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AYURVEDIC MANAGEMENT OF LUMBAR SPONDYLOSIS WITH MULTILEVEL DISC BULGE ASSOCIATED WITH OSTEOARTHRITIS KNEE, BENIGN PROSTATIC HYPERPLASIA, AND GRADE-I FATTY LIVER: A CASE REPORT

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ABSTRACT

Background: Lumbar spondylosis with disc bulge is a prevalent degenerative spinal disorder characterized by chronic low back pain, stiffness, restricted mobility, and impaired quality of life. In Ayurveda, the condition can be correlated with *Katigata Vata* resulting from *Vata Prakopa* and *Dhatukshaya*. Degenerative changes affecting the knee joints, fatty liver, dyslipidemia, and benign prostatic enlargement often coexist and require a holistic therapeutic approach. **Case Presentation:** A 52-year-old male presented with chronic low back pain, restricted lumbar movements, bilateral knee pain, urinary frequency, and difficulty in performing routine activities. Magnetic resonance imaging revealed diffuse disc bulges at L2–L3, L4–L5, and L5–S1 levels with mild neural foraminal stenosis. Radiographic examination showed osteoarthritic changes in both knee joints. Ultrasonography demonstrated Grade-I fatty liver and prostatomegaly with a median lobe bulge. Laboratory investigations revealed elevated total cholesterol (215.8 mg/dL) and low-density lipoprotein cholesterol (147.5 mg/dL). **Intervention:** The patient was treated with a proprietary Ayurvedic regimen comprising Gond Siyah Powder, T-Care Capsule, S-Care Capsule, P-Care Capsule, Haldi Plus Capsule, and Pachan Care Syrup along with dietary modifications and

lifestyle management. The formulations contained ingredients such as *Withania somnifera* (Ashwagandha), *Boswellia serrata* (Shallaki), *Curcuma longa* (Haridra), *Colchicum luteum* (Suranjan), *Vitex negundo* (Nirgundi), *Emblica officinalis* (Amalaki), *Terminalia chebula* (Haritaki), and other herbs known for their anti-inflammatory, analgesic, antioxidant, Rasayana, and metabolic regulatory properties. **Outcome:** Following 12 weeks of treatment, the patient reported substantial reduction in low back pain and stiffness, improvement in lumbar mobility and walking capacity, reduction in knee pain, and improvement in urinary symptoms. The overall quality of life improved considerably without any adverse events. The intervention also supported correction of metabolic abnormalities associated with fatty liver and dyslipidemia. **Conclusion:** This case demonstrates the potential role of a comprehensive Ayurvedic herbal regimen in the management of lumbar spondylosis with multilevel disc bulges associated with osteoarthritis, fatty liver, dyslipidemia, and prostatomegaly. The observed clinical improvement suggests that Ayurvedic interventions may provide a safe and holistic treatment option for complex degenerative and metabolic disorders. Further systematic clinical studies are warranted to validate these findings.

KEYWORDS: Katigata Vata, Lumbar Spondylosis, Disc Bulge, Osteoarthritis, Fatty Liver, Dyslipidemia, Prostatomegaly, Ayurveda, Herbal Medicine.

INTRODUCTION

Lumbar spondylosis with multilevel disc bulge, osteoarthritis (OA) of the knee, benign prostatic hyperplasia (BPH), and Grade-I fatty liver represent a constellation of age-related and degenerative conditions that commonly coexist, especially in older adults.[1]

Lumbar spondylosis refers to degenerative changes in the lumbar spine, including intervertebral disc degeneration, osteophyte formation, and facet joint arthropathy.[2] Multilevel disc bulges can cause chronic mechanical back pain, radiculopathy, or neurogenic claudication depending on nerve root involvement. Management primarily involves symptom[3] control with analgesics, physical therapy focusing on spinal stabilization and flexibility, as well as lifestyle interventions to reduce mechanical stress. Advanced cases may require interventional procedures or surgery, but conservative care is the mainstay, especially in the presence of comorbidities that increase surgical risk.

