Ayurvedic Management of Lumbar Spondylosis with Bilateral Lower Limb Pain in an Elderly Female: A Case Report

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***Abstract*: Background:** Lumbar spondylosis is a common degenerative spinal disorder in elderly individuals, often associated with chronic low back pain, radicular symptoms, lower limb heaviness, and impaired mobility. In Ayurveda, such manifestations resemble Katigata Vata with associated Sandhigata Vata features due to Vata predominance in old age. **Case Presentation:** A 69-year-old female presented with complaints of chronic low back pain radiating to both lower limbs, bilateral knee pain, crepitus with swelling in both knees, left lower limb swelling, difficulty in prolonged standing and walking, and bilateral lower limb heaviness. The patient had a history of fall two years prior and known hypertension for 20 years under allopathic treatment. **Intervention:** The patient was prescribed an integrative herbal regimen consisting of Gond Siyah powder, T-Care capsules, P-Care capsules, Pachan Care Syrup administered with lukewarm water and Gond Siyah oil for local application as advised. Outcome: After treatment, the patient reported reduction in low back pain and bilateral knee pain, mild reduction in lower limb heaviness, and improved ease in daily activities. Stiffness persisted mildly but no fresh complaints were observed. **Conclusion:** This case demonstrates symptomatic improvement in degenerative lumbar pathology through conservative traditional medicine management, suggesting possible benefit in pain reduction, mobility enhancement, and quality-of-life improvement in elderly patients with lumbar spondylotic changes.

Keywords: Index Terms: Lumbar spondylosis, Katigata Vata, Degenerative spine disease, Case report, Ayurveda, Elderly patient

I. INTRODUCTION

Lumbar spondylosis with bilateral lower limb pain is a clinical condition commonly associated with degenerative changes in the lumbar spine that can lead to nerve root compression and consequent lower extremity symptoms. Spondylosis refers to the age-related degeneration of the vertebral bodies, intervertebral discs, facet joints, and ligamentous structures in the lumbar spine, often causing anatomical narrowing of the spinal canal and foramina. This narrowing may occur centrally in the spinal canal or laterally in the recesses or neuroforamina, leading to symptoms such as bilateral lower limb pain, paresthesias, and neurological deficits[1].

The degenerative process that results in lumbar spondylosis typically involves intervertebral disc degeneration, facet joint arthropathy, and hypertrophy of the ligamentum flavum. These changes alter normal

spinal biomechanics and promote progressive narrowing of the canal or foramina (spinal stenosis), which compresses nerve roots. Compression, along with restricted microvascular circulation and impaired axoplasmic flow in affected nerves, leads to radicular pain often manifesting as bilateral lower limb discomfort or pain, sometimes accompanied by neurogenic claudication or muscle weakness[1].

Notably, lumbar spondylosis frequently coexists with or contributes to lumbar spinal stenosis (LSS), and the two terms overlap considerably in clinical practice. LSS is characterized by symptoms such as neurogenic claudication, radiculopathy, and low back pain attributable to canal narrowing. Both conditions share similar degenerative etiologies and symptomatology, with bilateral lower limb pain being a classic presentation of nerve root involvement at multiple levels of the lumbar spine[1-2].

Ayurveda, the ancient Indian system of medicine, offers a holistic and individualized approach that may be applied to various chronic conditions, including lumbar spondylosis. While the provided context does not directly discuss the specific application of Ayurveda to lumbar spondylosis, it furnishes a comprehensive understanding of Ayurveda's principles, treatment modalities, and their relevance to chronic degenerative conditions.

Modern medical treatments commonly include physical therapy, pain management, and surgical interventions such as spinal fusion in selected cases; however, the indications for such surgical options are carefully determined based on severity and recurrence of symptoms[3].

Ayurveda emphasizes a comprehensive treatment strategy that integrates mind, body, lifestyle, diet, and environment to restore systemic balance and promote optimal health[4]. The chronic nature of lumbar spondylosis aligns well with Ayurveda’s known strength in managing chronic disorders. Ayurveda treats disease through individualized plans based on the patient’s unique constitution (doshas) and psychophysiological state [4].

