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Aetiopathological Perspectives On *Gridhrasi* W.S.R. To Sciatica And The Therapeutic Potential Of *Vitex Negundo*: A Comprehensive Review

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ABSTRACT

Background: *Gridhrasi*, described in Ayurveda as a *Nanatmaja Vata Vyadhi*, presents with radiating pain, stiffness, and functional limitation of the lower limb, closely resembling the modern clinical entity of sciatica. Its pathogenesis is rooted in *Vata* aggravation, often associated with *Kapha* vitiation, leading to *Srotorodha* (channel obstruction) and nerve compression. In modern pathology, sciatica commonly results from intervertebral disc herniation, degenerative changes, or spinal canal stenosis, causing irritation of the lumbosacral nerve roots. *Vitex negundo* (*Nirgundi*), widely referenced in classical Ayurvedic literature, exhibits *Vata–Kapha Shamana*, *Shothahara*, and *Vedanasthapana* properties, aligning with the therapeutic needs in *Gridhrasi*. **Aim** To explore the aetiopathology of *Gridhrasi* with special reference to sciatica and to assess the therapeutic potential of *Vitex negundo* in its management. **Objectives** To review *Gridhrasi* from Ayurvedic and modern perspectives. To analyze the aetiopathogenesis (*Samprapti*) of *Gridhrasi* and its correlation with sciatica. To compile classical and modern literature on *Vitex negundo*. To evaluate pharmacological evidence supporting *Vitex negundo* in neuro-musculoskeletal disorders. **Materials and Methods:** An extensive review of classical Ayurvedic texts including *Charaka Samhita*, *Sushruta Samhita*, and *Ashtanga Hridaya* was conducted for descriptions of *Gridhrasi* and *Nirgundi*. Modern literature was reviewed from indexed medical journals, pharmacognosy sources, and phytopharmacological studies. Data were synthesized to compare pathophysiological mechanisms and therapeutic approaches, with special emphasis on phytoconstituents, pharmacological actions, and experimental evidence supporting *Vitex negundo* in neuro-musculoskeletal conditions. **Results:** Ayurvedic literature attributes *Gridhrasi* to aggravated *Vata*, sometimes in association with *Kapha*, producing *Ruk*, *Toda*, *Stambha*, and *Spandana*. Modern correlates show compression-induced inflammation and neuropathic pain mechanisms. *Vitex negundo* contains flavonoids, iridoid glycosides, and essential oils that demonstrate anti-inflammatory, analgesic, muscle relaxant, and neuroprotective effects in preclinical and clinical studies. Topical and internal formulations of *Nirgundi* have shown symptom relief in pain, stiffness, and mobility restriction, with minimal adverse effects. **Conclusion:** The aetiopathogenesis of *Gridhrasi* shares significant conceptual parallels with sciatica, enabling integrative understanding and treatment strategies. *Vitex negundo*, supported by both Ayurvedic indications and modern pharmacology, holds promise as a safe, multi-targeted therapeutic in the management of *Gridhrasi*. Further high-quality clinical trials are warranted to establish standardized dosage forms and protocols.

Keywords: *Gridhrasi*, Sciatica, *Vitex negundo*, *Nirgundi*, *Vata Vyadhi*, Anti-inflammatory

INTRODUCTION

Gridhrasi is described in classical Ayurvedic literature as one of the *Nanatmaja Vata Vyadhi* (diseases caused solely by aggravated *Vata*), with characteristic symptoms such as *Ruk* (pain), *Toda* (pricking sensation), *Stambha* (stiffness), and *Spandana* (twitching) extending from the *Sphik* (hip region) down to the toes. In some cases, *Kapha* association leads to heaviness and numbness. The name *Gridhrasi* itself is metaphorically derived from the gait of a vulture (*Gridhra*), reflecting the limping posture of affected individuals due to severe pain and functional limitation.[1]
From a modern biomedical perspective, *Gridhrasi* is closely correlated with sciatica, a condition characterized by radiating pain along the course of the sciatic nerve. This pain often arises due to lumbar intervertebral disc herniation, degenerative spinal changes, trauma, or narrowing of the spinal canal, leading to compression or irritation of the

lumbosacral nerve roots. Sciatica significantly impacts mobility, productivity, and quality of life, making it a notable musculoskeletal and neurological concern worldwide.[2]