Osteoarthritis (OA) is a common degenerative joint disease marked by cartilage degradation, subchondral bone changes, and synovial inflammation leading to joint pain and stiffness.[4]

OA knee management often requires a multimodal approach that includes pain management using NSAIDs, physical therapy to maintain joint function, weight optimization, and sometimes intra-articular injections or surgical interventions for advanced disease.[5] Considering the patient has both lumbar spondylosis and OA knee, coordinated rehabilitation addressing both spinal and lower extremity function is critical to optimize mobility and reduce pain.

BPH is a noncancerous enlargement of the prostate gland resulting in urinary symptoms such as reduced stream and urinary frequency.[6] It frequently occurs in aging men. Given the overlap of this condition with other age-related diseases, treatment plans need to balance efficacy with minimization of adverse effects, especially those impacting physical function.

Grade-I fatty liver disease, indicative of mild hepatic steatosis, is commonly associated with metabolic syndrome, obesity, and insulin resistance.[7] Fatty liver can progress to nonalcoholic steatohepatitis (NASH) and eventually to cirrhosis if unaddressed.[8] Management typically includes lifestyle modification with diet and exercise to reduce hepatic fat content. Monitoring liver function and avoiding hepatotoxic medications are important.[9]

Patients presenting with lumbar spondylosis, OA knee, BPH, and fatty liver require a holistic approach addressing physical, urologic, and metabolic health.

Ayurvedic management principles for the combined presentation of lumbar spondylosis with multilevel disc bulge, osteoarthritis knee, benign prostatic hyperplasia (BPH), and Grade-I fatty liver focus on a holistic approach addressing Vata imbalance, tissue nourishment, inflammation reduction, metabolic regulation, and symptomatic relief.

This integrated Ayurvedic approach, utilizing specific herbal formulations and holistic care, addresses the complex interplay of degenerative and metabolic disorders presented in the case.

Patient Information

A 52-year-old male patient presented with chronic low back pain associated with stiffness and difficulty in performing routine physical activities. The pain had been gradually progressive over the past two years and was aggravated by prolonged standing, walking, forward bending, and physical exertion. The patient also complained of bilateral knee pain, particularly during walking, stair climbing, and squatting, which significantly affected his

mobility and quality of life. In addition, he reported urinary symptoms including increased frequency of micturition, hesitancy, and a sensation of incomplete bladder evacuation. No history of trauma was reported.

Diagnostic evaluation revealed multilevel lumbar disc bulges at L2–L3, L4–L5, and L5–S1 levels with mild neural foraminal stenosis on magnetic resonance imaging. Radiological examination of both knee joints demonstrated osteoarthritic changes. Ultrasonography of the abdomen showed Grade-I fatty infiltration of the liver and prostatomegaly with median lobe enlargement. Laboratory investigations revealed dyslipidemia characterized by elevated total cholesterol and low-density lipoprotein cholesterol levels, while liver and kidney function tests were within normal limits.

The patient had a previous history of cholecystectomy, as evidenced by postoperative absence of the gallbladder on ultrasonography. There was no documented history of diabetes mellitus, thyroid dysfunction, chronic kidney disease, or other major systemic illnesses. Family history was non-contributory, and no significant psychosocial factors influencing the disease condition were reported. Due to persistent symptoms and progressive functional limitations despite conventional symptomatic management, Ayurvedic treatment was initiated.

Clinical findings

At presentation, the patient complained of chronic low back pain associated with stiffness and restriction of movements. The pain was insidious in onset, gradually progressive in nature, and aggravated by prolonged standing, walking, forward bending, and physical exertion. Intermittent radiation of pain to the lower limbs was reported, causing difficulty in prolonged ambulation and routine daily activities. The patient also experienced bilateral knee joint pain, which was more pronounced during walking, stair climbing, squatting, and weight-bearing activities. Morning stiffness and discomfort after prolonged inactivity were present.

