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Case Study

AN AYURVEDIC APPROACH TO EXTRA-DURAL EXTRA-MEDULLARY COMPRESSIVE MYELOPATHY

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ABSTRACT

Compressive myelopathy is a progressive neurological disorder caused by mechanical compression of the spinal cord, most commonly due to degenerative cervical spine changes. It leads to motor, sensory, and autonomic deficits with significant functional impairment. This report presents the Ayurvedic management of a patient with degenerative extra-dural, extra-medullary cervical compressive myelopathy. A 62-year-old male with a history of cervical trauma and multilevel cervical spondylosis presented with quadriparesis, spastic gait, hand clumsiness, paraesthesia, and neck pain. Magnetic resonance imaging demonstrated multilevel disc-osteophyte complexes, ligamentum flavum hypertrophy, severe canal stenosis, ventral cord compression, and intramedullary edema. Based on Ayurvedic evaluation, the condition was diagnosed as *Sarvangavata* with *Vata* predominant *Tridosha* vitiation involving *Asthi* and *Majja dhatus*. Ayurvedic treatment protocol comprising internal medications, external therapies, *Shodhana* procedures, *Nasya*, *Shirodhara*, *Matravasti*, along with dietary and lifestyle modifications was administered. Clinical outcomes were assessed using neurological examination, pain scores, Nurick grading, and the modified Japanese Orthopaedic Association (mJOA) scale. Following treatment, the patient showed marked reduction in neck pain and paraesthesia, improvement in hand grip strength, muscle power, gait stability, and functional activities. The mJOA score improved from moderate to mild disability, indicating significant neurological recovery. This case suggests that individualized Ayurvedic management may serve as a complementary therapeutic option in Extra dural Extra medullary Compressive Myelopathy.

INTRODUCTION

Compressive myelopathy represents a critical neurological syndrome resulting from mechanical compression on the spinal cord, leading to a spectrum of motor, sensory, and autonomic deficits. It is a major cause of spinal cord dysfunction in adults, with etiologies ranging from degenerative changes and trauma to neoplastic and infectious processes. The clinical impact of compressive myelopathy is profound, often resulting in significant disability, impaired quality of life, and, if untreated, irreversible neurological damage.

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Clinical Overview

Compressive myelopathy is spinal cord dysfunction from external compression, most often in the cervical region, Causes include degenerative changes due to spondylosis and disc herniation, trauma, tumours, infections notably tuberculosis, and congenital causes. Symptoms vary based on compression level, duration, and severity. [1]

Degenerative cervical myelopathy (DCM) is the most common adult form, resulting from age-related cervical spine degeneration such as disc changes, osteophyte growth, ligament hypertrophy, and ossification of posterior longitudinal ligament (OPLL).[2,3]

The disease course ranges from slow, stepwise decline to rapid progression, especially after trauma or infection. Early detection and treatment are vital, as some cases are reversible.

Epidemiology and Risk Factors

Radiographic cervical compressive changes had a mean treated prevalence of 0.19%, peaking at 0.42% in the 50–54 age group and declining thereafter, [4] the prevalence of Spinal cord compression in persons aged 60 and older was 35%. Results showed a predominance in men across every age band, escalating to almost double the incidence rate in men aged 70 years or older, compared with women. [5]

Pathophysiology and Mechanisms of Spinal Cord Compression

The pathophysiology of compressive myelopathy involves both static and dynamic factors:

Static Compression: Chronic narrowing of the spinal canal due to spondylosis, disc herniation, OPLL, ligamentum flavum hypertrophy, tumours, or abscesses leads to direct mechanical pressure on the spinal cord, Dynamic Factors: Repetitive neck movements, instability, or trauma exacerbate cord compression, especially in segments with pre-existing stenosis.

Clinical Presentation

The clinical features are typically categorized as motor, sensory, and autonomic. Motor-weakness (upper, lower limbs), gait disturbance, hand clumsiness, spasticity, frequent falls, Sensory-Numbness, paraesthesia, proprioceptive deficits, sensory level, Lhermitte's sign Autonomic - Bladder and bowel dysfunction, sexual dysfunction, orthostatic hypotension, Neck or back pain are also common clinical features.

