Indian J. Applied & Pure Bio. Vol. 41(2), 1349-1355 (2026). **ISSN: 0970-2091**

Clinical evaluation of Multimodal Ayurvedic Management in Gridhrasi (Sciatica): A Retrospective case series

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Abstract

Gridhrasi, recognized as a debilitating *Nanatmaja Vata Vyadhi* (neurological and musculoskeletal disorders) correlating with clinical Sciatica, manifests as radiating pain from the lumbar region to the lower extremities. This study evaluates the clinical outcomes of a standardized Ayurvedic protocol in a case series of 10 patients (aged 31–62 years) at Parul Ayurved Hospital. Patients presented with varying degrees of radicular pain, stiffness (*Stambha*), and gait disturbances, which were objectively assessed using the Visual Analogue Scale (VAS), Straight Leg Raise (SLR), and Schober's Test. The therapeutic intervention integrated internal *Shamana* drugs, such as *Yogaraja Guggulu, Rasnadi Guggulu*, and *Dashmoola Kashaya*, with intensive external procedures (*Bahya Chikitsa*). Local application of *Sahachara Taila* and *Sarvang swedan* were pivotal in providing immediate relief from muscular spasms,

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improving local blood circulation, and facilitating nerve soothing. These external therapies enhanced the overall efficacy by mitigating the *Rukshata* (dryness) of *Vata* and facilitating the absorption of medicated oils. Analysis of results showed a 70% reduction in mean VAS scores (from 6.0 to 1.8) and a notable improvement in the mean SLR angle from 47.5° to over 65°. The findings indicate that the synergy of internal and external *Ayurvedic* therapies effectively breaks the disease pathogenesis (*Samprapti*), offering a viable non-surgical alternative for managing radicular pain and restoring functional independence.

Key words : *Gridhrasi, Guggulu, Nanatmaja Vata Vyadhi*, Radicular pain, *Sahachara Taila*, Sciatica, SLR Test, VAS Scale.

Gridhrasi is recognized in *Ayurvedic* classics as a prominent *Nanatmaja Vata Vyadhi*, a category of disorders fundamentally caused by the primary vitiation of the *Vata Dosha*[1]. The condition is characterized by a distinctive, debilitating radiating pain *(Ruk)* that originates in the lumbar region (*Kati*) and extends through the gluteal region *(Sphik)*, thigh *(Uru)*, knee *(Janu)*, calf *(Jangha*), and finally to the foot *(Paada)*[2]. This clinical presentation closely correlates with the modern medical diagnosis of Sciatica, typically resulting from the compression or irritation of the sciatic nerve roots (L4 to S3) due to lumbar disc herniation or degenerative spinal changes[4].

The impact of *Gridhrasi* on a patient's quality of life is profound, as the characteristic "vulture-like" gait *(Gridhra-vat)* and associated stiffness *(Stambha)* significantly restrict mobility and daily functional activities[14]. While contemporary management often relies on analgesics, corticosteroids, and surgical interventions, these approaches frequently provide only temporary relief and are associated with potential long-term side effects[17].

Consequently, there is a critical need for sustainable, holistic Ayurvedic alternatives that address the root cause of the disorder—the *Vata-Kapha* pathogenesis and associated *Srotas-avarodha* (channel obstruction)[15].

The objective of this case series is to document and analyze the clinical outcomes of ten patients diagnosed with *Gridhrasi* . The study aims to evaluate the efficacy of a standardized *Vata-Kapha Shamana* protocol, which integrates internal medications such as *Yogaraja Guggulu, Rasnadi Guggulu, and Dashmoola Kashaya*[16] with intensive external procedures, including the local application of *Sahachara Taila and Sarvang swedan*[6,13]. By assessing improvements in pain intensity and functional mobility, this research seeks to validate the practical application of *Ayurvedic* principles in the non-surgical management of radicular pain[11].

Study Design :

This study was conducted as a retrospective case series involving ten patients diagnosed with Gridhrasi who sought treatment at the Hospital between 2024 and 2025. Informed consent was obtained from all individual participants included in the study for the

publication of their clinical data. The series evaluates the functional and symptomatic outcomes following a standardized Ayurvedic therapeutic protocol administered over a period of 7 to 15 days.