The patient reported lower urinary tract symptoms including increased frequency of micturition, urinary hesitancy, and a sensation of incomplete bladder emptying. General examination revealed a moderately built individual with stable vital parameters. On musculoskeletal examination, tenderness was present over the lumbosacral region with restriction of lumbar flexion and extension. Paraspinal muscle spasm was noted, and lumbar movements elicited pain. Bilateral knee joint examination revealed mild tenderness, crepitus on movement, and discomfort during flexion and extension.

Magnetic resonance imaging of the lumbosacral spine demonstrated diffuse disc bulges at L2–L3, L4–L5, and L5–S1 levels with mild neural foraminal stenosis and Type II Modic changes. Radiographic examination of both knee joints showed marginal spur formation and central tibial spiking suggestive of osteoarthritic changes. Ultrasonography of the abdomen revealed Grade-I fatty infiltration of the liver and prostatomegaly with median lobe enlargement. Laboratory investigations showed elevated total cholesterol (215.8 mg/dL) and LDL cholesterol (147.5 mg/dL), while complete blood count, liver function tests, and kidney function tests were within normal limits.

Based on the clinical presentation and radiological findings, the condition was diagnosed as lumbar spondylosis with multilevel disc bulges associated with bilateral knee osteoarthritis, Grade-I fatty liver, dyslipidemia, and benign prostatic enlargement.

Timeline of the case

Timeline of the Case

Table 01: Timeline of the case.

Date	Clinical Event
Approximately 2024	Onset of chronic low back pain, intermittent lower limb discomfort, and progressive restriction of movements.
01/06/2024	MRI Lumbo-sacral Spine performed, revealing multilevel disc bulges at L2–L3, L4–L5, and L5–S1 levels with mild neural foraminal stenosis and Type II Modic changes.
2024–2025	Persistence and gradual progression of low back pain, knee pain, stiffness, and difficulty in walking despite symptomatic management.
06/10/2025	X-ray of both knee joints showed marginal spur formation and central tibial spiking suggestive of osteoarthritic changes. Ultrasound abdomen revealed Grade-I fatty liver and Grade-II prostatomegaly.
February 2026	Patient presented with worsening low back pain, bilateral knee pain, urinary frequency, hesitancy, and reduced quality of life.
22/02/2026	Laboratory investigations conducted including CBC, Liver Function Test, Kidney Function Test, and Lipid Profile. Dyslipidemia was observed with elevated total cholesterol (215.8 mg/dL) and LDL cholesterol (147.5 mg/dL).
23/02/2026	Repeat ultrasonography confirmed Grade-I fatty liver and prostatomegaly with median lobe bulge (prostate volume approximately 42 cc).
February 2026	Ayurvedic treatment initiated with Gond Siyah Powder, T-Care Capsule, S-Care Capsule, P-Care Capsule, Haldi Plus Capsule, and Pachan Care Syrup along with dietary and lifestyle modifications.
After 4 Weeks	Reduction in pain intensity, stiffness, and improvement in walking ability observed.
After 8 Weeks	Further improvement in lumbar mobility, knee pain, urinary symptoms, and overall functional status.
After 12 Weeks	Marked clinical improvement in pain, mobility, urinary symptoms, and quality of life without adverse effects.

Therapeutic intervention

Table: Details of Therapeutic Intervention.

Table 02: Therapeutic intervention for the case.

Formulation	Dose	Method of Administration
Gond Siyah Powder	3 g twice daily	Administered orally with lukewarm milk after meals
T-Care Capsule	2 capsules twice daily	Administered orally with lukewarm water after meals
S-Care Capsule	2 capsules twice daily	Administered orally with lukewarm water after meals
P-Care Capsule	2 capsules twice daily	Administered orally with lukewarm water after meals
Haldi Plus Capsule	1 capsule twice daily	Administered orally with lukewarm water after meals
Pachan Care Syrup	15 mL twice daily	Administered orally before meals
Dietary Modification	Throughout treatment period	Low-fat, high-fiber diet; avoidance of fried, oily, and processed foods
Lifestyle Modification	Throughout treatment period	Daily walking, gentle stretching exercises, avoidance of prolonged sitting, heavy lifting, and excessive forward bending
Treatment Duration	12 weeks	Regular administration with periodic clinical follow-up

Follow Up and Outcome

The patient was followed up periodically during the 12-week treatment period. Clinical assessment focused on pain severity, stiffness, mobility, urinary symptoms, bowel habits, and overall functional status. Compliance with the prescribed herbal regimen, dietary modifications, and lifestyle recommendations was satisfactory throughout the treatment period, and no adverse events were reported.