II. PATIENT INFORMATION

A 69-year-old female, Mrs. Meera Devi, weighing 70.4 kg, presented to the outpatient department with complaints of chronic low back pain radiating to both lower limbs, bilateral knee pain associated with crepitus and swelling, heaviness in both lower limbs, and difficulty in prolonged standing and walking. The patient also complained of swelling in the left lower limb. She had a history of fall injury two years prior to presentation, which was considered a possible contributing factor to the progression of symptoms. Her past medical history revealed hypertension for the last 20 years, for which she was on regular allopathic medication. Past surgical history included cholecystectomy performed approximately 20 years ago. No history of drug or food allergy was reported. General examination showed blood pressure of 179/88 mmHg, pulse rate of 72 beats/minute, and oxygen saturation (SpO_2) of 100%. The patient reported sound sleep, regular bowel and bladder habits, and good appetite.

III. CLINICAL FINDINGS

On clinical examination, the patient was conscious, cooperative, and oriented to time, place, and person. She presented with chronic low back pain radiating to both lower limbs along with bilateral knee pain associated with crepitus and swelling. Swelling was also noted in the left lower limb, accompanied by a sensation of heaviness in both lower limbs. The patient reported difficulty in prolonged standing and walking, indicating impairment in mobility and routine daily activities. General physical examination revealed a pulse rate of 72 beats per minute, blood pressure of 179/88 mmHg, body weight of 70.4 kg, and oxygen saturation (SpO_2) of 100%. No bowel or bladder disturbances were reported; bowel habits were normal and micturition was regular. Appetite was reported to be good and sleep was sound. Based on the presenting symptoms of pain (Shoola), stiffness and movement restriction involving the lumbosacral region and joints, the clinical features were suggestive of Katigata Vata with associated Sandhigata Vata manifestations.

IV. TIMELINE OF THE CASE

Date/Duration	Clinical Events
Approximately 2005	Diagnosed with hypertension and started regular allopathic treatment.
Approximately 2005	Underwent cholecystectomy surgery.
Approximately 2023	History of fall injury approximately two years before current presentation; subsequent progression of low back symptoms noted.
2023–2025	Gradual development and progression of chronic low back pain radiating to both lower limbs with associated bilateral knee pain and stiffness.
Before September 2025	Symptoms worsened with bilateral knee crepitus and swelling, left lower limb swelling, heaviness in both lower limbs, and difficulty in prolonged standing and walking.
05/09/2025	Clinical examination and laboratory investigations performed. General examination showed pulse rate 72/min, BP 179/88 mmHg, weight 70.4 kg and SpO_2 100%.
05/09/2025	Hematological and biochemical investigations performed, revealing Hb 11.7 g/dL, CRP 2.33 mg/L, normal renal function parameters, and HbA1c 5.29%.
06/09/2025	MRI lumbosacral spine performed, showing multilevel degenerative spondylotic changes, L4–L5 and L5–S1 disc bulges, Grade I anterolisthesis of L5 over S1 with bilateral nerve root compression, and old L1 wedge collapse.
After 06/09/2025	Ayurvedic treatment initiated with Gond Siyah powder, T-Care capsule, P-Care capsule, Pachan Care syrup, and Gond Siyah oil for local application.
Follow-up period	Reduction in low back pain and bilateral knee pain, mild reduction in lower limb heaviness, improved mobility and activities of daily living; mild residual stiffness persisted.

Table 01: Timeline of the case.

V. DIAGNOSTIC ASSESSMENT

The patient underwent detailed clinical, laboratory, and radiological evaluation to determine the etiology of chronic low back pain with associated bilateral lower limb symptoms. Clinically, the patient presented with low back pain radiating to both lower limbs, bilateral knee pain with crepitus and swelling, left lower limb swelling, and heaviness in both lower limbs resulting in difficulty in prolonged standing and walking. The chronic nature of symptoms along with age-related progression suggested a degenerative musculoskeletal pathology.

Laboratory investigations demonstrated blood urea of 24.8 mg/dL and serum creatinine of 0.75 mg/dL, indicating normal renal function. Glycemic status was within normal limits with HbA1c of 5.29% and mean plasma glucose of 110.15 mg/dL. Inflammatory activity was not significantly elevated, as evidenced by C-reactive protein (CRP) of 2.33 mg/L. Hemoglobin level was 11.7 g/dL indicating mild anemia, while total leukocyte count was 7600 cells/mm^3 and remained within normal range.

