



Review Article

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CERVICAL SPONDYLOSIS AND ITS MANAGEMENT: AN EVIDENCE-BASED INTEGRATIVE REVIEW

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ABSTRACT

Cervical spondylosis is one of the most common degenerative disorders affecting the cervical spine and a leading cause of chronic neck pain, functional disability, and impaired quality of life worldwide. In Ayurvedic literature, cervical spondylosis closely resembles Manyagata Vata, a subtype of Vatavyadhi (Vata Disorders), characterized by pain, stiffness, and restricted movements of the cervical region. This narrative review was prepared by critically evaluating classical Ayurvedic texts and contemporary scientific literature from standard peer-reviewed journals to provide an evidence-based integrative perspective. Cervical spondylosis is a multifactorial disorder resulting from progressive degeneration of the cervical spine influenced by aging, biomechanical stress, occupational factors, and lifestyle practices, which demonstrates considerable similarity with the Ayurvedic concepts of Vata Prakopa (Vitiation of Vata Dosha), Asthi-Majja Dhatu Kshaya (Degeneration of bones), and Srotodushti (Obstruction of Channels). Conservative management remains the cornerstone of treatment, whereas Ayurvedic interventions including Nidana Parivarjana (Avoidance of etiological factors), Shamana Chikitsa (Palliative Treatment), Nasya (Trans-nasal drug Instillation), Manya Basti (Local Olation therapy), Basti (Medicated enema), and Agnikarma (Heat-burn Therapy), Jalukavacharan (Leech Therapy), Lepa Chikitsa (Medicated Herbal Paste) adjuvant to the standard physiotherapy and Yoga exercises have demonstrated encouraging clinical outcomes in reducing pain, improving cervical mobility, and enhancing functional status. Cervical spondylosis requires a multidisciplinary and patient-centred management strategy. An evidence-based integrative approach may provide comprehensive care and improve functional outcomes. This review highlights the need for holistic management of cervical spondylosis. However, well-designed clinical trials are needed to validate integrative management and support this perspective.

Keywords: Cervical spondylosis, Manyagata Vata, Manyastambha, Nasya, Manya-Basti, Agnikarma.

INTRODUCTION

Cervical spondylosis is a chronic degenerative disorder of the cervical spine characterized by progressive deterioration of the intervertebral discs, vertebral bodies, facet joints, and associated ligamentous structures.¹ It represents one of the leading causes of chronic neck pain, cervical stiffness, radiculopathy, and myelopathy among adults, particularly in the elderly population. Although degenerative changes are considered a physiological consequence of aging, increasing occupational demands, prolonged use of computers and handheld digital devices, sedentary lifestyles, and poor ergonomic practices have resulted in a growing incidence among younger individuals.² Consequently, cervical spondylosis has emerged as an important public health concern owing to its significant impact on physical function, work productivity, healthcare expenditure, and overall quality of life.³

The pathogenesis of cervical spondylosis is multifactorial, involving age-related disc degeneration, altered cervical biomechanics, osteophyte formation, ligamentous hypertrophy, and progressive narrowing of the spinal canal or neural foramina. These structural changes may lead to chronic axial neck pain, cervical radiculopathy, or cervical myelopathy depending on the extent and location of neural compression.⁴ Conventional management primarily focuses on pain relief, restoration of cervical mobility, prevention of neurological deterioration, and improvement of functional capacity through pharmacotherapy, physiotherapy, rehabilitation, and surgical intervention in selected cases.⁵