The Nurick grading system and mJOA score are the most widely used grading system for DCM. [6], Surgical intervention remains the cornerstone of treatment for DCM, for patients with mild DCM (mJOA 15–17), management may begin with a supervised trial of structured rehabilitation, including immobilization like cervical orthosis, physical therapy focused on cervical stabilization and strengthening, and nonsteroidal anti-inflammatory medications. [7]

Based on the clinical findings compressive cervical spondylitic myelopathy can be corelated to *Sarvangavata*, one among *Vata nanatmajavikaras*, *Vata* vitiates due to *Dhatukshaya* or *Margaavrodha*. When *Vata* vitiates all over the body it can have multisystemic effects resulting in wide range of symptoms including motor impairment, speech disturbances and neuropathic pain when motor function is compromised due to affliction of *Siras* and *Snayus* in all the four limbs it is called *Sarvanga vata.* [8]

In this particular case age, *Ayasa, Sirasa Bharaharanam, Ucha upadhanam*, multiple Falls led to the *Khavaigunya* at the *Griva pradesha* resulting in disc degenerative changes, *Siroabhighata* contributed to acute cord compression hence the symptoms of *Sarvangavata* manifested. Treatment principles of *Samanya Vataja Upakrama, Kshatajasopha chikitsa, Brmhana chikitsa* was adopted in this case.

Clinical History

A 62-year-old male self-employed with a K/H/O Type 2 Diabetes Mellitus and dyslipidemia, apparently in normal state of health, had a fall on 15/06/2025 at 3 AM, during which he struck his right forehead against a wall. He sustained a head injury with loss of consciousness for approximately 1 hour. On recovery, he noted weakness of both upper and lower limbs, sharp shooting pain on touch, and paraesthesia in both hands and feet.

Over the next 15 days, he noticed gradual improvement in weakness of the left lower limb, and reduction in sharp shooting pain, followed by gradual motor recovery of right lower limb and left upper limb weakness over the next month. He was eventually able to walk with support, though he reported slipping of footwear and he was aware of that. Subsequently, right upper limb weakness also improved within 2 months, and he was able to feed himself with difficulty.

However, he continued to have difficulty in fine motor activities involving hand. After one month he was able to walk without support, but had difficulty in turning while walking, rising from squatting position, climbing stairs.

Paresthesia in bilateral hands and feet persisted without improvement, which mainly aggravated during cold climate

One month prior to admission, he developed neck pain of moderate intensity, intermittent in nature, posture-related, two weeks later, he experienced right upper limb radicular pain, followed by similar symptoms on the left side. Despite partial recovery, he continued to have difficulty in walking, fine motor tasks, and persistent paraesthesia, prompting admission for further evaluation and management

Past Medical Illness

T2DM, dyslipidemia since 3 years, occasional BPPV for 4 years, no relevant family history.

Education & Psychosocial History: Completed SSLC.Patient lives with his wife and 2 sons, he is concerned about his health issues, The patient worked as a fabrication worker Gujarat, for 8 years, He subsequently spent 23 years in Saudi Arabia, he reported multiple workplace falls with head injury during this period. In 2012, he returned to Kerala and since been engaged in farming and real estate.

Personal History: Bowels are regular well-formed satisfactory evacuation, appetite is adequate, micturition is normal, sleep is sound, day sleep is present, allergy addictions: nil, exercise is moderate

Dietary History: Mixed diet preferred spicy and sour food, irregular food intake timings.

General examination

Patient is alert, conscious and oriented to time, place and person. built & nourishment moderate, posture erect, mood euthymic, no pallor/ icterus/ cyanosis/ clubbing/ lymphadenopathy/edema, spastic gait, pulse rate 68 bpm, right radial, rhythmic, good volume, heart rate 70 bpm, S1 S2 heard, no murmurs heard, blood pressure 130/80 mm hg, left arm, sitting position, respiratory rate 18/min, abdomino – thoracic, temperature afebrile, BMI 25.7 kg/m^2 (over weight), wasting present in first dorsal interosseous of right hand, healed scar mark present on right elbow joint and left wrist joint.

Physical Examination: Head- normocephalic, eyes-PEARL, nose - middle turbinate hypertrophy.