Magnetic Resonance Imaging (MRI) of the lumbosacral spine revealed multilevel degenerative lumbar spondylotic changes characterized by marginal osteophyte formation and intervertebral disc desiccation. An old anterior wedge collapse of the L1 vertebra with posterior subluxation was observed. Diffuse disc bulging at L4–L5 caused bilateral exiting nerve root impingement. Grade I anterolisthesis of L5 over S1 associated with spondylolysis was noted, along with pseudo-disc bulge at L5–S1 causing significant bilateral exiting

nerve root compression. These radiological findings correlated with the patient's clinical presentation of radicular pain and lower limb heaviness.

From an Ayurvedic perspective, the symptom complex of *Kati Shoola* (low back pain), *Stambha* (stiffness), difficulty in movement, and degenerative changes occurring during *Vata Pradhana Vaya* (old age) was interpreted as *Katigata Vata* with associated *Sandhigata Vata* features. Based on clinical and radiological findings, the final diagnosis was established as lumbar spondylosis with L4–L5 and L5–S1 disc pathology associated with Grade I spondylolisthesis and bilateral radiculopathy, corresponding to *Katigata Vata* in Ayurvedic diagnosis.

VI. THERAPEUTIC INTERVENTION

Intervention	Dose	Frequency	Route/Method of Administration
Gond Siyah Powder	3 g	Twice daily	Oral with lukewarm water
T-Care Capsule	1 capsule	Once daily	Oral
P-Care Capsule	1 capsule	Twice daily	Oral
Pachan Care Syrup	10 ml	Twice daily	Oral
Gond Siyah Oil	10 drops	As advised	Local application over affected region

TABLE 2: THERAPEUTIC INTERVENTION GIVEN IN THIS CASE.

VII. FOLLOW-UP AND OUTCOMES

The patient was followed up after completion of the prescribed therapeutic regimen to assess changes in symptom severity and functional status. During follow-up evaluation, the patient reported a noticeable reduction in chronic low back pain and bilateral knee pain compared with the initial presentation. Improvement in mobility and ease in performing routine daily activities were observed. The sensation of heaviness in both lower limbs was reduced mildly following treatment. Although the patient continued to experience mild residual stiffness, no worsening of symptoms or new complaints were reported during the follow-up period. No adverse drug reactions or treatment-related complications were observed throughout the course of management. Overall, the intervention resulted in symptomatic improvement and enhanced functional status, suggesting a beneficial role of conservative Ayurvedic management in degenerative lumbar conditions.

VIII. DISCUSSION

Lumbar spondylosis is a chronic degenerative disorder characterized by progressive degeneration of intervertebral discs, facet joints, and vertebral structures leading to pain, stiffness, neurological manifestations, and functional disability. Degenerative changes increase substantially with age and contribute significantly to impaired quality of life among elderly individuals. In the present case, MRI findings demonstrated multilevel lumbar spondylotic changes with L4–L5 and L5–S1 disc bulges, Grade I anterolisthesis of L5 over S1, and bilateral nerve root compression, correlating with the patient's symptoms of low back pain radiating to both lower limbs, heaviness, and difficulty in walking.

From the Ayurvedic perspective, the disease presentation resembles *Katigata Vata* with associated *Sandhigata Vata* features. In old age (*Vriddhavastha*), *Vata Dosha* predominates, and *Dhatu Kshaya* contributes to degenerative manifestations including pain (*Shoola*), stiffness (*Stambha*), crepitus (*Atopa*), and restricted movements.

The therapeutic interventions employed in this case included Gond Siyah powder, T-Care capsule, P-Care capsule, Pachan Care syrup, and Gond Siyah Pain Relief Oil. The formulations collectively contained several bioactive herbs possessing anti-inflammatory, analgesic, antioxidant, and tissue-supportive properties.

Gond Siyah powder and T-Care capsules contained *Withania somnifera* (Ashwagandha), *Zingiber officinale* (Ginger), and *Boswellia serrata*. Ashwagandha has demonstrated anti-inflammatory, antioxidant, adaptogenic, and immunomodulatory activities and has shown beneficial effects in inflammatory and arthritic conditions. Studies suggest that its active constituents, particularly withanolides, modulate inflammatory pathways and cytokine activity[5-8].

Boswellia serrata present in T-Care possesses anti-inflammatory and anti-arthritic properties through inhibition of 5-lipoxygenase pathways and inflammatory mediators. Randomized controlled studies and systematic reviews have demonstrated significant reductions in pain and improvements in functional status among patients with osteoarthritis receiving Boswellia preparations[9-12].

