



## Case Report

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### DEGENERATIVE CERVICAL MYELOPATHY MANAGEMENT WITH PANCHAKARMA THERAPY: A CASE REPORT

Farheen A Doman<sup>1\*</sup> and Varsha Kulkarni<sup>2</sup>

<sup>1</sup> PG Scholar, Department of Panchakarma, Government Ayurveda Medical College and Hospital Mysuru, Karnataka, India

<sup>2</sup> Professor and HOD PG Department of Panchakarma, Government Ayurveda Medical College and Hospital Mysuru, Karnataka, India

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\*Corresponding author

E-mail: farheendomani@gmail.com

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#### ABSTRACT

**Introduction:** Degenerative cervical myelopathy (DCM) is a progressive spinal disease characterized by spinal cord dysfunction and severe neurological symptoms such as paraesthesia, abnormal gait, decreased hand dexterity, and quadriparesis. The condition can significantly reduce the quality of life for affected individuals and lead to a high risk of neurological deterioration and complete dependency. This condition can be correlated with Kapha Avruta Vyana Vata, exhibiting clinical features such as Supti (numbness), gouravata (heaviness in the body), Todayuktavedana (pricking type of pain), and Kriyahani (loss of strength). **Case History:** A 45-year-old male patient presented with reduced strength in both bilateral lower and upper limbs, cervical pain radiating to the bilateral upper limbs, and low backache radiating to the bilateral lower limbs. These symptoms significantly impacted the patient's ability to perform daily activities, ultimately leading to the loss of his job. **Results:** The treatment approach involved Avaranahara Chikitsa with Agnilepa, followed by a Vatahara line of treatment that included Greeva, Katipichu, Sarvanga Abhyanga, and Matra Basti. Following this Panchakarma therapy, the patient showed notable improvements in strength, mobility, and pain levels. The modified Japanese Orthopaedic Association (mJOA) score improved from 8, indicating severe disability, to 18, indicating significant recovery, demonstrating the positive impact of the treatment. **Conclusion:** This case report highlights the potential effectiveness of Panchakarma therapy in managing DCM. Currently, no established guidelines outline the best management practices for patients with DCM, emphasising the importance of exploring alternative treatment approaches for this debilitating condition.

**Keywords:** Degenerative cervical myelopathy, Kapha Avruta Vyana Vata, modified Japanese Orthopaedic Scale (mJOA) and Panchakarma

#### INTRODUCTION

Degenerative cervical myelopathy (DCM)<sup>1</sup> is a leading cause of spinal cord injury and a significant contributor to disability due to the narrowing of the spinal canal resulting from osteoarthritic changes. This narrowing leads to persistent spinal cord compression and neurological issues, manifesting as a range of symptoms from mild numbness in the upper extremities to quadriparesis and incontinence<sup>2</sup>. Osteoarthritic changes such as spondylosis, disc herniation, and facet arthropathy commonly underlie this condition. DCM is a primary cause of spinal cord injury, and without intervention, there is a high risk of neurological deterioration, underscoring the importance of effective management strategies.

In the context of Ayurveda, DCM can be correlated with Vata dosha prakopa, which is responsible for most musculoskeletal disorders. The causative factors responsible for Vata and Kapha vikruti include ruksha-shita ahara (dry and cold foods), alpa bhोजना (insufficient food intake), madatyaya (alcohol consumption), ati ratrijagarana (excessive nighttime awakeness), diwaspana (daytime sleeping), atichesta (excessive activity), krodha (anger), and vegadharana (suppression of natural urges). Here, Kapha dosha obstructs Vata, leading to Kapha-vruta Vyana

Vata<sup>3</sup>, producing symptoms such as gouravata (heaviness), supti (numbness), and shoola (pain). Avarana (obstruction) can cause further prakopa (aggravation) of Vyana Vata when vitiated, producing symptoms throughout the body<sup>4</sup>, as described by Acharya Sushruta. Clinical manifestations such as sthambha (stiffness), kriyahani (loss of strength), and todayukta vedana (pricking pain) resemble the clinical features of degenerative cervical myelopathy.

The uniqueness of the present case lies in the adoption of a comprehensive treatment approach. Panchakarma, a set of shodhana (purification) and shamana (palliative) chikitsa, plays a pivotal role in addressing the root cause of Vata dosha imbalance and alleviating the symptoms of DCM. The development of guidelines for the management of DCM is of utmost importance, especially considering the projected increase in the elderly population. Successful outcomes in the treatment of DCM should focus not only on halting disease progression but also on improving function, reducing disability, alleviating pain, and enhancing the overall quality of life for affected individuals. Therefore, integrating traditional Ayurvedic principles with modern medical approaches could provide a promising avenue for the effective management of degenerative cervical myelopathy.