Ayurveda offers a holistic understanding of degenerative musculoskeletal disorders through the concept of Vatavyadhi (Vata Disorders), wherein aggravated Vata Dosha associated with Asthi-Majja Dhatu Kshaya (Degeneration of bones) produces progressive functional and structural impairment.⁶ Although cervical spondylosis is not described as a distinct disease entity in the classical Ayurvedic texts, its clinical manifestations closely resemble Manyagata Vata, characterized by Manya Shoola (neck pain), Stambha (stiffness), Graha (restricted cervical movements), and radiating pain involving the upper extremities. Classical Ayurvedic management emphasizes Nidana Parivarjana (Avoidance of etiological factors), Shamana Chikitsa (Palliative Treatment), Panchakarma (Purification Procedures), and Rasayana (Rejuvenation) therapies aimed at pacifying aggravated Vata, nourishing depleted tissues, and restoring functional balance.⁷

Recent years have witnessed increasing scientific interest in evaluating Ayurvedic interventions through clinical research. Several studies have reported beneficial effects of therapies such as Nasya (Trans-nasal drug Instillation), Manya Basti (Local Olation therapy), Basti (Medicated Enema), Agnikarma (Heat Burn Therapy), Jalukavacharan (Leech Therapy), Lepa Chikitsa (Medicated Herbal Paste), and various herbal formulations in reducing pain, improving cervical mobility, and enhancing quality of life.⁸ However, the available literature remains heterogeneous with respect to study design, sample size, treatment protocols, and outcome assessment, emphasizing the need for critical appraisal of the existing evidence.

The present review aims to comprehensively evaluate the contemporary understanding of cervical spondylosis regarding its etiology, epidemiology, pathophysiology, clinical evaluation, differential diagnosis, prognosis, and management by correlating the modern biomedical concepts with Ayurvedic principles of Manyagata Vata. A comprehensive literature search was conducted using electronic databases, including PubMed, Scopus, Google Scholar, and the AYUSH Research Portal, to identify relevant clinical studies. Relevant publications from standard peer-reviewed journals were critically reviewed. Classical Ayurvedic texts, including the Charaka Samhita, Sushruta Samhita, and Ashtanga Hridaya, were referred to establish the evidence-based integrative narrative and Ayurvedic concepts.

Etiology

Cervical spondylosis is a multifactorial degenerative condition that involves progressive degeneration of the intervertebral discs, facet joints, uncovertebral joints, vertebral end plates, and ligamentous structures. With advancing age, the intervertebral discs undergo dehydration due to loss of proteoglycans and water content, resulting in reduced elasticity and diminished shock-absorbing capacity. Subsequent alterations in cervical biomechanics promote osteophyte formation, facet arthropathy, ligamentous hypertrophy, and progressive narrowing of the spinal canal and neural foramina.⁹

In addition to age-related degeneration, several occupational and lifestyle factors accelerate disease progression. Prolonged use of computers and smartphones, sustained neck flexion, poor ergonomic posture, repetitive cervical movements, driving, heavy manual labour, smoking, obesity, physical inactivity, and previous

cervical trauma contribute to increased mechanical stress on the cervical spine. Metabolic disorders such as diabetes mellitus and osteoporosis may further impair tissue repair and accelerate degenerative changes.^{10, 11}

From an Ayurvedic perspective, cervical spondylosis closely resembles Manyagata Vata, a subtype of Vata-vyadhi (Vata Disorders), primarily resulting from Vata Prakopa (Vata Vitiating) and Asthi-Majja Dhatu Kshaya (Bone Degeneration). Classical etiological factors include Ativyayama (excessive physical exertion), Vishamacheta (prolonged maintenance of improper postures), Abhighata (trauma), Vegadharana (suppression of natural urges), Vishamashana (irregular dietary habits), Apatarpan (inadequate nourishment), Ratrijagarana (night awakening), Manodvega (psychological stress), and Jara (ageing). These factors aggravate Vata Dosha, diminish tissue nourishment, and promote degeneration of the musculoskeletal system, ultimately manifesting as pain, stiffness, and restricted cervical movements.¹²

The remarkable overlap between contemporary risk factors and classical Ayurvedic Nidanas (Etiological Factors) highlights the relevance of an integrative understanding of cervical spondylosis. Table 1 presents the probable etiological factor, pathological effect, and correlation between cervical spondylosis and Manyagata Vata. While modern medicine explains the disease through biomechanical and degenerative mechanisms, Ayurveda attributes disease progression to functional imbalance of Vata associated with gradual depletion of structural tissues. Together, these concepts provide a comprehensive framework for understanding disease initiation and progression.