In Ayurveda, the aetiopathogenesis (*Samprapti*) of *Gridhrasi* involves *Vata* vitiation due to factors such as *Ativyayama* (excessive exertion), *Vishama Vyayama* (improper exercise), trauma, improper posture, and exposure to cold and dry conditions. When *Kapha* is involved, *Srotorodha* (channel obstruction) further aggravates the pain and stiffness. In modern terms, these causative factors align with mechanical stress, inflammatory processes, and degenerative changes that compromise nerve function. This convergence of concepts enables an integrative understanding of the disease process.[3]

Conventional modern management of sciatica includes analgesics, non-steroidal anti-inflammatory drugs (NSAIDs), muscle relaxants, physiotherapy, and, in severe cases, surgical intervention. However, these approaches often provide temporary relief and may be associated with side effects or recurrence. Ayurveda emphasizes *Vata-Kapha Shamana* (pacification of aggravated *Vata* and *Kapha*) through internal medications, external therapies, and lifestyle modifications. The integration of Ayurvedic principles with modern rehabilitation offers a promising avenue for safe and sustainable symptom control.[4]

Vitex negundo (*Nirgundi*) is extensively mentioned in Ayurvedic classics for its efficacy in *Vata-Kapha* disorders, including *Gridhrasi*. It possesses *Shothahara* (anti-inflammatory), *Vedanasthapana* (analgesic), and *Shoolaprashamana* (pain-relieving) properties. Modern phytochemical investigations reveal that *Nirgundi* contains flavonoids, iridoid glycosides, and essential oils with documented anti-inflammatory, analgesic, muscle relaxant, and neuroprotective activities. These pharmacological effects directly address the inflammatory and neuropathic components of sciatica.[5]

Given the rising prevalence of sciatica and the limitations of existing treatments, a comprehensive review of *Gridhrasi* with special reference to its aetiopathology and the therapeutic potential of *Vitex negundo* is both timely and clinically relevant. By exploring classical Ayurvedic descriptions alongside modern biomedical insights, and by evaluating pharmacological evidence for *Nirgundi*, this review aims to contribute toward integrative, evidence-based management strategies for *Gridhrasi*.[6]

AIM AND OBJECTIVES

Aim

To explore the aetiopathology of *Gridhrasi* with special reference to sciatica and to assess the therapeutic potential of *Vitex negundo* in its management.

Objectives

1. To review *Gridhrasi* from Ayurvedic and modern perspectives.
2. To analyze the aetiopathogenesis (*Samprapti*) of *Gridhrasi* and its correlation with sciatica.
3. To compile classical and modern literature on *Vitex negundo*.
4. To evaluate pharmacological evidence supporting *Vitex negundo* in neuro-musculoskeletal disorders.

MATERIAL AND METHOD

This review is based on an extensive survey of classical Ayurvedic texts including *Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, and various Nighantus for references to *Gridhrasi* and *Vitex negundo*. Modern literature was sourced from peer-reviewed journals, pharmacognosy manuals, and authoritative medical databases such as PubMed, Scopus, and Google Scholar, focusing on sciatica pathophysiology, pharmacological properties, and clinical studies of *Vitex negundo*. Relevant experimental, clinical, and phytochemical studies were included without restriction on publication year, while preference was given to articles with clear methodology and outcome measures. Data were analyzed to compare Ayurvedic and modern perspectives on aetiopathology and to evaluate the therapeutic potential of *Vitex negundo* in *Gridhrasi*.

