

Effect Of Prasarini Capsule And Prasarini Taila Matra Basti In The Management Of Gridhrasi (Sciatica): An Open Label Single Arm Clinical Study

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ABSTRACT

Background: Gridhrasi is one among the eighty Nanatmaja Vata Vyadhis described in Ayurveda and is characterized by pain originating from the Sphik region and radiating to Kati, Pristha, Uru, Janu, Jangha and Pada. The clinical presentation closely resembles sciatica described in modern medicine^{5,7}. Owing to increasing sedentary lifestyle, occupational stress and degenerative spinal disorders, the incidence of sciatica has increased considerably^{2,3}. Ayurveda advocates Basti as the prime treatment for Vata Vyadhi and recommends Sneha-based interventions for Vata predominant disorders. **Aim:** To evaluate the combined effect of Prasarini Capsule and Prasarini Taila Matra Basti in the management of Gridhrasi (Sciatica). **Materials and Methods:** An open label single arm clinical study was conducted on 30 patients diagnosed with Gridhrasi attending the Outpatient and Inpatient Departments of Sri Dharmasthala Manjunatheswara Hospital, Hassan. Patients received Prasarini Capsules orally along with Prasarini Taila Matra Basti. Assessments were performed on Day 1, Day 9 and Day 25 using Visual Analogue Scale (VAS), lumbar range of motion, Straight Leg Raising Test (SLR), Oswestry Disability Index (ODI) and associated symptoms of Gridhrasi. **Results:** Statistically significant improvement was observed in Ruk, Toda, Stambha, lumbar extension, left lumbar rotation, SLR test and ODI scores ($p < 0.05$). Significant reduction in pain and disability with improvement in spinal mobility was observed following intervention. Spandana demonstrated an improvement trend whereas Gourava and Arochaka did not show statistically significant changes. **Conclusion:** Prasarini Capsule combined with Prasarini Taila Matra Basti was found to be safe and effective in reducing pain, improving spinal mobility and enhancing quality of life in patients suffering from Gridhrasi.

Keywords: Gridhrasi, Sciatica, Prasarini Capsule, Prasarini Taila, Matra Basti, Vata Vyadhi.

INTRODUCTION

Gridhrasi is one among the Vataja Nanatmaja Vyadhis described by Acharya Charaka and is considered one of the common disorders affecting the locomotor system⁵. The disease derives its name from the peculiar gait of the patient resembling that of a vulture (Gridhra) due to severe pain and restriction of movements. Classical Ayurvedic texts describe the disease as beginning from Sphik and radiating successively to Kati, Pristha, Uru, Janu, Jangha and Pada⁷.

According to Ayurveda, Gridhrasi results from vitiation of Vata Dosha either independently or in association with Kapha Dosha. Vataja Gridhrasi manifests predominantly with Ruk, Toda, Stambha and Spandana, whereas Vata-Kaphaja Gridhrasi

additionally presents with Tandra, Gourava and Arochaka⁶. The pathological process involves Dosha-Dushya Samurchana affecting Asthi, Majja and Snayu Dhatus along with Asthivaha and Majjavaha Srotas.

The clinical features of Gridhrasi closely resemble sciatica described in contemporary medicine. Sciatica is characterized by radiating pain along the course of the sciatic nerve due to nerve root compression or irritation, commonly resulting from lumbar disc prolapse, spinal canal stenosis and degenerative disc disease. Patients frequently present with pain, tingling sensation, numbness, restricted movement and disability affecting their quality of life.

Modern management mainly includes analgesics, non-steroidal anti-inflammatory drugs, physiotherapy

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and surgery in severe cases^{1,4}. Although these modalities provide symptomatic relief, recurrence and residual disability are common. Long-term use of analgesics may also produce adverse effects.

Ayurveda offers a holistic approach through Nidana Parivarjana, Shamana and Shodhana therapies. Among Panchakarma procedures, Basti is considered Ardha Chikitsa and is regarded as the most effective treatment for Vata disorders^{6,11}. Matra Basti, being a Sneha Basti, is particularly beneficial in Vata disorders due to its nourishing and Vata-pacifying properties¹¹.