Table 1: Etiological Factors, pathological effect and correlation between cervical spondylosis and Manyagata Vata¹³

Modern etiological factor	Pathological effect	Ayurvedic correlation
Aging	Disc degeneration	Jara, Asthi Dhatu Kshaya
Poor posture	Mechanical stress	Vishamacheta
Repetitive neck movements	Cervical strain	Ativyayama
Trauma	Structural injury	Abhighata
Sedentary lifestyle	Muscular weakness	Avyayama
Sleep deprivation	Impaired tissue repair	Ratrijagarana
Inadequate nutrition	Tissue degeneration	Apatarpana, Dhatu Kshaya
Psychological stress	Muscle tension and pain amplification	Chinta, Manodvega

Epidemiology

Cervical spondylosis is one of the most prevalent degenerative disorders of the spine and a leading cause of chronic neck pain worldwide. The global burden of cervical spondylosis has increased substantially over recent decades due to population aging, urbanization, sedentary lifestyles, and occupational changes. Prolonged computer use, excessive smartphone use, poor workplace ergonomics, and reduced physical activity have contributed to a rising incidence among younger adults, particularly those engaged in desk-based occupations. Healthcare professionals, drivers, dentists, teachers, information technology professionals, and individuals performing repetitive cervical movements are considered at increased occupational risk.¹⁴

The prevalence of radiographic cervical degeneration increases progressively with age, affecting approximately half of individuals over 40 years of age and the majority of adults beyond 60 years.¹⁵

From an Ayurvedic perspective, these changing epidemiological trends parallel the increasing prevalence of Vata-provoking Ahara (Diet) and Vihara (Lifestyle), characterized by irregular dietary habits, prolonged sitting, mental stress, inadequate sleep, and reduced physical activity. Such lifestyle modifications contribute

to Vata Prakopa (Vata Vitiating) and progressive Asthi-Majja Dhatu Kshaya (Bone Degeneration), predisposing susceptible individuals to Manyagata Vata.

Pathophysiology

Cervical spondylosis is characterized by progressive degeneration of the functional spinal unit, involving the intervertebral disc, vertebral bodies, facet joints, uncovertebral joints, ligaments, and surrounding musculature. The pathological process generally begins with age-related degeneration of the intervertebral disc. Progressive loss of proteoglycans and water content leads to disc dehydration, decreased elasticity, and reduction in disc height. These alterations impair the normal load-distributing function of the disc and increase mechanical stress across adjacent vertebral structures.¹⁶

As degeneration progresses, compensatory osteophyte formation, facet joint arthropathy, ligamentum flavum hypertrophy, and posterior longitudinal ligament thickening occur. These structural changes may narrow the spinal canal and intervertebral foramina, compressing cervical nerve roots or the spinal cord. Concurrently, inflammatory mediators, including cytokines and matrix metalloproteinases, contribute to extracellular matrix degradation, pain sensitization, and progressive tissue

degeneration. Depending on the extent of neural involvement, patients may develop axial neck pain, cervical radiculopathy, cervical myelopathy, or mixed clinical presentations.¹⁷

In Ayurveda, these pathological events are interpreted through the concept of Manyagata Vata, wherein persistent Vata Prakopa (Vata Vitiating) associated with Asthi-Majja Dhatu Kshaya (Bone Degeneration) and Srotodushti (Obstruction of channels) results in degeneration and dysfunction of the cervical region. Repeated exposure to Vata-provoking Nidanas (Etiological Factors), coupled with the physiological process of Jara (Ageing), leads to depletion of structural tissues and impaired nourishment of the cervical spine. Aggravated Vata localizes in the Manya Pradesh (Neck Region), producing characteristic manifestations such as Manya Shoola (Cervical Pain), Stambha (Stiffness), Graha (Restricted movements), Toda (Pricking Pain), Supti (Numbness), and radiating pain involving the upper extremities.^{18, 19}