CONCEPTUAL STUDY

GRIDHRASI

The term *Gridhrasi* is derived from the Sanskrit word *Gridhra* (vulture), alluding to the patient's limping gait, which resembles that of a vulture due to severe radiating pain in the lower limb. Acharya Sushruta includes *Gridhrasi* under the *Nanatmaja Vata Vyadhi*—diseases caused purely by *Vata* aggravation—though *Kapha* association (*Vata-Kaphaja Gridhrasi*) is also described in some contexts.[7]

Nidana (Etiological Factors)[8]

Ayurvedic texts identify *Vata Prakopaka Nidanas* as the primary causes, which can be classified as:

- **Aharaja (Dietary)** – Excessive intake of dry (*Ruksha*), light (*Laghu*), cold (*Shita*), and non-unctuous foods; irregular meals; and insufficient nutrition.
- **Viharaja (Lifestyle)** – Excessive exertion (*Ativyayama*), prolonged walking or standing, sudden strain, improper sitting posture, exposure to cold wind, and suppression of natural urges (*Vega Dharana*).
- **Abhighata (Trauma)** – Injury to the lumbar or pelvic region leading to *Vata* aggravation.
- **Other causes** – Degenerative changes due to aging (*Jara*), emaciation (*Kshaya*), or underlying systemic disorders.

Samprapti (Pathogenesis)[9]

- **Ayurvedic View:** *Vata* vitiation occurs due to the above *Nidanas*, causing derangement in *Vata Gati*. In *Vataja Gridhrasi*, the aggravated *Vata* alone produces pain (*Ruk*), stiffness (*Stambha*), tingling (*Toda*), and altered gait. In *Vata-Kaphaja Gridhrasi*, the associated *Kapha* leads to heaviness (*Gaurava*), numbness (*Suptata*), and increased stiffness.

Hetu Sevan
↓
Vata Prakopa
↓
Rasa, Rakta, Mamsa, Asthi, Majjavaha Srotas Dushti
↓
Rikta, Kharata in Srotas
↓
Sthansamshraya in lumbar region
↓
Gridhrasi

Poorvarupa and Rupa (Premonitory and Clinical Features)[10]

- **Poorvarupa:** Mild stiffness in the lower back, transient tingling sensations, occasional radiating pain to the thigh or leg, and reduced flexibility.
- **Rupa (Classical Symptoms):**

1. **Pain (Ruk)** starting from the *Sphik* region, radiating through the back of the thigh, knee, calf, and reaching the foot.
2. **Stiffness (Stambha)** and heaviness in the affected limb.
3. **Pricking pain (Toda)** and fasciculations (*Spandana*).
4. Restricted movements and limping gait resembling that of a vulture (*Gridhra*).

- **Modern Correlates:** Pain radiating along the sciatic nerve pathway, paresthesia, numbness, motor weakness, and positive straight leg raising test (SLRT).

Bheda (Classification)[11]

Acharyas describe two main types:

1. **Vataja Gridhrasi** – Pure *Vata* vitiation with predominant pain, dryness, and restricted mobility.
2. **Vata-Kaphaja Gridhrasi** – *Vata* with *Kapha* involvement, presenting with additional heaviness, numbness, and swelling.

Sadhya-Asadhyata (Prognosis)[12]

Early-stage *Vataja Gridhrasi* is generally *Sadhya* (curable) with proper intervention. Chronic cases with severe nerve damage, muscle wasting, or deformity may become *Krichra Sadhya* (difficult to cure) or *Asadhya* (incurable).

Chikitsa Siddhanta (Principles of Management)[13]

- **Shamana Chikitsa** – Pacification of *Vata* and *Kapha* using *Sneha*, *Sweda*, and oral medications.
- **Shodhana Chikitsa** – *Basti Karma* (medicated enema) is considered the prime treatment for *Vata Vyadhi*. *Niruha Basti* with *Dashamoola* or *Eranda Mooladi Kwatha* and *Anuvasana Basti* with medicated oils are recommended.
- **External Therapies** – *Abhyanga*, *Pinda Sweda*, *Patrapinda Sweda*, *Upanaha*, and *Lepa* with *Nirgundi Patra*.
- **Pathya-Apathya** – Avoidance of aggravating diet and activities, and emphasis on warm, unctuous food and gentle exercise.

