Snigdha Guna, Ushna Virya, and Mutrala Karma, exhibits Tridosha Shamaka, diuretic, anti-inflammatory, analgesic, tonic, and neuroprotective properties.^[5,8]

Trivrut contains resinous glycosides and, due to its Laghu, Tikshna Guna, Ushna Virya, and Katu Vipaka, demonstrates Kapha-Pitta Shamaka and Apana Vata-regulating effects along with purgative, laxative, anti-inflammatory, analgesic, and detoxifying properties.^[5,8]

The Roland–Morris Disability Questionnaire (RMDQ) is a validated tool used to assess functional disability due to low back pain. Developed in 1983 and later refined in 2000, it is sensitive to changes in mild to moderate disability across acute, subacute, and chronic conditions. The questionnaire

consists of 24 items, each scored as one point, with total scores ranging from 0 (no disability) to 24 (maximum disability).^[9]

In the present study, Panchamooli Kashaya was administered for 30 days, and the outcomes were assessed through subjective parameters (Ruk, Toda, Stambha, Spandana) and objective parameters (SLR – Active and Passive, and RMDQ). The results revealed statistically highly significant improvement ($p < 0.001$) in all parameters, demonstrating the therapeutic potential of Panchamooli Kashaya in Gridhrasi.

Effect of Panchamooli Kashaya on Ruk

Panchamooli Kashaya produced a highly significant reduction in Ruk, reflecting strong analgesic and anti-inflammatory action. Pharmacological studies show Salaparni, Brihati, Kantakari and Gokshura exhibit proven anti-nociceptive, NSAID-like, cytokine suppressing and pain-modulating properties, while Trivrut supports pain relief through detoxification and bowel regulation. Collectively, these actions pacify aggravated Vata, reduce inflammatory mediators and nerve irritation, leading to marked reduction in continuous radiating pain

Effect of Panchamooli Kashaya on Toda

Toda showed statistically significant improvement post-treatment. Toda being a manifestation of nerve irritation and Vata dominance, improved due to the analgesic, neuroprotective and anti-inflammatory actions of Salaparni, Brihati, Kantakari and Gokshura, while Ushna Virya corrects impaired Vata Gati and relieves sharp pricking neural pain.

Effect of Panchamooli Kashaya on Stambha

A highly significant improvement in Stambha was observed. Stambha is associated with Vata–Kapha Avarana, and the formulation's Laghu, Ruksha, Ushna qualities along with proven anti-inflammatory, antioxidant and muscle-relaxing properties of Salaparni, Prsniparni and Brihati help relieve Srotorodha, muscular rigidity and stiffness.

Effect of Panchamooli Kashaya on Spandana (Twitching)

Spandana showed statistically significant reduction. As Spandana denotes Vata Prakopa affecting neuromuscular stability, the Vatahara and CNS modulating properties of Brihati, Kantakari and Gokshura, along with Ushna Virya and anti-inflammatory effects, stabilize neuromuscular signaling and reduce involuntary twitching.

Effect on Sakthiutkshepa Nigraha (SLR Restriction)

Both Active and Passive SLR improved significantly, indicating reduced nerve root compression and muscular tension. Experimental studies confirm Gokshura suppresses inflammatory cytokines, Brihati and Kantakari reduce neural inflammation and pain, while Salaparni and Prsniparni enhance tissue healing and neuro-muscular recovery.

Effect on Roland–Morris Disability Questionnaire (RMDQ)

There was a significant reduction in disability scores, reflecting improved mobility, posture tolerance and daily functional performance. Pharmacological evidence of combined anti-inflammatory, analgesic, antioxidant, neuro-modulatory and Rasayana properties directly contributes to functional recovery and quality of life enhancement.

Overall, the results validate Ayurveda's classical understanding of Gridhrasi and scientifically support the role of Panchamooli Kashaya as an effective therapeutic regimen in its management.

VI. CONCLUSION

The present clinical study establishes the therapeutic efficacy of Panchamooli Kashaya administered with Trivrut Churna as Prakshepa in the management of Gridhrasi (Sciatica). The formulation produced statistically highly significant improvement in cardinal symptoms such as Ruk, Toda, Stambha, and Spandana, along with marked enhancement in Straight Leg Raise and substantial reduction in functional disability scores. (RMDQ). These outcomes reflect the formulation's Vata–Kapha Shamana, analgesic, anti-inflammatory, neuromodulatory, and muscle-relaxing actions, which are further supported by contemporary pharmacological evidence of its constituent drugs. The combined therapeutic effects demonstrate its ability to reduce nerve irritation, alleviate pain and stiffness, restore neuromuscular function, and improve overall functional capacity.

Thus, Panchamooli Kashaya can be considered an effective, safe, and rational Ayurvedic therapeutic option in the management of Gridhrasi.

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