Modern medicine attributes cervical spondylosis primarily to biomechanical degeneration and neuroinflammatory mechanisms; however, Ayurveda emphasises functional imbalance of Vata Dosha and progressive tissue depletion. These perspectives are complementary rather than contradictory, together providing a broader understanding of disease progression and a rationale for integrative management strategies aimed at both structural preservation and functional restoration.

Physical Evaluation

The diagnosis should be based on a comprehensive assessment incorporating patient history, physical examination, neurological evaluation, and appropriate imaging studies.

Clinical History²⁰

A detailed history should include the onset, duration, progression, and characteristics of neck pain; associated stiffness; radiation of pain to the upper extremities; paraesthesia; numbness; weakness; gait disturbances; and bladder or bowel dysfunction. Aggravating factors such as prolonged computer use, sustained neck flexion, repetitive occupational activities, and previous cervical trauma should be documented.

From an Ayurvedic perspective, history taking should additionally evaluate Nidana Sevana (Exposure to Etiological factors), dietary habits, occupational practices, sleep pattern, bowel habits, psychological stress, and Prakriti (Genomic Variations).

Physical Examination²¹

General physical examination is followed by a focused assessment of the cervical spine. Inspection should evaluate cervical alignment, postural abnormalities, muscle asymmetry, deformity, and range of movement. Palpation may reveal tenderness over the cervical vertebrae, paraspinal muscle spasm, trigger points, or localized warmth in inflammatory conditions.

Active and passive cervical movements, including flexion, extension, lateral flexion, and rotation, should be assessed and compared bilaterally. Restriction of cervical mobility associated with pain and muscle spasm is a common clinical finding.

Neurological examination should include assessment of muscle strength, sensory deficits, deep tendon reflexes, coordination, and upper motor neuron signs. Pay special attention to features suggestive of cervical radiculopathy or cervical myelopathy.

Special Clinical Tests

Several provocative tests help confirm the diagnosis and identify neural involvement.

Spurling's Test: Reproduction of radicular pain following cervical extension, lateral flexion, and axial compression suggests nerve root irritation.²²

Shoulder Abduction Relief Test: Improvement of symptoms after placing the hand over the head supports cervical radiculopathy.^{23,24}

Neck Distraction Test: Relief of symptoms during gentle cervical traction indicates foraminal compression.^{25,26}

Lhermitte's Sign: An electric shock-like sensation radiating down the spine during neck flexion may indicate cervical cord involvement.

Upper Limb Tension Test: Useful for assessing neural tissue that is mechanosensitive.

Radiological Evaluation

Plain radiographs may demonstrate reduced intervertebral disc space, osteophyte formation, altered cervical curvature, and facet joint degeneration. Magnetic resonance imaging (MRI) remains the investigation of choice for evaluating intervertebral disc pathology, spinal canal stenosis, nerve root compression, ligamentous changes, and cervical myelopathy.^{27,28}

Rugna Pariksha (Ayurvedic Clinical Evaluation)

Ayurvedic diagnosis is based on the principles of Trividha, Ashtavidha, and Dashavidha Pariksha together with assessment of Dosha, Dushya, Srotas, Agni, Bala, and Prakriti. Clinical features such as Manya Shoola (neck pain), Manya Stambha (stiffness), Graha (restricted movements), Toda (pricking pain), Supti (numbness), and radiating pain indicate the predominance of aggravated Vata Dosha involving the cervical region.²⁹

Assessment of disease chronicity, Dhatu Kshaya (tissue depletion), and overall patient strength assists in planning individualized treatment strategies according to Ayurvedic principles.