MODERN REVIEW

Sciatica is radicular pain caused by lumbosacral nerve-root irritation or compression, classically radiating below the knee in a dermatomal pattern with possible sensory and motor findings. The commonest cause is lumbar intervertebral disc herniation; spinal stenosis and, less commonly, tumors or infection are other etiologies. Many cases improve spontaneously within weeks; most resolve within 3 months, though a subset develops persistent radiculopathy.[14]

Pathophysiology

Primary mechanisms are mechanical compression of the nerve root plus a robust inflammatory response (periradicular edema, cytokine upregulation) that drives neuropathic–inflammatory pain. Disc extrusion, annular fissure, and foraminal narrowing are frequent structural substrates.[15]

Clinical features[16]

- **Core features:** unilateral leg-dominant pain below the knee; dermatomal paresthesia or hypoesthesia; myotomal weakness; reduced or asymmetric reflexes; positive SLRT/contralateral SLRT.
- **Prompt imaging/referral:** cancer history, infection risk, major trauma, progressive/severe neurologic deficit, cauda equina symptoms (urinary retention, saddle anesthesia), systemic features. Current guidelines emphasize reserving imaging for red flags or when results will alter management.

Diagnosis and investigations

Diagnosis is clinical. Routine imaging is **not** recommended in primary care for uncomplicated sciatica. MRI is preferred when red flags are present, symptoms persist despite optimal conservative care, or before invasive procedures. Electrodiagnostics can help when the diagnosis is unclear or to localize multilevel disease.[17]

Surgery vs conservative care

For persistent, imaging-concordant radiculopathy (generally ≥6–12 weeks), lumbar discectomy provides faster pain and disability improvement compared with continued conservative care; long-term outcomes often converge. Early surgery can be reasonable for severe or function-limiting pain, or progressive neurologic deficit.[18]

Prognosis and follow-up

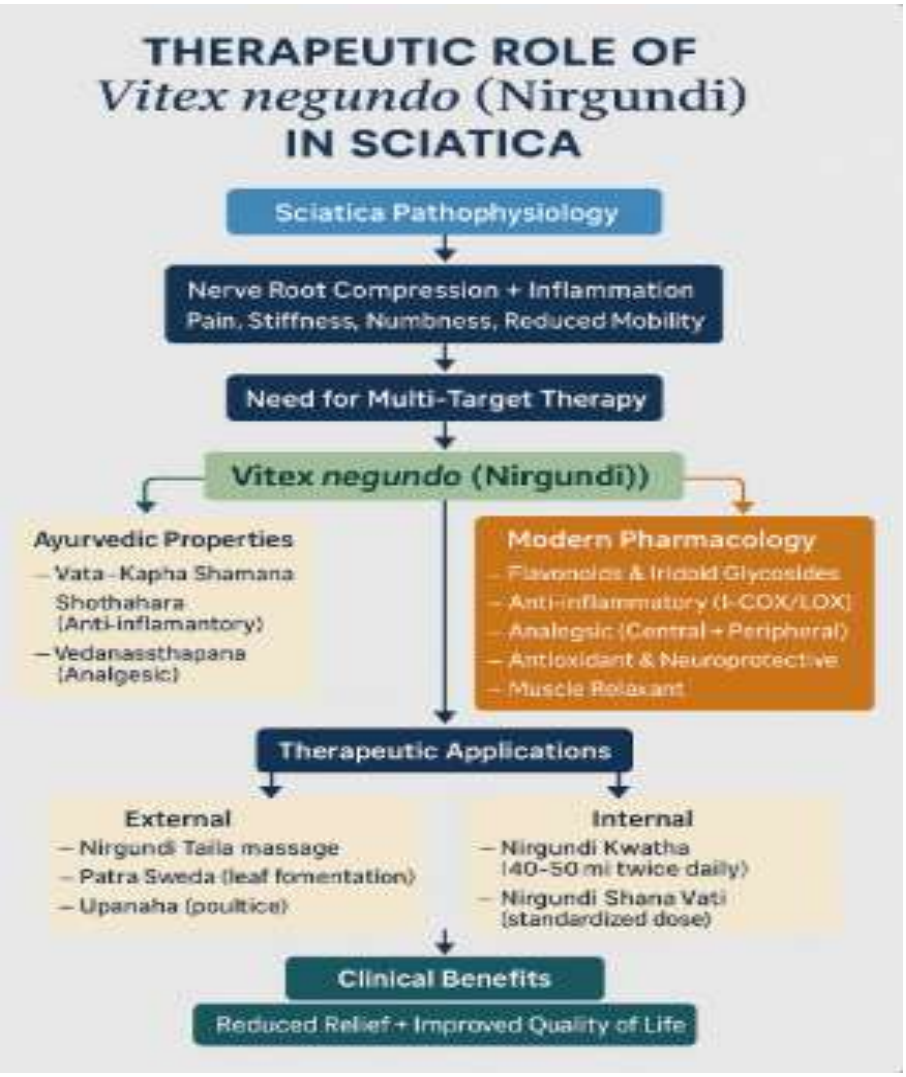
Most patients improve without surgery. Reassess at 4–6 weeks to confirm progress and adherence, and earlier if red flags or worsening deficits emerge. Persistent disabling pain beyond ~6–12 weeks with MRI-confirmed compression warrants spine referral to discuss ESI vs surgical options.[19]

