



Integrative Herbal Management of Chronic Low Back Pain with Associated Stiffness and Digestive Disturbance in an Elderly Male: A Case Report

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Abstract:**Introduction:** Chronic low back pain in elderly individuals is frequently associated with degenerative musculoskeletal changes, post-traumatic factors, stiffness, and gastrointestinal disturbances that influence quality of life and functional mobility. Multimodal therapeutic strategies may provide symptomatic benefit when conventional symptom relief remains incomplete.

Case Presentation: A 73-year-old male presented with chronic low back pain of approximately two years' duration, associated with low back stiffness. The patient had a history of fall-related injury and reported associated acidity and constipation. Appetite, bowel clearance, urination, and sleep were otherwise satisfactory. There was no history of diabetes mellitus or hypertension documented. **Intervention:** The patient was prescribed an integrative herbal regimen consisting of Gond Siyah powder, S-Care capsules, Boswellia serrata capsules, and Gond Siyah oil for local application, administered with lukewarm water and local massage as advised. **Outcome:** Follow-up records indicated approximately 60% relief in low back pain, with reduction in stiffness and improved comfort during daily activity. **Conclusion:** This case suggests that multimodal herbal therapy combining internal anti-inflammatory support and local application may provide symptomatic benefit in elderly chronic low back pain associated with stiffness and digestive complaints.

Keywords: Chronic low back pain, elderly, Boswellia serrata, integrative therapy, stiffness, case report

I. INTRODUCTION

Low back pain (LBP) is a highly prevalent and disabling condition that affects a significant portion of the population worldwide. It is a frequent cause of medical consultation and a major contributor to disability, with a broad range of possible underlying causes and complex mechanisms involved.

Low back pain can be classified broadly into specific and nonspecific categories. Specific low back pain is attributable to identifiable pathological causes such as trauma, tumor, infection, inflammation, or nerve root involvement. In contrast, nonspecific low back pain, which constitutes up to 85% of cases, lacks a clear anatomical or pathological origin and is often termed idiopathic or of unknown etiology[1-2].

Lumbar instability, caused by ligamentous laxity or degeneration, is recognized as one potential etiology of low back pain. Instability can lead to abnormal spinal motion and pain, and targeted treatments such as prolotherapy, including platelet-rich plasma injections, aim to restore spinal stability and alleviate symptoms[3].

Vitamin D deficiency has also been implicated in chronic low back pain of unclear origin. Studies have shown that patients with low back pain often have significantly lower serum vitamin D levels compared to controls, suggesting a contributory role of metabolic factors in pain pathogenesis. Early screening and correction of vitamin D status have been recommended as part of a comprehensive diagnostic and preventive strategy, especially in populations with sedentary lifestyles or metabolic comorbidities like diabetes mellitus [4].

Central sensitization—is an emerging concept in understanding chronic low back pain, where changes in the central nervous system lead to heightened pain sensitivity and persistence of pain beyond the initial injury. Recognizing central sensitization is important as it influences treatment strategies, often necessitating multimodal approaches combining pharmacologic and non-pharmacologic interventions targeting central nervous system pathways[2].

Comprehensive clinical evaluation, including detailed history taking for red flags (serious pathology), yellow flags (psychosocial risks), and physical examination, is essential in diagnosing and managing chronic low back pain[5].

Conservative treatment remains the cornerstone of managing nonspecific chronic low back pain. Patient education and reassurance about the benign nature of most low back pain are crucial initial steps. Exercise therapy, particularly strength training of the lumbar extensors, has demonstrated significant benefits. Isolated lumbar extension strengthening exercises, performed with pelvic stabilization, improve muscle strength, endurance, mobility, and reduce pain and symptoms. These positive effects have also been associated with improved vertebral bone mineral density and reduced healthcare utilization [6].

Over-the-counter medications like non-steroidal anti-inflammatory drugs (NSAIDs) and acetaminophen are widely used as first-line pharmacotherapy for non-specific low back pain. Other agents including antidepressants, muscle relaxants, and opioids are reserved for specific cases or more severe pain.

Ayurveda, as one of the oldest holistic healthcare systems, offers a comprehensive approach for managing various chronic conditions, including lower back pain (LBP). Its role in the treatment of LBP, particularly chronic nonspecific low back pain, has been explored through clinical trials and systematic assessments, highlighting its potential effectiveness and safety profile.

Further adding to the landscape, Ayurveda's broader therapeutic framework encompasses herbal medicines, physical therapies including massage, and lifestyle interventions, aimed at restoring balance among body, mind, and spirit. Evidence from clinical research in arthritis management — conditions involving chronic musculoskeletal pain similar to LBP — indicate that Ayurvedic medicines are generally safe and may have immunomodulatory and healing properties aligning with Ayurvedic concepts like 'Rasayana'.