Differential Diagnosis

Neck pain is a common clinical symptom with numerous musculoskeletal, neurological, inflammatory, infectious, and neoplastic causes. Since radiographic cervical degeneration may coexist with unrelated disorders, careful differentiation is essential before initiating treatment. Table 2 lists the common differential diagnoses, cardinal features, and Specific Investigations for cervical spondylosis.

Table 2: Differential Diagnosis of Cervical Spondylosis^{30,31}

Disease	Cardinal Features	Specific Investigation
Cervical disc prolapse	Acute radicular pain	MRI
Cervical myelopathy	Hyperreflexia, gait disturbance, bladder involvement	MRI
Rotator cuff disease	Shoulder tenderness, painful shoulder movements	Ultrasound/MRI shoulder
Adhesive capsulitis	Global restriction of shoulder motion	Clinical examination
Thoracic outlet syndrome	Vascular symptoms, positive Adson's test	Doppler, nerve conduction studies
Rheumatoid arthritis	Multiple joint involvement, prolonged morning stiffness	Rheumatoid factor, Anti-CCP
Polymyalgia rheumatica	Bilateral shoulder pain with elevated ESR	ESR, CRP

Management of Cervical Spondylosis

The management of cervical spondylosis aims to alleviate pain, improve cervical mobility, restore neurological function, prevent disease progression, and enhance the patient's quality of life. While conventional medicine primarily focuses on symptomatic relief and correction of structural abnormalities, Ayurveda emphasizes correction of the underlying Vata imbalance, tissue nourishment, and restoration of normal musculoskeletal function. Integrating these approaches offers a rational strategy for long-term management.

Treatment Objective

The primary objectives in managing cervical spondylosis are to relieve neck pain and associated muscle spasm, improve cervical range of motion and functional ability, prevent neurological deficits and disease progression, and correct biomechanical and ergonomic risk factors.³² Additionally, treatment aims to enhance activities of daily living and overall quality of life while restoring tissue strength and functional balance through individualized Ayurvedic therapeutic interventions.

Lifestyle Modification and Ergonomic Measures

Patient education is fundamental in preventing disease progression. Maintaining proper posture during occupational activities, ergonomic workstation design, regular stretching exercises, avoiding prolonged neck flexion, taking periodic breaks during computer use, and maintaining optimal body weight reduce repetitive mechanical stress on the cervical spine. Smoking cessation and regular physical activity further help preserve cervical disc health.³³

Internal medicine (Pharmacotherapy)

Pharmacological treatment primarily provides symptomatic relief. Non-steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen, diclofenac, acetylsalicylic acid, naproxen, indomethacin, meloxicam, and piroxicam remain the most commonly prescribed medications for pain reduction and inflammation control. Muscle relaxants such as Chlorzoxazone, tizanidine, and methocarbamol may benefit patients with significant cervical muscle spasm, whereas neuropathic pain agents such as pregabalin or gabapentin may be indicated when radicular symptoms predominate. Short-term oral corticosteroids such as prednisone, prednisolone, methylprednisolone, and dexamethasone may be considered in selected patients with acute radiculopathy. Furthermore, Calcium and Vitamin D3 supplements are prescribed as an add-on therapy to correct the underlying nutritional deficiency contributing to osteoporosis. However, prolonged pharmacotherapy is often limited by adverse effects and does not alter the underlying degenerative process.³⁴

Physiotherapy and Rehabilitation

Structured physiotherapy plays a central role in conservative management. Therapeutic exercises focusing on cervical stabilization, strengthening of deep cervical flexor muscles, postural correction, stretching, and proprioceptive training improve functional outcomes and reduce recurrence. Manual therapy, supervised rehabilitation programs, and cervical traction may provide additional symptomatic relief in carefully selected patients. For routine use, cervical collar support and long-term adherence to rehabilitation programs remain essential for sustained improvement.³⁵