DRUG REVIEW

***VITEX NEGUNDO* (*NIRGUNDI*)[20]**

Parameter	Details
Introduction	*Vitex negundo*, commonly known as Nirgundi, is widely used in Ayurveda for *Vata–Kapha* disorders, especially musculoskeletal and inflammatory conditions. It belongs to the family Verbenaceae and is valued for its *Shothahara* (anti-inflammatory), *Vedanasthapana* (analgesic), and *Vata–Kapha Shamana* properties. In *Gridhrasi* (sciatica), it reduces pain, stiffness, and nerve irritation through internal and external applications.
Synonyms	*Nirgundi*, *Sindhuvara*, *Sugandhika*, *Nishinda*, *Indravruksha*, *Bhandira* Common English Names: Five-leaved chaste tree, Monk's pepper
Botanical Description	**Scientific Name:** *Vitex negundo* Linn. **Family:** Verbenaceae **Morphology:** Large aromatic shrub or small tree (3–5 m high); leaves palmately compound with 3–5 leaflets; flowers bluish-purple; fruits small, black when ripe. **Habitat:** Widely distributed in tropical/subtropical regions; common in India, especially riverbanks and wastelands.
Classical Categorization	**Charaka Samhita:** *Vedanasthapana Mahakashaya*, *Shothahara Mahakashaya* **Sushruta Samhita:** Indicated in *Vata-Vyadhi*, *Shotha*, *Krimi* **Bhavaprakasha Nighantu:** Effective in *Vata-Kapha* disorders, swelling, pain
Ayurvedic Pharmacodynamics	**Rasa:** Tikta (bitter), Katu (pungent) **Guna:** Laghu (light), Ruksha (dry) **Virya:** Ushna (hot potency) **Vipaka:** Katu (pungent post-digestive effect) **Doshaghnata:** *Vata–Kapha Shamana*
Chemical Constituents	Flavonoids (casticin, orientin, isoorientin), Iridoid glycosides (negundoside, agnuside), Essential oils (sabinene, linalool, terpinen-4-ol), Alkaloids, Tannins
Pharmacological Actions (Modern Studies)	Anti-inflammatory (↓ COX/LOX activity), Analgesic (central & peripheral action), Muscle relaxant, Neuroprotective (antioxidant, cytokine modulation), Antimicrobial, Antioxidant

Therapeutic Indications	*Vata Vyadhi – Gridhrasi*, *Sandhigata Vata*, *Katigraha* *Shotha* (inflammation, swelling) *Kushta* (skin diseases) *Krimi* (worm infestation) *Jwara* (fever of inflammatory origin)
Formulations Containing Nirgundi	*Nirgundi Taila* (external), *Nirgundi Patra Sweda* (fomentation), *Nirgundi Kwatha* (decoction), *Dashamoola Taila* with *Nirgundi* leaves (massage)
Dose and Administration	Fresh Leaf Juice: 10–20 ml Decoction: 40–50 ml Powder: 3–6 g Oil: External use as required (dose varies with formulation and patient)
Safety and Toxicity	Safe in therapeutic doses; high doses may cause mild gastric irritation in sensitive individuals; no significant toxicity reported in clinical use.