Chronic lower back pain often requires multimodal management strategies including physical therapy, pharmacology, behavioral approaches, and sometimes interventional procedures or surgery. Ayurveda's external treatments such as massage can be part of conservative treatment paradigms that focus on pain relief and improving quality of life. Current evidence suggests that while Ayurvedic massage effectively reduces pain and enhances psychological well-being in the short term, more research is needed to evaluate longer-term functional outcomes and disability improvements [7].

Ayurveda may complement these by offering holistic approaches that address not only symptoms but also mind-body harmony, which may be particularly relevant in chronic pain syndromes where psychosocial factors play a role [8].

II. PATIENT INFORMATION

A 73-year-old male weighing approximately 72 kg presented with chronic low back pain of approximately two years' duration. The pain was associated with low back stiffness and discomfort during routine activities. A previous history of fall-related injury was noted. Associated digestive complaints included acidity and constipation. Appetite was reported as satisfactory, bowel clearance was adequate, urination was normal, and sleep was sound. The patient had no documented allergic history and no major chronic systemic illness clearly affecting the present complaint.

III. CLINICAL FINDINGS

On examination, the patient was conscious, cooperative, and oriented. General condition was stable. Low back pain with stiffness was clinically evident. No acute neurological deficit or systemic distress was recorded. Blood pressure noted during follow-up was 140/80 mmHg. No acute gait instability was documented.

IV. TIMELINE OF THE CASE

Date	Clinical Event	Details
17/03/2026	Initial consultation	Chronic low back pain, stiffness, acidity, constipation
17/03/2026	Clinical assessment	History of fall injury noted
17/03/2026	Therapeutic intervention started	Gond Siyah powder + S-Care + Boswellia serrata + local oil
12/04/2026	Follow-up	Approximately 60% relief in low back pain and stiffness

Table 01: Timeline of the case.

V. DIAGNOSTIC ASSESSMENT

The diagnosis was clinically assessed as chronic low back pain with stiffness, likely influenced by age-related degenerative changes and prior trauma. No imaging findings were available in the present documentation. Digestive complaints were considered contributory to systemic discomfort.

VI. INTERVENTION

Medicine	Dose	Frequency	Route	Purpose
Gond Siyah Powder	½ spoon	Twice daily	Oral with lukewarm water	Systemic support and musculoskeletal strengthening
S-Care Capsule	1 capsule	Three times daily after food	Oral	Pain and stiffness support
Boswellia serrata Capsule	1 capsule	Twice daily	Oral	Anti-inflammatory action
Gond Siyah Pain Relief Oil Advance	10 drops/local application	As advised	Local application	Local symptomatic relief

Table 02: Therapeutic intervention given in this case.

VII. FLOW-UP AND OUTCOME

At follow-up, the patient reported approximately 60 relief in low back pain, with noticeable reduction in stiffness. Daily activity became more comfortable, and no adverse effects were reported.

VIII. DISCUSSION

Chronic low back pain in elderly patients often results from degenerative musculoskeletal changes combined with prior mechanical injury and chronic inflammatory activity. In this case, improvement may be linked to the combined effects of *Boswellia serrata*, Gond Siyah, and supportive herbal formulations.

Boswellia serrata is one of the most evidence-supported botanical anti-inflammatory agents for musculoskeletal pain [9-11]. Its boswellic acids inhibit leukotriene synthesis through 5-lipoxygenase inhibition, reducing inflammatory pain and stiffness [12]. Randomized clinical trials have shown significant reduction in osteoarthritic pain and improvement in physical function with *Boswellia* supplementation [13-15].

S-Care Advance contains several ingredients with established anti-inflammatory and analgesic potential. *Boswellia serrata* present in the formulation is one of the most evidence-supported herbal agents for musculoskeletal inflammation. Boswellic acids inhibit 5-lipoxygenase-mediated leukotriene synthesis, thereby reducing inflammatory pain and stiffness in chronic joint and spinal disorders. Clinical trials have demonstrated that *Boswellia* significantly improves pain scores and functional mobility in osteoarthritis and

chronic musculoskeletal pain syndromes[13-15]. *Curcuma longa* further strengthens anti-inflammatory activity through curcumin-mediated inhibition of NF- κ B, cyclooxygenase pathways, and pro-inflammatory cytokines [16-17], which likely contributed to reduction in low back discomfort and stiffness.

The inclusion of *Colchicum luteum* in S-Care Advance is important because colchicine-related phytoconstituents possess anti-inflammatory action by reducing neutrophil-mediated inflammatory activation[18]. Although classically associated with gout-related inflammation, colchicum derivatives may also help reduce chronic inflammatory tissue irritation in degenerative pain states. *Vitex negundo* [19] and *Zingiber officinale* [20-21] present in the same formulation provide additional analgesic and anti-inflammatory effects through cyclooxygenase modulation and antioxidant activity. *Withania somnifera* contributes adaptogenic and anti-stress effects [22-23], which are relevant in chronic pain states where tissue recovery and neuroendocrine balance are impaired.