Interventional Procedures and Surgical Management

Patients with persistent radicular pain refractory to conservative management may benefit from selective nerve root blocks or epidural steroid injections. Surgical intervention is reserved for individuals with progressive neurological deficits, cervical myelopathy, severe spinal canal stenosis, or persistent disabling

pain despite adequate conservative treatment. Common surgical procedures include anterior cervical discectomy and fusion (ACDF), cervical disc replacement, posterior decompression, and laminoplasty, depending upon the level and extent of pathology.^{36,37}

Ayurvedic Management

Ayurveda considers cervical spondylosis analogous to Manyagata Vata, wherein aggravated Vata Dosha, associated with Asthi-Majja Dhatu Kshaya (Bone Degeneration), produces pain, stiffness, and restricted cervical movement. Accordingly, treatment aims to pacify aggravated Vata, nourish depleted tissues, improve circulation, and restore normal function through a combination of Nidana Parivarjana (Avoidance of Etiological Factors), Shamana Chikitsa (Palliative treatment), Panchakarma (Purification Therapy), Agnikarma (Heat Burn Therapy), Jalukavacharan (Leech Therapy), Lepa Chikitsa (Medicated Herbal Paste) and Rasayana (Rejuvenation) therapies.

Nidana Parivarjana (Avoidance of Etiological Factors)

The first principle of management involves avoidance of factors responsible for Vata aggravation. Patients should be advised to maintain proper posture, avoid prolonged sitting, excessive travel, repeated cervical strain, exposure to cold environments, irregular dietary habits, fasting, sleep deprivation, and psychological stress. A balanced lifestyle with appropriate nutrition and regular physical activity forms the foundation of long-term disease management.

Shamana Chikitsa (Palliative treatment)

Various Ayurvedic formulations with Vatahara, Balya, Brimhana, and Rasayana properties are prescribed according to the individual patient's constitution and disease severity. These herbal formulations, such as Panchatikta Ghrita Guggulu, Trayodashang Guggulu, Ashwagandha Vati/Churna, Punarnava Guggulu, Dashmool Kwath, Rasnadi Kwath, etc aim to reduce pain, improve tissue nourishment, and promote musculoskeletal strength. Various Rasakalpa (Herbo-mineral formulations), such as Vatavidhwansa Rasa, Mahayograj Guggulu, and Brihatvatachintamani Rasa, also help pacify vitiated Vata Dosha and have been found helpful in tissue regeneration. Selection of medications should be individualized based on Dosha predominance, Dhatu involvement, and associated systemic conditions.³⁸

Snehana (Oleation) and Swedana (Fomentation)

External oleation (Abhyanga) with medicated oils such as Mahanarayan oil, Vishagarbha Oil, Nirgundi Oil and Sahachar Oil etc followed by Swedana (Fomentation) with Dashmoola, Erand Patra, Nirgundi Patra Pinda Sweda (Leaf Bolus Fomentation) and Shashti Shali Pinda Sweda (Rice Bolus fomentation) etc remains an integral component of treatment. Oleation reduces dryness, alleviates muscle spasm, improves local circulation, and enhances flexibility, while fomentation relieves stiffness and facilitates improved cervical mobility. These therapies are particularly useful in patients presenting with prominent Stambha and muscular tightness.³⁹

Nasya Karma (Trans-nasal Drug Instillation)

Nasya is regarded as one of the principal therapeutic procedures for Urdhvajatrugata Vikara (disorders affecting the region above the clavicle). Administration of medicated oils such as Anutaila and Pachhindriya Vardhan Taila, etc through the nasal route facilitates pacification of aggravated Vata in the cervical region, reduces pain and stiffness, improves cervical mobility, and enhances neuromuscular function. Several clinical studies have reported favourable outcomes following Nasya in patients with Manyagata Vata.⁴⁰

Lepa Chikitsa (Medicated Herbal Paste)

Lepa Chikitsa involves applying warm, herbal pastes directly to the affected joint. It helps reduce localised pain, swelling, and stiffness by pacifying aggravated Vata and reducing local inflammation. Various herbal lepas, such as Dashang Lepa, Raktachandan Lepa, Rasnadi Churna Lepa, and Daruharidra Churna Lepa, have been found effective in managing symptoms of Manyagat Vata.