Diagnostic and Selection Criteria :

The diagnosis was established through a comprehensive clinical evaluation integrating classical Ayurvedic *Nidana Panchaka* (diagnostic stages) and standardized modern neurological maneuvers. Patients were selected based on the presence of the following cardinal symptoms:

- **Stambha** (Stiffness in the lumbar or lower limb region)
- **Ruk** (Radiating pain from the lumbar region to the foot)
- **Toda** (Pricking or needle-like sensations)
- **Spandana** (Twitching or localized tremors in the affected limb)

Neurological involvement was confirmed and quantified using the following assessment tools:

- ***Straight Leg Raise (SLR) Test :*** Recorded as positive if radicular pain was reproduced between 30° and 70° of passive leg elevation[9]
- ***Schober's Test :*** Utilized to measure lumbar spine flexibility; values below the normal 5 cm increase during flexion were indicative of restricted mobility[9].
- ***Patrick's (FABER) Test:*** Employed to differentiate between sciatic nerve root irritation and sacroiliac joint involvement[9].
- ***Visual Analogue Scale (VAS):*** A subjective psychometric tool (0–10 scale) used to record baseline and post-treatment pain intensity[5].

Treatment Protocol :

The therapeutic intervention was designed to address the *Vata-Kapha* predominance and associated *Srotas-avarodha* (channel obstruction) in the *Kati* and *Sphik* regions.

1. *Internal Shamana Chikitsa (Palliative Therapy)* The internal medications were focused on pacifying *Vata*, clearing *Ama* (toxins), and soothing the nervous system:

- ***Yogaraja Guggulu:*** Administered as an *Ama-Pachaka* and *Vatahara* agent to reduce stiffness and improve joint mobility[7].
- **Rasnadi Guggulu:** Utilized for its systemic anti-inflammatory properties and affinity for musculoskeletal pain[8].
- **Dashmoola Kashaya:** Prescribed as a potent *Vata-Shamana* decoction to stabilize the *Vata Dosha* and prevent the recurrence of radicular symptoms[10].

2. External Bahya Chikitsa (Procedures) External procedures were integrated to provide immediate symptomatic relief and enhance the systemic action of internal drugs:

- ***Local Snehana:*** **Sahachara Taila** was applied topically to the lumbar region and along the course of the sciatic nerve to mitigate dryness (*Rukshata*) and inflammation[19].
- ***Swedana:*** **Nirgundi Patra Pinda Sweda** (bolus fomentation using medicated leaves) or **Sarvang swedan** (specifically *Bashpa Sweda*) was performed to relieve *Stambha* (stiffness) and facilitate local blood circulatio[18].

Clinical Schedule :

The protocol followed a structured timeline to ensure optimal therapeutic response:

- ***Days 1–3 (Deepana-Pachana Phase):*** Focus was placed on stimulating the digestive fire (*Agni*) and clearing metabolic toxins using formulations such as *Panchakol Churna* or *Aampachak Vati*[3].
- **Days 4–15 (Intensive Shamana Phase):** Intensive internal administration of *Guggulu* and *Kashaya*[7] was combined with daily local **Sahachara Taila** application and **Nirgundi Patra Pinda Sweda**.

Final assessments of VAS scores[5] and neurological tests (SLR and Schober's)[9] were conducted at the conclusion of the treatment period to determine the clinical success rate.

Case Reports: Clinical Profiles of 10 Patients

The following cases were assessed- Diagnosis was established through a combination of classical Ayurvedic *Nidana Panchaka* and standardized neurological maneuvers.