System Review

Nervous system examination: HMF and cranial nerves-intact, muscle tone - hypertonic all limbs, muscle bulk - normal, muscle power - shoulder- 4+/5 right, 5/5 left, elbow-4+/5 right, 5/5- left, wrist-4-/5 bilaterally, dorsiflexion 4+ bilaterally, hand grip weak bilaterally.

Hip- 4/5 bilaterally, knee flexion 4/5 bilaterally, extension- 4+/5 bilaterally, plantar flexion- 4+ bilaterally, dorsiflexion- 4$^-$/5 bilaterally, big toe and other toes-4/5.

Deep tendon reflex's - Knee jerk and ankle jerk 3+ bilaterally, supinator jerk 2+ bilaterally, triceps jerk 2+ bilaterally, biceps jerk- 1+(right), 2+(left). Superficial reflexes are present, plantar reflex- right extensor, left mute.

Sensory System: Spinothalamic sensation reduced over left lower limb, posterior column sensation- deep pain diminished over left lower limb, vibration diminished over left lower limb, cortical sensation intact, coordination- intact, Romberg's positive, tandem walking possible. cerebellar and meningeal irritation signs are absent, Hoffmans sign Positive (right), finger escape sign -positive (right), inverted supinator sign-positive (right), grip release test-clumsiness present (bilaterally).

Cervical Spine- Lateral flexion and rotation restricted due to stiffness, shoulder joint restricted on the right.

Diagnostic evaluation

Multilevel cervical spondylitic disease with disc osteophyte complexes and marked ligamentum flavum hypertrophy producing severe canal stenosis at C4- C5, C5- C6, C6- C7. Ventral cord compression more on Rt side from C3-C4 to C6-C7 with associated intramedullary cord edema, severe neural foraminal narrowing from C3-C4, C4-C5, C5-C6, C6-C7 compressing the corresponding roots on right side. No acute fracture, facet dislocation, ligamentous rupture, epidural collection C2-C3 – 9mm, C3-C4 -8mm C4- C5 – 4.6mm C5- C6 – 4.3mm C6- C7 -5.8mm, C7-D1- 9.2mm, Biochemistry- FBS-98mg/dl,PPBS 242mg/dl, HbA1C-6.63, T.Cholestol- 167mg%, Triglycerides 162 mg%, ASO-333.8 IU/ml on admission.

Ayurveda Clinical assessment

Dosha: Vata pitha pradhana tridosha dushti, Dhathu- Rasa, Raktha, Mamsa, Medas, Asthi, Majja, Upadhathu- Sira, snayu, Agni- Madhyama, Srothodushti- Sangam, Rogamargam -Madhyamam, Udbhavasthana - Greeva, Vyakthasthanam -Sarva Deham, Bhoomi desham – Sadharana, Deha desham –Sarva deham, Roga balam - Pravaram, Rogi balam – Madhyamam, Kshanadi – Sisiram, Vyadhi Avastha – Navam, Prakruthi- Vatapittam, Satwam Madhyamam, Satmayam- katuamla rasa pradhaan satmayam, Ahaara and Vyayama shakthi – Madhyamam.

Treatment intervention

	Internal medications	External Treatments	Outcome
Stage 1	*Kaidaryadi kashayam 90 ml HS B/F* *Vaiswanara churnam 1 tsp bd B/F* *Nishakathakadi ks panam* *Rasna Saptaka ks- 90ml* morning B/F	Lepanam with *Nagaradi lepa churnam* and *Dhanyamla* over neck region *Udwartanam* with *Kolakulathadi choornam* – 7 days	Neck pain reduced paraesthesia, weakness persists
Stage 2	*Rasna Erandadi ks 90ml* bd b/f *Dhanwantharam Mezhukupakam*-5ml bd with ks	*Abhyangam ushmasweda* with *Nishosheeradi tailam*- 7 days	Paresthesia slightly reduced, pain over lateral part of bilateral elbow reduced
Stage 3	*Rasna Erandadi ks 90ml bd b/f* *Dhanwantharam Mezhukupakam*-5ml bd with ks	*Churna Pinda Sweda* with *Sahacharadi tailam+ Dhanwantharam tailam* *Talam- Karuthavattu+ Nimbamrtha erandam*	Parasthesia and weakness reduced
Stage 4		*Anulomana* with *Nimbamrtha Eranda taila* (30 ml) and hot water	No. of *Vegas* 6