T-Care also contained *Curcuma longa* (Turmeric), which possesses curcuminoids known to suppress inflammatory mediators and oxidative stress. Meta-analyses suggest improvement in pain and joint function following curcumin supplementation in musculoskeletal disorders[13].

Pachan Care syrup contained ingredients including *Triphala*, *Piper longum*, *Zingiber officinale*, and *Trachyspermum ammi*, which are traditionally used for *Agni Deepana* and *Pachana*. According to Ayurvedic principles, restoration of digestive function contributes to improved metabolism and tissue nourishment, thereby supporting the therapeutic effect of administered interventions.

Local application of Gond Siyah Pain Relief Oil included ingredients such as *Withania somnifera*, *Boerhaavia diffusa*, *Curcuma longa*, *Cedrus deodara*, and sesame oil. Local application of medicated oil (*Snehana*) is traditionally used for *Vata Shamana* and may facilitate reduction in stiffness and pain through local tissue effects.

IX. PATIENT PERSPECTIVE

After completion of the prescribed treatment regimen, the patient reported noticeable improvement in symptoms compared with the initial presentation. She experienced reduction in low back pain and bilateral knee pain, which improved her ability to stand and walk for longer durations. The sensation of heaviness in both lower limbs was reduced, and she felt greater ease while performing routine daily activities. Although mild stiffness persisted, the patient expressed satisfaction with the treatment outcome and perceived improvement in her overall physical comfort and functional capacity.

X. CONCLUSION

This case demonstrates that conservative Ayurvedic management may provide symptomatic relief and improve functional status in elderly patients with lumbar spondylosis and associated lower limb symptoms.

XI. REFERENCES

[1] Andersen K. Congenital pseudarthrosis of the leg. Late results. The Journal of Bone & Joint Surgery. 1976 July 1;58(5):657–662.

[2] Kwon JW, Suk KS, Moon SH, Park SY, Kim N, Park SR, et al. Lumbar spinal stenosis: current concept of management. Asian Spine J. 2025 June 13;20(1):143–157.

[3] Zdeblick TA. The Treatment of Degenerative Lumbar Disorders. Spine. 1995 Dec 1;20(Suppl 24):138S.

[4] Sharma H, Chandola HM, Singh G, Basisht G. Utilization of Ayurveda in Health Care: An Approach for Prevention, Health Promotion, and Treatment of Disease. Part 2—Ayurveda in Primary Health Care. The Journal of Alternative and Complementary Medicine. 2007 Dec 1;13(10):1135–1150.

[5] Mishra LC, Singh BB, Dagenais S. Scientific basis for the therapeutic use of *Withania somnifera* (Ashwagandha): a review. Altern Med Rev. 2000;5(4):334-46.

[6] Alanazi HH, El-Agamy DS, Almarhoon ZM, et al. The immunomodulatory role of *Withania somnifera* (L.) Dunal. Molecules. 2023;28:2443.

[7] Ramakanth GS, Uday Kumar R, Kishan PV, et al. A randomized, double blind placebo controlled study of *Withania somnifera* in knee joint pain. J Ayurveda Integr Med. 2016;7(3):151-7.
[8] Gupta A, Mahdi AA, Shukla KK, et al. Evaluation of anti-inflammatory effect of *Withania somnifera* root in collagen-induced arthritis. Pharm Biol. 2014;52(3):308-20.
[9] Kimmatkar N, Thawani V, Hingorani L, Khiyani R. Efficacy and tolerability of *Boswellia serrata* extract in treatment of osteoarthritis of knee: a randomized double blind placebo controlled trial. Phytomedicine. 2003;10(1):3-7.
[10] Yu G, Xiang W, Zhang T, Zeng L, Yang K, Li J. Effectiveness of *Boswellia* and *Boswellia* extract for osteoarthritis patients: systematic review and meta-analysis. BMC Complement Med Ther. 2020;20:225.
[11] Dubey V, Kheni D, Sureja V. Efficacy evaluation of standardized *Boswellia serrata* extract in osteoarthritis: systematic review and meta-analysis. Explore (NY). 2024;20(5):102983.
[12] Majeed A, Majeed S, Satish G, et al. Standardized *Boswellia serrata* extract improves knee osteoarthritis symptoms. Front Pharmacol. 2024.
[13] Bannuru RR, Osani MC, et al. Efficacy of curcumin and Boswellia for knee osteoarthritis: systematic review and meta-analysis. Semin Arthritis Rheum. 2018;48(3):416-29.