**MATERIALS AND METHODS**

**Patient information**

**Chief Complaints**

Reduced strength in bilateral lower limb and upper limb  
Unable to walk - for 6 months

Cervical region pain radiating to bilateral upper limb for 1 year  
Backache radiating to B/L lower limb for 1 year

**Associated Complaints:** Heaviness and restricted moment of bilateral upper limb and lower limb for 6 months.

**History of Present Illness:** A 45-year-old patient was brought to the Panchakarma outpatient department of GAMC Mysore, Karnataka, India, on a stretcher, exhibiting clinical manifestations of bilateral upper and lower limb weakness for the past six months. The patient, who was previously asymptomatic, worked as a labourer and used to lift heavy weights. He gradually began experiencing pain in his cervical region, which radiated to his bilateral upper limbs, accompanied by paraesthesia and difficulty in performing daily activities. Over a year, he developed lower back pain that progressed to involve his bilateral lower limbs. Consequently, the patient experienced weakness in all limbs, leading to a loss of strength and his subsequent inability to perform daily activities. As a result, he lost his job. His condition continued to deteriorate, affecting his mobility and causing frequent falls and an unsteady gait, which eventually rendered him bedridden. Initially, the patient visited a local hospital, where he received nonsteroidal anti-inflammatory drugs (NSAIDs) for pain relief, but these proved ineffective. Upon the recommendation of a relative, he sought treatment at an Ayurvedic hospital, where he underwent sarvanga abhyanga, sweda, and Ayurvedic shamana Aushadi, resulting in a reduction in weakness and pain. Subsequently, the patient returned to work, but after two months, his symptoms relapsed, including quadriparesis and intense radiating pain throughout the spine and

bilateral limbs. The patient returned to the hospital on a stretcher, accompanied by his guardians.

**Past Medical History:** N/K/C/O DM2, HTN

No history of trauma was found

**Family History:** No history found

**Clinical Findings**

**General Examination**

Built – moderately nourished

Pallor – absent

Icterus –absent

Clubbing – absent

Cyanosis - absent

Lymphadenopathy- absent

Gait – unable to perform

Edema – absent

**Ashta Sthana Pariksha**

Nadi – Vata-Pitta

Mala – once/day

Mutra – 4-5 times /day

Jivha – alipta

Shabda – prakruta

Sparsha – supti in hasta and pada

Drik – prakruta

Akriti – madhyama

**Systemic Examination**

CVS – S1, S2 heard

RS – Normal vesicular breathing was heard

CNS – Conscious, oriented to person, place, time, higher mental function are intact

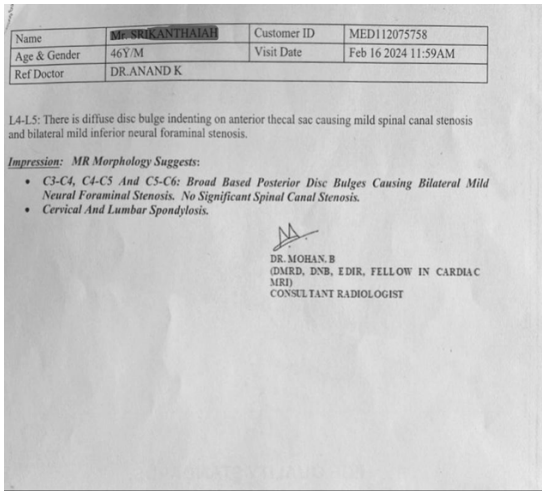
**Table 1: Cervical And Lumbar Spine Examination**

Examination	Cervical spine	Lumbar spine
Inspection	Loss of cervical lordosis	No abnormality detected
Palpation	Tenderness at C3 To C7 vertebra Paraspinal muscle tenderness Range of movement – Restricted and painful restriction flexion and extension and lateral rotation	Tenderness at L5-S1 Range of movement – unable to perform
Special test	Spurling test positive Lhermitte’s sign positive	Unable to perform
Sensory system	Paraesthesia	Paraesthesia
Motor system	Tone – hypertonia Atrophy – absent Power- Upper limb -2/5 Lower limb-1/5	Tone – hypertonia Atrophy – absent Power- Upper limb -2/5 Lower limb-1/5