		Peyadi-3 days	
Stage 5	*Dasamoola kashayam 90ml bd b/f* *T Hinguvachadi 1-0-1 b/f* *Vaiswanara churnam 1 tsp bd B/F*	*Nasya* with *Anutailam* for 3 days *Tailam- Ksheerabala plain* *Talam- Karuthavattu+ Nimbamrtha erandam* *Nasya* with *Ksheerabala 41 A* for 4 days	Weakness and paraesthesia over hands reduced. Hand grip improved
Stage 6	*Dasamoola kashayam 90ml bd b/f* *Sahacharadi 21 A 10 drops with Ks*	*Greeva pichu* with *Dhanwantharam taila* and *Sahacharadi taila* for 7 days	Paresthesia reduced.
Stage:7	*Dasamoola ksheera kashayam 90ml bd b/f* *Dhanwantharam Mezhukupakam- 5ml bd with ks*	*Sirodhara* with *Vatasini tailam* 7 days	Paresthesia reduced
Stage:8	*Dasamoola ksheera kashayam 90ml bd b/f*	*Matravasthi with pippalyadi anuvasana tailam* 90 ml- 5 days *Dhanwantharam Mezhukapakam- 2 days*	Paresthesia reduced

Advice and Condition on discharge

- *Shunthibala dwaya Kashayam*- 90 ml Bd B/F
- *Cap. Ksheerbala 101 Avarthy*- 2-0-2 after food
- *Nishakathakadi Kashyam- Panam*
- *Dhanwantharam tailam* external application

Condition at discharge

	Before treatment	**After Treatment**
Paraesthesia	Present	Reduced considerably
Muscle power hand grip	Weak	Strong
Wrist	4-	4
Hip	4	4+
Foot	4-	4
Neck pain	8/10	2/10
FBS	98	82
PPBS	242	185

Assessment Scales

	10/11/25	**14/1/26**
Nurick Clinical Scale	Grade 2 (Moderate)	Grade 2 (Moderate)
mJOA	13 (Moderate)	16- Mild

DISCUSSION

Based on *Nidana panchaka* the condition was diagnosed as *Sarvanagavatam. Nidanas* include *Aharaja- Akala bhojanam, Guru abhishyandi ahara, Vidahi annam*, *Viharaja-Ayasa, Sirasa bharaharanam, Uccha upadhanam, Urdwaveekshanam, Atapa seva.*

Samprapthy: Guru abhishyandi bhojanam causing *Kapha pitta dushty* resulting in *Agnimandyam* leading *to Prameha* and due to *Chirakari swabhava* causing *Medakshaya,* concurrently *Vata prakopa nidanas* contributed to *Asthimajjagata vatam Abhighata* in *Shiras,* in this context led to *Vata pradhana tridosha dushty* and subsequent development of *Khavaigunya* in *Greeva pradesha* causing *Sira vishoshana* manifesting as *Sarvangavatam.*

The goal of treatment was to improve *Dhatuposhanam*, quality of life, and to reduce the progression of the disease, The treatment principles were adopted from *Kshataja sopha chikitsa*, *Sarvanga vata chikitsa*, *Asthi kshaya chikitsa* and *Vata vyadhi.*

The treatment was started with *Deepana Pachana* with medicines *Kaidaryadi kashayam, Vaiswanara churnam, Nishakathakadi kashayam, Rasna Saptaka kashayam*, external treatments with *Nagaradi lepa choornam* followed by *Udwarthanam* was planned. In the second stage *Sneha* and *Swedam*

externally include *Abhyangam* with *Nishousheeradi Thailam* considering *Prameha* status, followed by *Churna pinda swedam* for 3 days with *Sahacharadi thailam* and *Dhanwantharam thailam*, *Rasna Erandadi kashayam* and *Dhanwantharam Mezhukapakam* were given internally as it is having properties of *Sarva vata vikarajith, Marmasthi kshatha ksheena*. Patient experienced mild improvement in paraesthesia.