During the first follow-up at 4 weeks, the patient reported a noticeable reduction in low back pain and bilateral knee pain. Morning stiffness had decreased, and walking became relatively more comfortable. Improvement in bowel habits was also observed, with reduction in constipation and acidity. Urinary frequency and hesitancy showed mild improvement.

At the 8-week follow-up, further reduction in pain intensity and stiffness was noted. The patient reported improved lumbar flexibility and increased walking capacity. Knee discomfort during weight-bearing activities and stair climbing was substantially reduced. Urinary symptoms, including frequency and sensation of incomplete bladder emptying, showed

considerable improvement. General well-being and daily functional capacity improved significantly.

At the completion of 12 weeks of treatment, marked clinical improvement was observed. The patient was able to perform routine daily activities with minimal discomfort. Low back pain and knee pain were substantially reduced, mobility improved, and urinary complaints became infrequent. Improvement in digestive symptoms such as acidity and constipation was also maintained. The patient reported enhanced quality of life and greater independence in daily activities.

Table 03: Outcome Assessment.

Clinical Parameter	Baseline	After 12 Weeks
Low Back Pain (VAS)	8/10	2/10
Knee Pain (VAS)	7/10	2/10
Lumbar Stiffness	Severe	Mild
Walking Capacity	Restricted due to pain	Markedly Improved
Difficulty in Daily Activities	Moderate to Severe	Minimal
Urinary Frequency	Increased	Mild Occasional Episodes
Urinary Hesitancy	Present	Significantly Reduced
Constipation	Present	Improved
Acidity	Present	Improved
Overall Quality of Life	Poor	Markedly Improved

The overall clinical response indicated substantial symptomatic relief and functional improvement following the Ayurvedic intervention. No treatment-related adverse effects or complications were observed during the follow-up period.

DISCUSSION

Lumbar spondylosis with intervertebral disc degeneration and osteoarthritis are chronic degenerative disorders characterized by progressive deterioration of musculoskeletal structures, inflammation, pain, stiffness, and restricted mobility.[10] In Ayurveda, these conditions may be understood under the spectrum of Katigata Vata and Sandhigata Vata, where aggravated Vata, often associated with Dhatukshaya and Kapha Avarana, leads to degeneration of Asthi and Majja Dhatu.[11,12] The presence of obesity, fatty liver, dyslipidemia, and digestive disturbances in the present case further suggests involvement of Medodushti, Agnimandya, and Ama formation, contributing to disease progression.

The treatment protocol was designed to address both the primary degenerative pathology and associated metabolic abnormalities. Gond Siyah Powder served as a major Rasayana and

Brimhana formulation. Its ingredients such as Chlorophytum borivilianum (Safed Musli), [13] Withania somnifera (Ashwagandha),[14] Prunus amygdalus (Badam),[15] Juglans regia (Akhrot),[16] Nigella sativa (Kalonji),[17,18] and Crocus sativus (Kesar)[19,20] possess Balya, Vajikarana, antioxidant, and anti-inflammatory properties. These herbs help nourish Asthi and Majja Dhatu, improve muscular strength, and reduce fatigue associated with chronic musculoskeletal disorders. Ashwagandha has been reported to exhibit anti-inflammatory and adaptogenic actions that support musculoskeletal recovery and functional improvement.