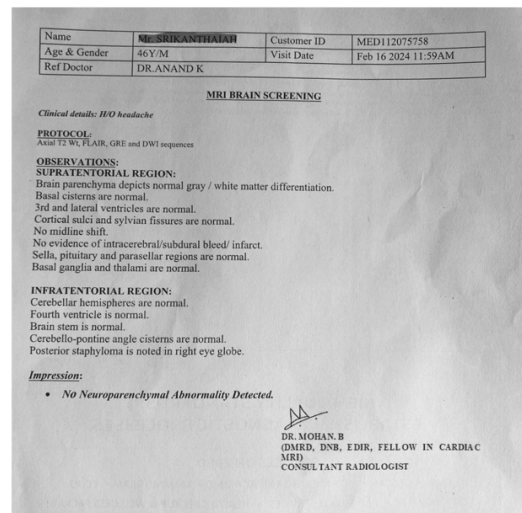
**Table 2: Reflexes**

Reflexes	Right	Left
Bicep	Brisk	++
Tricep	++	++
Knee	++	++
Ankle	++	++
Babinski	Positive	Positive

**Diagnostic Finding**



**Figure 1: MRI Whole Spine**



**Figure 2: MRI Brain**

**Ethical Consideration:** The case study was conducted as per ICMR National Ethical Guidelines for Biomedical and Health Research Involving Human Participants.

**Informed Consent:** Informed consent was obtained from the patient.

**Table 3: Therapeutic Intervention**

Date	Treatment	Duration
25/05/24 to 29/05/24	Agnichikitsa lepa	5 days
30/05/2024 to 06/06/2024	Greeva Pichu and Kati Pichu with Kottamchukadi + Pinda taila	8 days
30/05/2024 to 06/06/2024	Sarvanga Abhayanga with Sahacharadi taila f/b Bashpa sweda	8 days
30/05/2024 to 06/06/2024	Matra Basti with GTG + Ashwagandha Bala Laxadi taila	8 days

**Table 4: Shamana Aushadi**

Yoga	Dose
Hingivashtaka choorna	½ tsp thrice a day before food with lukewarm water
Agnitundi vati	1 tid after food
Triphala guggulu	2 bd after food

**Table 5: Results**

Symptoms	Before treatment	After treatment
Unable to walk	Bedridden	Able to walk without support
Weakness in bilateral upper limb	+++	Absent
Low back ache	++	Absent
Cervical region	++	Absent
Paresthesia in bilateral upper and lower limb	++	Absent
POWER		
Upper limb	2/5	5/5
Lower limb	1/5	4/5

**Table 6: Modified Japanese Orthopaedic Association (Mjoa)<sup>5</sup>**

Category	Before treatment	After treatment
Upper Extremity Motor	Score- 1 Unable to eat with a spoon but able to move hands	Score -5 Normal hand coordination
Lower Extremity Motor/Sensation	Score- 2 Unable to walk but some movement	Score -7 Normal walking
Upper Extremity Sensory	Score- 2 Mild loss of hand sensation	Score-3 Normal hand sensation
Urinary function	Score-3 Normal urinary function	Score-3 Normal urinary function

It is a 17-point functional disability score specific to cervical myelopathy, which includes components for upper extremity motor function, lower extremity motor/sensory function, upper

extremity sensory function, and urinary function. Patients are characterized as having mild (mJOA 15–17), moderate (mJOA 12–14), or severe (mJOA 0–11) disability.

## DISCUSSION

### Ayurvedic Correlation of These Diseases

The Vata dosha is primarily responsible for most musculoskeletal disorders, causing symptoms such as shoola (pain), toda (ache), and kriyahani (loss of strength). Its pathology is broadly classified into nirupsthambha yukta (not obstructed by any other dosha) and upsthambha yukta (where another dosha obstructs Vata dosha), with differing treatment approaches for each condition. The nidana (causal factors) of the present condition include ruksha-shita ahara (dry and cold foods), alpa bhojana (insufficient food intake), madatyaya (alcohol consumption), ati ratrijagarana (excessive nighttime awakeness), diwaspana (daytime sleeping), atichesta (excessive activity), krodha (anger), and vegadharana (suppression of natural urges), all of which aggravate Vata and Kapha dosha. Here, Kapha dosha obstructs Vata, leading to Kapha-vruta Vyana Vata.

Whenever avaranya janya vatavyadhi (diseases caused by Vata obstruction) is observed, Avarana hara chikitsa (treatment to remove obstruction) is performed before administering Vata dosha chikitsa.