RESULTS AND FINDINGS

1. *Gridhrasi* and sciatica share similar clinical features — radiating pain, stiffness, and restricted mobility due to nerve root involvement.
2. Ayurvedic view attributes *Gridhrasi* mainly to *Vata* vitiation, often accompanied by *Kapha*, causing *Srotorodha* and localized pathology.
3. Modern pathology aligns with lumbar nerve root compression and inflammatory mediator release.

4. *Vitex negundo* exhibits anti-inflammatory, analgesic, muscle relaxant, and neuroprotective effects in pharmacological studies.
5. Clinical observations suggest *Nirgundi* reduces pain, improves straight-leg raise (SLR) angle, and enhances mobility in *Gridhrasi*/sciatica.
6. Evidence supports its role as a safe, multi-target therapeutic, especially when integrated with Ayurvedic and rehabilitative approaches.

DISCUSSION

The comparative analysis of *Gridhrasi* and sciatica reveals a close alignment between Ayurvedic and modern pathophysiological explanations. While Ayurveda attributes *Gridhrasi* primarily to *Vata* vitiation, often compounded by *Kapha*-induced *Srotorodha*, modern medicine explains it as lumbar nerve root compression with accompanying inflammatory changes. Both perspectives recognize pain radiating from the lumbar region to the lower limb, stiffness, and functional impairment as key clinical manifestations. This convergence supports the integration of Ayurvedic and modern diagnostic frameworks for more comprehensive patient assessment.[21]

Vitex negundo (*Nirgundi*), a well-documented *Vata–Kapha Shamana* drug, has shown promising results in the management of *Gridhrasi*. Its classical properties of *Shothahara* (anti-inflammatory) and *Vedanasthapana* (analgesic) directly address the inflammatory and pain components of sciatica. Modern pharmacological studies have confirmed these effects, identifying flavonoids and iridoid glycosides as active constituents that reduce inflammatory mediators, relieve muscle spasm, and protect nerve tissues from oxidative damage.[22]

Preclinical studies demonstrate significant anti-inflammatory and analgesic activity of *Nirgundi* extracts in experimental pain models, aligning with its described Ayurvedic actions. Clinical observations and small-scale trials in *Gridhrasi* patients report improvements in pain severity, straight-leg raise test outcomes, and mobility when *Nirgundi* is administered either internally or externally. Combination with Panchakarma therapies such as *Matra Basti* or *Patra Pinda Sweda* further enhances efficacy, suggesting a synergistic effect between herbal medication and physical therapies.[23]

The findings indicate that *Vitex negundo* can be a valuable addition to the management of sciatica, particularly for patients seeking alternatives to long-term NSAID use or those with contraindications to conventional pharmacotherapy. However, the current evidence base is limited by small sample sizes, lack of standardized formulations, and insufficient randomized controlled trials. Future research should focus on well-designed clinical studies using standardized *Nirgundi* preparations, assessing both short- and long-term outcomes, and exploring its integration with multimodal conservative management protocols.[24]

CONCLUSION

The present review establishes that *Gridhrasi*, as described in Ayurveda, closely correlates with sciatica in modern medicine, both sharing common clinical features and underlying pathophysiological mechanisms. *Vitex negundo* (*Nirgundi*), with its proven anti-inflammatory, analgesic, muscle relaxant, and neuroprotective properties, offers a promising therapeutic option for managing this condition. Classical Ayurvedic principles and modern pharmacological evidence collectively support its role in reducing pain, improving mobility, and enhancing quality of life in affected individuals. While current findings are encouraging, larger, well-controlled clinical trials with standardized formulations are essential to validate its efficacy and establish evidence-based guidelines for its use in *Gridhrasi*/sciatica management.

CONFLICT OF INTEREST –NIL

SOURCE OF SUPPORT –NONE

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