Next stage of treatment procedure included *Mrdu Shodhanam* with *Nimbamrutha Eranda thailam* as it is having *Urdhwajatruvisheshatwam*, followed by *Peyadi karma* for 3 days. *Nasya karma* was administered for 7 days with *Anu thailam* for 3 days, followed by *Ksheerabala* 41 *Avarthy*. Following *Nasya karma* patient experienced improvement in weakness and hand grip. *Anu thailam* was selected for its *Srothoshodhanam* property and *Ksheerbala thailam* as *Brimhanam* and *Rasayanam.*

Local treatments in *Greeva pradesham* with *Dhanwantharam* and *Sahacharadi thailam*, internal mediations include *Dashamoolam kashyam* with *Sahacharadi 21 Avarthy* 10 drops with *kashayam*. *Dashamoolam* has the property of *Vata kapha shamanam* and strengthening *Dhatus*.

Shirodhara with *Vathashini thailam* was done for 7 days after the procedure patient experienced significant reduction in paresthesia.

In the end *Matravasthy* with *Dhanwantharam mezhukapakam* was administered as *Vata shamanam, Brmhanam* and *Anulomanam.*

The patient was given *Shunthibaladwya kwatham* for *Vathakapha shamanam, Ksheerbala kwatham* as *Brumhanam* and *Supthi haram.*

CONCLUSION

The case report demonstrates that Ayurvedic management can be effectively adopted in the management of Degenerative compressive myelopathy. Based on the clinical findings it was corelated to *Sarvangavatam*, further research and structured studies are warranted to validate these findings and integrate Ayurveda in treatment options for degenerative compressive myelopathy.

REFERENCES

1. Matsunaga S, Kukita M, Hayashi K, Shinkura R, Koriyama C, Sakou T, Komiya S. Pathogenesis of myelopathy in patients with ossification of the posterior longitudinal ligament. J Neurosurg. 2002 Mar; 96(2 Suppl): 168-72.
2. Sharrak S, Al Khalili Y. StatPearls [Internet. StatPearls Publishing; Treasure Island (FL): Aug 28, 2023. Cervical Disc Herniation.
3. Kuo DT, Tadi P. StatPearls [Internet. StatPearls Publishing; Treasure Island (FL): May 1, 2023. Cervical Spondylosis
4. Grodzinski B, Stubbs DJ, Davies BM. Most degenerative cervical myelopathy remains undiagnosed, particularly amongst the elderly: modelling the prevalence of degenerative cervical myelopathy in the United Kingdom. J Neurol. 2023 Jan; 270(1): 311-319.
5. Wu JC, Ko CC, Yen YS, Huang WC, Chen YC, Liu L, Tu TH, Lo SS, Cheng H. Epidemiology of cervical spondylotic myelopathy and its risk of causing spinal cord injury: a national cohort study. Neurosurg Focus. 2013 Jul; 35(1): E10.
6. Benzel EC, Lancon J, Kesterson L, Hadden T. Cervical laminectomy and dentate ligament section for cervical spondylotic myelopathy. J Spinal Disord. 1991 Sep; 4(3): 286-95.
7. Fehlings MG, Tetreault LA, Riew KD, Middleton JW, Aarabi B, Arnold PM, Brodke DS, Burns AS, Carette S, Chen R, Chiba K, Dettori JR, Furlan JC, Harrop JS, Holly LT, Kalsi-Ryan S, Kotter M, Kwon BK, Martin AR, Milligan J, Nakashima H, Nagoshi N, Rhee J, Singh A, Skelly AC, Sodhi S, Wilson JR, Yee A, Wang JC. A Clinical Practice Guideline for the Management of Patients With Degenerative Cervical Myelopathy: Recommendations for Patients With Mild, Moderate, and Severe Disease and Nonmyelopathic Patients With Evidence of Cord Compression. Global Spine J. 2017 Sep; 7(3 Suppl):70S-83S
8. Yadav Ji Trikamji, Charaka Samhita with Ayurveda Dipika Commentary by Chakrapanidatta, Chiktsa Sthana 28/20-24 Chaukhamba Publications, New Delhi 2016, pg.no-625

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