Prasarini is traditionally indicated in disorders involving pain, stiffness and restricted movements and possesses Vata-Kaphahara, Vedanasthapana and Shothahara properties^{13,17,18}. Therefore, the present study was undertaken to evaluate the combined effect of Prasarini Capsule and Prasarini Taila Matra Basti in Gridhrasi.

AIM AND OBJECTIVES

Aim

To evaluate the combined effect of Prasarini Capsule and Prasarini Taila Matra Basti in the management of Gridhrasi (Sciatica).

Objectives

1. To assess the effect of therapy on radiating pain.
2. To evaluate improvement in Toda, Stambha, Spandana, Gourava, Tandra and Arochaka.
3. To assess changes in lumbar mobility and Straight Leg Raising Test.
4. To assess improvement in quality of life using Oswestry Disability Index.

MATERIALS AND METHODS

Source of Data

Patients were selected from the Outpatient and Inpatient Departments of Sri Dharmasthala Manjunatheshwara Hospital, Hassan.

Study Design

- Open label single arm clinical study.
- Convenience sampling method.
- Sample size: 30 patients.
- Single group pre-test and post-test design.

Screening and Diagnosis

A screening proforma containing history, signs and symptoms of Gridhrasi was prepared.

Diagnostic Criteria

- Pain originating from Sphik and radiating to Kati, Pristha, Uru, Janu, Jangha and Pada.
- Presence of one or more associated symptoms such as Toda, Stambha, Spandana, Gourava, Tandra and Arochaka.

Inclusion Criteria

- Age between 30 and 70 years.
- Positive SLR test between 0° and 40°.
- Patients presenting with classical features of Gridhrasi.
- Subjects fit for Basti Karma.
- Patients willing to provide informed consent.

Exclusion Criteria

- Tuberculosis of spine.
- Neoplasm of spine.
- Spinal infections and abscess.
- Congenital spinal disorders.
- Fracture spine.
- Severe cardiac, hepatic and renal disorders.
- Uncontrolled hypertension (>160/100 mmHg).
- Uncontrolled diabetes mellitus (HbA1c >8%).

- Pregnant and lactating women.

Ethical Clearance and Trial Registration

The study protocol was approved by the Institutional Ethics Committee of Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan vide approval number **SDM/IEC/109/2024**.

The clinical study was prospectively registered under the Clinical Trials Registry–India with registration number **CTRI/2025/03/083740**.

Written informed consent was obtained from all participants before enrolment.

INTERVENTION

Prasarini Capsule

- Dose: 3 capsules twice daily.
- Strength: 500 mg each capsule.
- Route: Oral administration.
- Anupana: Warm water (3 Pala).
- Duration: 24 days.

Prasarini Taila Matra Basti

- Dose: 72 ml once daily.
- Route: Rectal administration.
- Duration: 8 days.

METHOD OF ADMINISTRATION OF MATRA BASTI

Purva Karma

Sthanika Abhyanga using Tila Taila followed by Nadi Sweda was performed over lower abdomen, back and thighs.

Pradhana Karma

Patients were instructed to lie in left lateral position with the left leg extended and the right leg flexed at the knee and hip. The anal orifice was lubricated and indirectly heated Prasarini Taila was administered using a rubber catheter attached to an enema syringe.

Paschat Karma

Patients were advised to remain in supine position for five minutes and Basti retention time was recorded.

ASSESSMENT CRITERIA

Primary Outcome Measures

- Ruk (Pain)
- Toda (Pricking pain)
- Stambha (Stiffness)
- Spandana (Pulsating pain)
- Gourava (Heaviness)
- Tandra
- Arochaka

Secondary Outcome Measures

- Quality Of Life

Statistical Analysis

Data were analysed using SPSS software version 23. Friedman Test was used for repeated non-parametric variables, Wilcoxon Signed Rank Test for pairwise comparison, Cochran's Q Test for dichotomous repeated variables and McNemar Test for post hoc comparison. Statistical significance was considered at $p < 0.05$.