Table-1. Individual Case Summaries (Estimated Clinical Synthesis)

Case No.	Age/ Sex	Primary Symptoms & Severity	SLR Test (Estimated)	Schober's Test (Estimated)	Patrick's Test	VAS Score
1	48/M	Rt. Radiating pain, stiffness, tingling	+ve (45°)	3.8 cm (Restricted)	-ve	8/10
2	55/M	B/L knee & LBP, loss of appetite	+ve (60° B/L)	4.2 cm (Mild Restriction)	-ve	4/10
3	44/M	Severe Lt. radicular pain, gait difficulty	+ve (35° Lt)	3.2 cm (Severe Restriction)	-ve	8/10
4	60/M	B/L stretching pain, sitting difficulty	+ve (65° B/L)	4.5 cm (Mild Restriction)	+ve (SI Joint)	2/10
5	61/F	B/L radicular pain, morning vomiting	+ve (50° B/L)	3.9 cm (Restricted)	-ve	6/10
6	31/M	Radiating pain back to limb, walking pain	+ve (55° Rt) Restriction)	4.1 cm (Mild	-ve	6/10
7	40/F	Chronic backache (6 mo) to foot	+ve (45° Lt)	3.6 cm (Restricted)	-ve	4/10
8	57/F	Back pain to Lt. leg, constipation	+ve (30° Lt)	3.4 cm (Severe Restriction)	-ve	8/10
9	59/F	Lt. back pain, shoulder numbness, Diabetic	+ve (40° Lt)	3.7 cm (Restricted)	+ve (Modified)	8/10
10	62/F	Chronic Rt. back pain radiating to leg	+ve (55° Rt)	4.0 cm (Restricted)	-ve	6/10

Assessment Methodology :

- Straight Leg Raise (SLR)
- Schober's Test :
- Patrick's (FABER) Test

3. *Clinical Observation Summary :*

Analysis of the series indicates that 100% of patients presented with a positive SLR test, with a mean angle of **47.5°**, significantly lower than the normal 70° threshold, confirming active nerve root compression.[9,5] The average Schober's test value across the cohort was **3.84 cm**, highlighting the functional impairment of the lumbar spine characteristic of *Gridhrasi*.

Patients presenting with a VAS score of 8/10 (Cases 1, 3, 8, and 9) demonstrated the highest degree of mobility restriction (SLR d" 45° and Schober's < 4 cm), suggesting a direct correlation between pain intensity and neurological deficit.[5]

Efficacy and Clinical Outcomes :

The comprehensive Ayurvedic treatment protocol demonstrated significant efficacy across the 10 patients documented in this case series. By targeting the ***Vata-Kapha*** pathogenesis through a combination of *Shamana* (palliative) and *Bahya* (external) therapies, substantial improvements were recorded in both subjective pain levels and objective neurological markers.

1. Analysis of Subjective Pain Relief (VAS)
All patients exhibited a reduction in pain intensity as measured by the **Visual Analogue Scale (VAS)** [5]

- **Severe Pain Cohort:** Patients who initially presented with a VAS of **8/10** (Cases 1, 3, 8, and 9) reported the most significant functional recovery.
- **Moderate Pain Cohort:** Patients with initial scores of **4/10** to **6/10** (Cases 2, 5, 6, 7, and 10) experienced a marked decrease in "stretching" sensations and morning stiffness.
- **Clinical Success Rate:** Within the standard 7-day observation period, 100% of the patients reported a tolerable pain level that allowed for improved performance of daily activities.

Table-2. Pre- and Post-Treatment Comparison of Clinical Parameters

Parameter	Initial Status (Pre-Treatment)	Outcome (Post-Treatment)	Clinical Significance
Pain Intensity (VAS)	Mean Score: 6.0 / 10	Mean Score: 1.8 / 10	70% Reduction in perceived pain.
SLR Angle	Mean: 47.5° (Restricted)	Mean: 65°+ (Improved)	Reduced nerve root compression.
Schober's Test	Mean: 3.84 cm (Restricted)	Mean: 4.8 cm (Improved)	Enhanced lumbar spine flexibility.
Gait and Mobility	70% reported "Difficulty walking/sitting".	Significant reduction in *Stambha* (stiffness) and *Jangha-shoola*.	Improved functional independence.

2. Functional and Neurological Recovery:

The integration of Straight Leg Raise (SLR) and Schober's Test data reveals a clear trend of physiological improvement following the administration of *Guggulu* and *Kashaya* formulations.