### Agni Chikitsa Lepa

The Agni chikitsa lepa is a traditional formulation containing powerful ingredients such as Kshudraagnimantha, Nirgundi, Krishna Tulasi, Maricha, Sarshapa, and Haridra, each in a quantity of 5 grams, along with 8 lavanga and 8 dehusked seeds of lasuna. This lepa exhibits properties similar to Niragni Upanaha sveda and demonstrates Agnideepana, Amapachana, Shothahara, and Vedanasthapana actions. When applied to the whole body, it effectively reduces local pain, swelling, stiffness, and tenderness in affected joints.<sup>6</sup>

Anagni sveda is indicated in conditions associated with Kapha and Meda combined with Vata or Kaphamedo avarana of Vata. Ama has similar properties to Kapha, and srotorodha (obstruction of channels) is seen in Kapha-vruta Vata. These factors highlight the importance of administering Agni chikitsa lepa in cases of Kapha avaruta Vyana Vata<sup>7,8</sup>.

When degenerative cervical myelopathy occurs, it initiates a series of pathological events in the spinal cord, including vascular changes, neuroinflammation, disruption of the brain–spinal cord barrier, and apoptosis. These processes lead to demyelination, neuronal loss, and astrogliosis. Phytochemicals in Agni chikitsa lepa have demonstrated actions that can help mitigate these pathological events. Nirgundi, Agnimantha, Eranda, Sarshapa, and Tulsi have shown analgesic and anti-inflammatory activities, attributed to the presence of compounds such as alkaloids and eugenol. Additionally, methanolic leaf extracts from Nirgundi and Tulsi have demonstrated protective effects against cellular events during edema formation and various stages of acute inflammation. These phytochemicals are believed to interfere with inflammatory and apoptotic pathways, potentially regressing the pathology.

After achieving the state of Nirama avastha (free from toxins) to pacify aggravated Vata, snehanopchara (oil therapy) was performed using Sneha, which has qualities opposite to Vata and is considered the best treatment to reduce Vata. The significance of snehana (oleation) and swedana (sudation) is emphasized by the analogy that just as a dry stick will break when bent, it will not break when immersed in Sneha. Similarly, the appropriate use of Sneha nourishes the dhatu (tissues), and the snigdha guna (unctuous quality) of Sneha counteracts the ruksha guna (dry quality) of Vata. Sweda helps alleviate toda, shula (pain),

sthambhata (stiffness), and gouravata (heaviness) in the body; hence, in asthigata vikara (joint disorders), bahya (external) and abhyantara (internal) Sneha is given prime importance<sup>9</sup>.

### Greeva and Kati Pichu

Pichu is a process where a cotton cloth dipped in warm oil is applied to the affected region. As a form of snigdha sweda and a modified form of shiropichu, Kati and Greeva Pichu were performed using Kottomchukadi taila, which acts as Vata-Kapha hara due to the ushna virya (hot potency) of Shunti, Shigru, and Lasuna. Drugs like Rasna, Devdaru, and Chinchwa swarsa help in Vatanulomana (Normalizing Vata), while Ashwagandha nourishes the asthi (bones).<sup>10</sup>

### Sarvanga Abhyanga Followed by Nadi Sweda

Repeated Snehana and Swedana are essential in Vata vyadhi, as they impart mruduta (softness) to the koshta (body) and promote agnivaradhana (enhancement of digestive fire), preventing Vata from manifesting diseases. For individuals with aggravated Vata throughout the body causing toda yukta vedana, abhyanga (full-body massage) and Matra Basti were selected. Sahacharadi taila was chosen for Sarvanga Abhyanga due to its Madhura rasa (sweet taste) and snigdha guna, which subside Vata and provide bruhamana (nourishment) to the body.<sup>11</sup>

### Matra Basti

Matra Basti is a type of Sneha Basti in which a small quantity of Sneha is administered, irrespective of the season, and it does not produce complications even when administered daily. It is effective for Vataroga, providing strength and nourishing the body<sup>12</sup>. Yamaka Sneha involves using a combination of two types of Sneha, such as taila and ghrita. This approach offers enhanced therapeutic benefits. The combination of Yamaka using Guggulutikta Ghrita<sup>13</sup> and Bala-Ashwagandha Taila has been chosen for Matra Basti in the present study. Guggulutikta Ghrita is preferred in cases of Sandhi, Asthi, and Majjagata Vata, acting as Vata-Kapha hara and Vedhasthapaka (stabilizing), while Bala-Ashwagandha Taila<sup>14</sup> serves as Pushtikara (nourishing) and helps alleviate all types of Vata vyadhi.

## CONCLUSION

The case report underscores the efficacy of Panchakarma therapy in managing Degenerative Cervical Myelopathy (DCM). The substantial enhancement in the patient's strength, mobility, and pain levels following the Ayurvedic intervention demonstrates its positive impact. The successful outcome of this case emphasizes the importance of exploring alternative treatment approaches for DCM, especially in the absence of established management guidelines for this debilitating condition. Further research and studies are necessary to validate these findings and develop comprehensive management guidelines for patients with DCM.

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