OBSERVATIONS

Among 86 screened subjects, 31 fulfilled the eligibility criteria and were enrolled. One patient discontinued treatment and 30 patients completed the study.

The majority of patients belonged to the age group of 41–50 years indicating increased susceptibility due to degenerative changes and progressive Vata predominance with advancing age.

Male predominance was observed in the study. Farmers and homemakers constituted the majority of participants, suggesting the role of repetitive bending, prolonged standing and heavy physical work in the pathogenesis of Gridhrasi.

Right-sided involvement was observed in most patients. Vataja Gridhrasi constituted the majority of cases followed by Vata-Kaphaja Gridhrasi.

RESULTS

Significant clinical improvement was observed in most assessment parameters.

Outcome Measure	D1 Mean Rank	D9 Mean Rank	D25 Mean Rank	χ^2 Value	p-value	Remrks
RUK	3.23	1.73	2.56	49.24	0.001	S
TODA	2.80	1.33	1.87	45.091	0.001	S
Tandra	1.26	1.13	1.06	2.000	0.009	S
Gourava	2.03	1.98	1.98	2.000	0.360	NS
Arochaka	2.00	2.00	2.00	45.091	0.120	NS

Table 01-result of Friedman's test on subjective parameters

Outcome Measure	D1 Mean Rank	D9 Mean Rank	D25 Mean Rank	χ^2 Value	p-value	Remrks
Lumbar ROM – Extension	2.85	2.02	1.13	51.515	<0.05	S
Lumbar ROM – Flexion	1.12	1.98	2.90	51.125	<0.005	S
Lumbar ROM – Right Rotation	2.43	1.88	1.68	14.480	<0.05	S
Lumbar ROM – Left Rotation	1.68	2.12	2.20	7.013	<0.05	S

Table 02-Reasult of Friedman's test on ROM of lumbar spine

Outcome Measure	D1 Mean Rank	D9 Mean Rank	D25 Mean Rank	χ^2 Value	p-value	Remrks
SLR	2.78	1.38	1.83	43.780	<0.001	S

Table 03-Result of Friedman's test on SLR

Outcome Measure	D1 Mean Rank	D9 Mean Rank	D25 Mean Rank	χ^2 Value	p-value	Remrks
ODI (Quality of Life)	3.00	1.00	2.00	60.000	<0.05	S

Table 04-Result of Friedman's test on ODI

Outcome Measure	D9–D1 (Z value)	D9–D1 (p-value)	D25–D9 (Z value)	D25–D9 (p-value)	D25–D1 (Z value)	D25–D1 (p-value)	Remarks
RUK	-4.264	<0.05	-4.630	<0.05	-4.736	<0.05	S
TODA	-4.456	<0.005	-3.557	<0.005	-4.565	<0.005	S

Gourava	-	>0.05	-	>0.05	-	>0.05	NS
Arochaka	0.000	1.000	0.000	1.000	0.000	1.000	NS

Table 05. Wilcoxon Signed Rank Test on Subjective Parameters

Outcome Measure	D9–D1 (Z value)	D9–D1 (p-value)	D25–D9 (Z value)	D25–D9 (p-value)	D25–D1 (Z value)	D25–D1 (p-value)	Remarks
Lumbar ROM – Extension	-3.174	<0.016	-2.558	<0.016	-3.559	<0.016	S
Lumbar ROM – Flexion	-2.257	>0.016	-0.622	>0.016	-2.268	>0.016	NS
Lumbar ROM – Right Rotation	-0.808	>0.016	-2.668	>0.016	-1.833	>0.016	NS
Lumbar ROM – Left Rotation	-2.837	0.005	-0.801	0.420	-2.410	0.016	S

Table 06. Wilcoxon Signed Rank Test on Lumbar ROM

Outcome Measure	D9–D1 (p-value)	D25–D9 (p-value)	D25–D1 (p-value)	Remarks
SLR	<0.001	0.004	<0.001	S

Table 08. Wilcoxon Signed Rank Test on ODI (Quality of Life)

Outcome Measure	D9–D1 (Z value)	D9–D1 (p-value)	D25–D9 (Z value)	D25–D9 (p-value)	D25–D1 (Z value)	D25–D1 (p-value)	Remarks
ODI (QOL)	-3.127	0.001	-3.357	0.002	-3.963	0.000	S

Table 07. McNemar Test on SLR

DISCUSSION

Gridhrasi is predominantly a Vata Vyadhi involving Asthi, Majja and Snayu structures. The disease develops due to aggravation of Vata by factors such as excessive physical exertion, prolonged standing, irregular dietary habits, suppression of natural urges and exposure to cold.