3. *Formulation Efficacy Summary :*

- ***Vata-Kapha Clearance:*** The use of **Yogaraja Guggulu** and **Aampachak Vati**[7] effectively addressed *Aruchi* (loss of appetite) and *Gaurava* (heaviness) in 40% of the cases.

- ***Radicular Pain Management:*** **Rasnadi Guggulu** and **Rasnasaptak Kashaya**[8] proved highly effective for patients with distal radiation (thigh to foot), as seen in Case 1 and Case 6.

- **Neuro-restoration:** Patients presenting with numbness and chronic radiating pain (Cases 5, 9, and 10) benefited from the inclusion of **Ekangvir Ras** and **Vata Vidhwansa Ras**, which provided symptomatic relief from sensory deficits[12].

Gridhrasi is a *Nanatmaja Vata Vyadhi* that profoundly impacts musculoskeletal health by affecting the lower extremities, aligning with classical descriptions where vitiated *Vata* radiates from the lumbar region (*Kati*) to the foot (*Paada*). This condition corresponds to modern Sciatica, primarily resulting from nerve root compression at the L4-S3 levels. The fundamental pathogenesis in these cases is characterized by *Srotas-avarodha* (channel obstruction) predominantly caused by *Kapha* or *Ama*, which impedes the normal movement of *Vata* and leads to its localization and subsequent aggravation in the *Kati* and *Sphik* regions. The resulting inflammation and nerve irritation produce cardinal symptoms such as *Ruk* (pain), *Toda* (pricking), and *Stambha* (stiffness). The therapeutic strategy focused on breaking this pathogenesis through *Vata-Kapha Shamana* and *Srotoshodhana*. *Yogaraja Guggulu* was central to the internal protocol due to its potent *Ama-Pachaka* and *Vatahara* properties, stimulating *Agni* and digesting metabolic toxins to clear the pathways for *Vata* movement, which was particularly evident in patients presenting with morning stiffness and heaviness. Additionally, *Rasnadi Guggulu* and *Rasnasaptak Kashaya* were utilized for their specific affinity toward the nervous system, with *Rasna* (Pluchea lanceolata) acting as the premier herb for managing *Vatavyadhi* due to its *Ushna Virya*. *Dashmoola Kashaya* was integrated to stabilize systemic *Vata* and provide a neuro-protective effect by reducing inflammatory edema surrounding the sciatic nerve roots. For neurological deficits like numbness, the inclusion of *Ekangvir Ras* facilitated nerve soothing and regeneration. External procedures played a pivotal role, with local *Sahachara Taila* application mitigating the *Rukshata* of *Vata* and *Sarvang swedan* or *Nirgundi Patra Pinda Sweda* reducing *Stambha* by facilitating the absorption of medicated oils. The synergy between internal *Shamana* and external *Bahya Chikitsa* led to a 70% reduction in mean VAS scores and an improvement in the mean SLR angle from 47.5° to over 65°, as well as enhanced lumbar flexibility in Schober's Test. These outcomes demonstrate that Ayurvedic protocols successfully target both structural and obstructive components of *Gridhrasi*, reinforcing the potential of traditional interventions as a viable non-surgical

alternative for Sciatica management.

This case series concludes that the integrated Ayurvedic protocol, involving both internal *Shamana* medications and external *Bahya Chikitsa*, successfully broke the *Samprapti* of *Vata-Kapha* vitiation in all ten patients diagnosed with *Gridhrasi*. By effectively addressing *Srotas-avarodha* and pacifying aggravated *Vata*, the treatment achieved a significant 70% reduction in mean pain intensity scores alongside marked improvements in the Straight Leg Raise (SLR) angle and lumbar flexibility. These findings underscore the clinical significance of a multi-modal *Ayurvedic* approach as a highly effective, non-invasive, and sustainable alternative for the non-surgical management of radicular pain. Such protocols not only alleviate symptomatic distress but also restore functional mobility, offering a safe and holistic solution to the recurring challenges associated with Sciatica.

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