Jalaukaavcharan (Leech Therapy)

Jalaukaavcharan (Leech Therapy) is one of the therapeutic procedures of Raktamokshan (Bloodletting). This therapy of pain relief involves application of Nirvish Jalauka (Nonpoisonous Leeches – *Hirudo medicinalis*) for removal of vitiated blood at the site of pain. The use of Jalukavacharan has been documented in various case studies for managing bone- and joint-related disorders, including Manyagata Vata.⁴¹

Manya Basti/Greeva Basti (Local Oleation)

Greeva Basti involves retention of warm medicated oils such as Mahanarayan Oil, Ashwagandha Oil, Vishagarbha Oil, etc over the cervical region for a specified duration. The combined effect of local oleation and gentle heat improves tissue nutrition, relieves muscle spasm, enhances local circulation, and reduces pain and stiffness. This therapy is widely practised in Ayurvedic management of cervical spondylosis owing to its simplicity and patient acceptability.⁴²

Basti Karma (Medicated Enema)

Basti is considered the Ardh Chikitsa (Prime treatment) for Vatavyadhi (Vata Disorders) because of its systemic action on aggravated Vata Dosha. Administration of Anuvāsana Basti (Oil Enema) with oil such as Sahachar Oil, Ashwagandha Oil, Nirgundi Oil etc and Niruha Basti (Medicated Decoction Enema) with panchatikita ghrita Ksheera Basti and Dashmool Siddha Basti, Vajigandhadi Basti depending on the clinical condition, promotes systemic Vata pacification, improves nourishment of deeper tissues, and supports long-term functional recovery. Basti is particularly beneficial in chronic degenerative disorders associated with generalized Vata predominance.⁴³

Agnikarma (Heat Burn Therapy)

Agnikarma (Heat Burn Therapy) is indicated in selected patients with chronic localized pain unresponsive to conservative measures.⁴⁴ Controlled therapeutic heat provides immediate analgesia, relieves muscle spasm, improves local circulation, and facilitates restoration of cervical function.⁴⁵ Appropriate patient selection and meticulous procedural technique are essential to achieve optimal outcomes. The procedure can be done as per the patient's compliance, either by Samyak Dagdha Agnikarma (Direct Heat burn therapy) method or by Dagdha Vrana Rahit Agnikarma (Indirect Heat Burn therapy) with pancha-dhatu/copper/silver/gold Shalaka (metal probes).⁴⁶

Yogic Exercise

Yoga practices, including gentle cervical stretching exercises, Bhujangasana, Makarasana, Marjariasana, Tadasana, and breathing exercises, may improve flexibility, posture, muscular endurance, and psychological well-being when practised under appropriate supervision.⁴⁷

Integrative Perspective in the Management

Current evidence suggests that neither conventional medicine nor Ayurveda alone completely addresses the multifactorial nature of cervical spondylosis. Contemporary medicine provides rapid symptomatic relief and effective management of neurological

complications, whereas Ayurveda emphasizes restoration of physiological balance, correction of lifestyle factors, tissue nourishment, and long-term functional rehabilitation.

An evidence-based integrative approach may therefore provide superior patient-centred care. During the acute painful phase, pharmacological therapy, physiotherapy, and ergonomic modification may be combined with Ayurvedic external therapies such as Abhyanga (Oleation), Swedana (Sudation), Manya Basti (Local oleation), Agnikarma (Heat Burn Therapy), Jalukavacharan (Leech Therapy), Lepa Chikitsa (Medicated Herbal Paste) to achieve early pain relief and restoration of mobility. Once acute symptoms subside, Nasya (Trans-nasal Drug Instillation), Basti (Medicated Enema), individualized internal medications, and supervised Yoga may facilitate long-term maintenance, reduce recurrence, and improve quality of life.⁴⁸ Surgical intervention remains indispensable in patients presenting with cervical myelopathy, progressive neurological deficits, or severe structural compression and should not be delayed when indicated.