The present study demonstrated statistically significant improvement in Ruk, Toda, Stambha, lumbar extension, left rotation, SLR and ODI scores following administration of Prasarini Capsule and Prasarini Taila Matra Basti.

The reduction in Ruk can be attributed to the Vedanasthapana and Vatahara properties of Prasarini. The Ushna Veerya and Snigdha Guna of the Taila oppose the Sheeta and Ruksha qualities of aggravated Vata thereby reducing pain and improving mobility.

Toda, representing sharp pricking pain due to nerve root involvement, also showed significant improvement. This may be due to the anti-inflammatory and analgesic activities of the formulation.

Improvement in Stambha can be attributed to the lubricating and nourishing action of Sneha Basti which reduces muscle spasm and enhances flexibility.

Although Spandana showed an overall trend towards improvement, pairwise comparisons did not demonstrate statistical significance. This may be due to the low baseline prevalence of the symptom and small sample size.

Similarly, Gourava and Arochaka did not show significant improvement as these symptoms were present only in a small number of participants and were predominantly associated with Vata-Kaphaja Gridhrasi.

The significant improvement observed in lumbar extension and rotation indicates restoration of spinal flexibility and reduction in paraspinal muscle spasm.

SLR demonstrated significant improvement throughout the study period suggesting reduction in nerve root tension and restoration of functional mobility.

The Oswestry Disability Index also showed statistically significant improvement indicating enhancement in daily activities, occupational performance and overall quality of life.

The probable mode of action of Matra Basti can be explained through both Ayurvedic and modern principles. Pakwashaya is considered the principal seat of Vata Dosha and administration of Sneha through the rectal route facilitates direct Vata pacification.

Rectal administration permits absorption of lipid soluble phytoconstituents through the rectal venous plexus resulting in systemic action. Prasarini Taila exerts Vatahara, Shoolaghna and Shothahara effects while nourishing Asthi, Majja and Snayu Dhatus.

The combined use of oral medication and Matra Basti provided both systemic and local therapeutic effects and may explain the significant improvement observed in the majority of clinical parameters.

LIMITATIONS

- Small sample size.
- Lack of control group.

- Short follow-up duration.
- Occupational and dietary factors were not controlled.

FUTURE SCOPE

- Larger randomized controlled trials are required.
- Comparative studies with standard therapies may be undertaken.
- Long-term follow-up studies are necessary to evaluate recurrence rates.
- Separate evaluation of Prasarini Capsule and Prasarini Taila may be performed.

CONCLUSION

The present study demonstrated that Prasarini Capsule administered orally in combination with Prasarini Taila Matra Basti produced significant clinical improvement in patients suffering from Gridhrasi (Sciatica).

The intervention effectively reduced radiating pain, pricking pain and stiffness while improving lumbar mobility, Straight Leg Raising Test and quality of life scores.

The findings support the Ayurvedic principle that Basti is the treatment of choice for Vata Vyadhi and highlight the therapeutic importance of Sneha-based interventions in disorders involving Asthi, Majja and Snayu Dhatus^{6,11}.

The treatment was found to be safe and well tolerated with no major adverse events reported during the study period. Although the study was limited by a small sample size and absence of a control group, the results indicate considerable clinical benefit and justify further evaluation through larger randomized controlled studies.

Based on the findings of the present study, Prasarini Capsule and Prasarini Taila Matra Basti may be considered an effective Ayurvedic therapeutic approach for the management of

Gridhrasi and can be incorporated into routine clinical practice for appropriately selected patients.

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