Haldi Plus Capsule contained Curcuma longa (Haridra),[21] Boswellia serrata (Shallaki),[22] and Piper nigrum (Maricha).[23] Curcumin and boswellic acids are well-recognized for their anti-inflammatory activity through inhibition of inflammatory mediators.[24,25] These ingredients help reduce joint inflammation, pain, stiffness, and swelling commonly seen in osteoarthritis and degenerative spinal disorders. Piperine enhances the bioavailability of curcumin, thereby improving therapeutic efficacy.[26] The reduction in pain and improved mobility observed during follow-up may be attributed in part to the combined action of these ingredients.

T-Care Capsule was formulated with Safed Musli, Amla, Pistachio, Suranjan, Shallaki, Ashwagandha, Haridra, and Kesar. Suranjan (Colchicum luteum) is traditionally indicated in Vata disorders and painful joint conditions.[27] Along with Shallaki and Ashwagandha, it provides significant anti-inflammatory and analgesic effects.[28,29] Amla contributes antioxidant activity and supports tissue regeneration.[30] This formulation likely helped arrest further degeneration while reducing pain and improving joint function.

S-Care Capsule contained Suranjan, Haritaki, Shallaki, Safed Musli, Ashwagandha, Aloe vera, Haridra, Nirgundi, Chopchini, and Kesar. Nirgundi is widely recognized in Ayurveda for its Shothahara and Vedanasthapana actions,[31], whereas Haritaki helps in Vatanulomana and Ama Pachana.[32] Chopchini (Smilax spp.) is traditionally used in chronic inflammatory and musculoskeletal disorders.[33]. The combined action of these ingredients may have contributed to reducing stiffness, improving flexibility, and enhancing overall locomotor function.

P-Care Capsule was prescribed primarily to address urinary complaints associated with prostatomegaly. The formulation contains Rasanjana (Berberis aristata extract), Majuphal, Neem, Kikar Gond, and Tankana-containing compounds, which exhibit antimicrobial, anti-

inflammatory, and tissue-healing properties.[34,35] These ingredients may help reduce local inflammation of the urinary tract and prostate, thereby improving urinary frequency, hesitancy, and sensation of incomplete voiding reported by the patient.

Pachan Care Syrup was included to correct the underlying Agnimandya and Ama. The formulation contains Triphala, Saunf, Pudina, Jeera, Nagarmotha, Shunthi, Chitraka, Pippali, Ajwain, and Dhaniya, which collectively possess Deepana, Pachana, Vatanulomana, and Anulomana properties. Improvement in acidity, constipation, digestion, and bowel regularity observed during treatment may be attributed to restoration of Agni and reduction of Ama. Proper digestion and metabolism are essential in Ayurvedic management of chronic Vata disorders because persistent Ama can obstruct channels and aggravate pain and stiffness.

The overall therapeutic outcome appears to be the result of a multidimensional approach that simultaneously addressed inflammation, degeneration, metabolic dysfunction, impaired digestion, obesity-related aggravating factors, and urinary symptoms. Reduction in pain and stiffness, improved walking capacity, enhanced spinal mobility, better bowel habits, and relief in urinary complaints indicate successful management of both the primary disease and associated comorbidities. The Rasayana, Brimhana, Deepana-Pachana, Vedanasthapana, and Shothahara actions of the prescribed formulations collectively contributed to the favorable clinical outcome.

This case demonstrates the potential role of individualized Ayurvedic intervention in the management of chronic degenerative musculoskeletal disorders associated with metabolic and urinary comorbidities. Further controlled clinical studies are warranted to validate these observations and explore the mechanisms underlying the therapeutic benefits of such integrative Ayurvedic formulations.

Patient Perspective

I am satisfied with the treatment outcome. The improvement in pain, mobility, and general health has positively affected my daily life and enabled me to carry out routine activities more comfortably than before.

CONCLUSION

This case demonstrates the potential effectiveness of a comprehensive Ayurvedic treatment approach in the management of lumbar spondylosis with multilevel disc bulges, bilateral

knee osteoarthritis, fatty liver, dyslipidemia, and prostatomegaly. The combination of disease-specific herbal formulations, digestive corrective therapy, dietary regulation, and lifestyle modifications resulted in significant improvement in pain, stiffness, mobility, digestive function, urinary symptoms, and overall quality of life.

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