Gond Siyah Powder appears to provide deeper restorative support. It contains *Withania somnifera*, *Chlorophytum borivilianum*, *Nigella sativa*, *Prunus amygdalus*, and *Juglans regia*, which are nutritionally rich and may support musculoskeletal endurance in elderly individuals. *Withania somnifera* has demonstrated reduction in musculoskeletal pain and improvement in muscle strength through anti-inflammatory and antioxidant mechanisms[24]. *Nigella sativa* also possesses thymoquinone-mediated anti-inflammatory activity and may help reduce chronic oxidative stress associated with persistent pain[25].

A notable component in Gond Siyah Powder is *Colchicum luteum*, which may complement S-Care by reducing inflammatory sensitivity in painful tissues[26]. *Piper nigrum* [27] and *Zingiber officinale* [28] improve gastrointestinal digestion and enhance absorption of phytoconstituents through piperine-mediated bioavailability enhancement. This is clinically relevant because the patient also experienced acidity and constipation, and digestive correction may indirectly improve systemic inflammatory perception.

The local application of Gond Siyah Pain Relief Oil Advance likely played an important supportive role in reducing low back pain and stiffness in the present case by providing topical anti-inflammatory, analgesic, circulatory, and neuromuscular relaxation effects. The formulation contains a broad combination of herbal ingredients traditionally used for musculoskeletal disorders, several of which have documented anti-inflammatory and tissue-supportive pharmacological actions.

A major component of the oil is *Withania somnifera*, included both in decoction and kalk form. *Withania somnifera* possesses well-established anti-inflammatory, antioxidant, and adaptogenic effects[22-24]. Experimental studies have shown that withanolides reduce inflammatory mediators and improve muscle recovery, which may contribute to relief in chronic low back stiffness and tissue fatigue[29]. Its presence in topical oil may support local reduction in muscular tension and improve tissue nourishment.

Curcuma longa included in the oil provides curcuminoids with strong anti-inflammatory action through suppression of cyclooxygenase pathways, NF- κ B signaling, and local oxidative stress [16-17]. Topical curcumin-containing preparations are known to reduce inflammatory discomfort and improve mobility in chronic pain conditions [30]. This may have contributed to the observed reduction in low back pain after regular external application.

The inclusion of *Cedrus deodara*, *Saussurea lappa*, and *Nardostachys jatamansi* adds further analgesic and neuromuscular relaxing potential. *Cedrus deodara* has demonstrated anti-inflammatory and mild analgesic properties [31], while *Saussurea lappa* contributes local anti-inflammatory action through sesquiterpene lactones[32]. *Nardostachys jatamansi* may improve local microcirculation and reduce sensory irritability, thereby supporting pain relief in chronic musculoskeletal stiffness [33].

Boerhaavia diffusa and *Sida cordifolia* present in the decoction fraction may enhance local anti-inflammatory and anti-edematous action. *Boerhaavia diffusa* is recognized for reducing inflammatory swelling and oxidative stress[34], while *Sida cordifolia* is traditionally used in musculoskeletal weakness and pain syndromes due to its strengthening and anti-inflammatory actions [35].

The formulation also contains *Rubia cordifolia*, *Glycyrrhiza glabra*, and *Berberis aristata*, which possess antioxidant and anti-inflammatory phytochemicals that may support local tissue repair. *Glycyrrhiza glabra* has demonstrated inhibitory effects on inflammatory cytokines [36], while *Berberis aristata* provides berberine-related anti-inflammatory support [37].

Camphor and *Cinnamomum tamala* likely contribute immediate local symptomatic relief through mild counter-irritant and circulatory stimulation effects. Camphor improves superficial blood flow and creates a warming sensation [38], which can reduce stiffness perception and improve comfort during movement.

The sesame oil base (*Sesamum indicum*) is clinically important because sesame oil acts as an efficient transdermal carrier and itself possesses antioxidant and anti-inflammatory properties [39]. Sesame oil improves penetration of lipid-soluble phytoconstituents into superficial tissues and may help maintain local lubrication and flexibility. Local oil application may further enhance local circulation and reduce stiffness.

Thus, the clinical improvement observed in this patient may be attributed to combined local anti-inflammatory action, improved circulation, neuromuscular relaxation, and enhanced tissue nourishment, all of which are especially relevant in chronic low back pain associated with stiffness and previous injury.

IX. PATIENT PERSPECTIVE

Before starting treatment, I had continuous pain in my lower back and stiffness, which made it difficult to move comfortably and perform my daily activities. Sitting for long periods and changing posture were uncomfortable. After taking the prescribed medicines regularly and applying the oil as advised, the stiffness gradually reduced and the pain became less. I now feel more comfortable while doing routine work and moving around

X. CONCLUSION

This case demonstrates that integrative herbal therapy may provide symptomatic improvement in chronic low back pain with stiffness in elderly patients, particularly when inflammatory and digestive components coexist.

XI. REFERENCES

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