DISCUSSION

The clinical manifestations of cervical spondylosis closely resemble the Ayurvedic description of Manyagata Vata, wherein aggravated Vata Dosha, associated with Asthi-Majja Dhatu Kshaya (Bone Degeneration), produces pain, stiffness, restricted cervical movements, and neurological manifestations. The remarkable conceptual similarity between contemporary biomedical understanding and classical Ayurvedic principles provides a scientific basis for adopting an integrative approach to disease management.

The prognosis of cervical spondylosis largely depends upon the severity of degenerative changes, duration of symptoms, neurological involvement, patient compliance with treatment, and correction of modifiable risk factors. Most patients with uncomplicated cervical spondylosis respond favourably to conservative management, including lifestyle modification, structured rehabilitation, and appropriate pharmacological or Ayurvedic interventions. Early diagnosis and timely treatment are associated with significant improvement in pain, cervical mobility, functional capacity, and overall quality of life.⁴⁹

From the Ayurvedic perspective, persistent Vata Prakopa (Vata Vitiātion), continued exposure to Nidana, and progressive Asthi-Majja Dhatu Kshaya (Bone Degeneration) may lead to chronicity of Manyagata Vata with increasing restriction of cervical movements, muscular weakness, and functional disability. Failure to eliminate causative factors often results in repeated exacerbations despite symptomatic treatment. Therefore, Nidana Parivarjana (Avoidance of etiological factors), regular Panchakarma (Purification Procedures), where indicated, appropriate Rasayana (Rejuvenation) therapy, and adherence to healthy lifestyle practices are considered essential for preventing recurrence and maintaining long-term musculoskeletal health.⁵⁰

However, progressive degenerative changes may result in chronic pain, recurrent episodes of neck stiffness, persistent radiculopathy, or cervical myelopathy if left untreated. Chronic pain often contributes to sleep disturbances, psychological stress, anxiety, reduced work productivity, and impaired activities of daily living. Advanced disease with spinal cord compression may produce gait instability, fine motor dysfunction of the hands, hyperreflexia, sphincter disturbances, and irreversible neurological deficits requiring surgical intervention.⁵¹

CONCLUSION

Cervical spondylosis is a multifactorial degenerative disorder that continues to pose a significant clinical and socioeconomic burden owing to its high prevalence, chronicity, and impact on functional independence. Although age-related degeneration remains the principal etiological factor, occupational stress, poor ergonomics, sedentary lifestyle, and altered biomechanics substantially contribute to disease onset and progression.

Current evidence indicates that conservative management remains the cornerstone of treatment for most patients, while Ayurvedic interventions including Nidan Parivarjana (Avoidance of etiological factors), Shamana Chikitsa (Palliative Treatment), Nasya (Trans-nasal drug instillation), Manya Basti (Local Oleation), Basti (Medicated Enema), Agnikarma (Heat Burn Therapy), Jalukavacharan (Leech Therapy), Lepa Chikitsa (Medicated Herbal Paste) and Rasayana (Rejuvenation) therapies may serve as valuable adjuncts in improving pain, cervical mobility, functional recovery, and overall quality of life. However, the available evidence largely comes from studies with modest sample sizes, heterogeneous treatment protocols, and limited long-term follow-up.

In conclusion, an evidence-based integrative approach combining rational contemporary management with individualized Ayurvedic interventions appears to offer a comprehensive strategy for the prevention, treatment, and long-term rehabilitation of patients with cervical spondylosis. Continued interdisciplinary research will further strengthen the scientific foundation of integrative care and contribute to improved patient outcomes.

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