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Management Of Cervical Pain With Turmeric Fume Nasal Inhalation (Haridra Dhooma Nasya): A Case Series

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Abstract- *Dhooma Nasya*, a procedure of the *Panchakarma* modality in Ayurveda, was first coined by Acharya *Charaka*. The utilization of *Dhooma Nasya* as a primary therapeutic procedure has been disregarded due to insufficient information in traditional Ayurvedic texts and a lack of awareness. The clinical implementation of *Dhooma Nasya* as a main treatment is infrequent in contrast to its more prevalent use in post-treatment procedures. The uses of *Dhooma Nasya* are outlined for *Jatrurdhwa vikara* (diseases above the clavicle) which also includes *Manyastambha* (Cervical Spondylosis). Cervical spondylosis is a natural condition that occurs with age and involves degenerative changes specifically within the intervertebral disc. Cervical spondylosis is a diverse set of progressive degenerative changes impacting the cervical spine.

Background:
In our contemporary era, Cervical spondylosis stands out as a prevalent musculoskeletal condition, which significantly affects an individual's quality of life. According to Ayurveda, the symptoms described can be attributed to a condition known as *Manyastambha*. Here is an effort made to explain the clinical importance of *Dhooma Nasya* in the management of *Manyastambha*, through the following case series.

Methods:
Based on the Ayurveda classical symptoms and clinical examination, five cases of *Manyastambha* were identified and diagnosed. The treatment approach for these cases involved administering *Haridra Dhoomanasya*, with three puffs in each nostril twice a day for a duration of seven days.

Observation: The assessment was conducted based on both subjective and objective parameters.

Result: Satisfactory improvement in the signs and symptoms of *Manyastambha* was observed at the end of the treatment.

Keywords: Cervical spondylosis, *Manyastambha*, *Dhooma Nasya*, *Haridra Dhooma Varti*

Introduction:

Dhooma Nasya (medicated fume inhalation) is a *Nasya karma* described solely by Acharya *Charaka*, wherein medicated fumes are administered through the nostrils and expelled through the mouth. The practice of daily detoxification is recommended in the daily routine of a healthy individual. Among its multiple uses, *Dhooma Nasya* is recommended for addressing different ailments, with *Manyastambha* (Cervical Spondylosis) being one such condition. [1]

Cervical spondylosis is a degenerative musculoskeletal condition that affects the cervical spine and develops naturally as part of aging. It is most commonly observed in individuals in their fifth decade of life, posing a higher risk during this age range. [2] In addition to degeneration, the early onset of cervical spine issues can be attributed to factors such as congenital spinal abnormalities, trauma, dystonic cerebral palsy, and engagement in certain sports like horse riding, [3] Specific occupations such as tractor driving, tailoring, and IT jobs. These factors can contribute to the development of cervical spine problems at a younger age. In adults, the majority of cervical spine spondylosis changes occur without causing noticeable symptoms. [4] In 2019, worldwide rates of neck pain per 100,000 people were approximately 2,696.5 for prevalence, 579.1 for incidence, and 267.4 for years lived with disability (YLD). These estimates come with a 95% uncertainty range. Overall, there was no significant difference in prevalence, incidence, or YLD of neck pain between 1990 and 2019. There was a higher risk in women than men. [5]

Ayurveda suggests that Cervical spondylosis and *Manyastambha* share similar signs and symptoms, indicating a correlation between the two conditions. *Manyastambha* is characterized by various symptoms such as pain and stiffness, commonly associated with heaviness and numbness at the back of the neck. [6] [7] In Ayurveda, a detailed description of *Manyastambha* is found described by Acharya *Charaka*, Acharya *Sushruta*, and Acharya *Vagbhatta* [8] [9] [10]. The contributing factors to neck pain include improper sleeping, sitting, and standing posture, as well as frequent tilting of the neck upwards to view objects. In the management of cervical spondylosis, non-surgical treatment methods are employed across different stages, ranging from mild to severe. [11]

Conservative treatment options for cervical spondylosis are commonly nonsteroidal anti-inflammatory drugs (NSAIDs) [12] [13]. Prolonged NSAID usage can lead to significant adverse effects, prompting the search for side-effect-free alternatives to address this issue. *Nasya karma* is considered the most suitable treatment approach for treating disorders affecting body parts above the clavicle, as per Ayurvedic medicine. Therefore, *Nasya karma* is the primary treatment approach recommended for *Manyastambha*. [14] Among the five types of *Nasya karma* mentioned in *Manyastambha, Dhooma Nasya* is one. In this case series, all five patients with *Manyastambha* were treated using *Haridra Dhooma Nasya Karma* for a duration of 7 days. Acharya *Charaka* has outlined five types of *nasya karma*, with *dhooma nasya* being one of them [15]. *Dhooma nasya* is recommended as part of the treatment for *Manyastambha* [16]. This present case series is based on five patients, treated by *Haridra dhooma nasya karma* (turmeric fume nasal inhalation)

Case report:

This case series includes patients who visited Parul Ayurved Hospital in Vadodara, Gujarat. The patients were selected based on their past history, present history, physical examination, and subjective assessments. In addition, demographic information, including personal and medical history starting from the day the symptoms appeared, was gathered and documented. The pre-and post-assessment of each patient was done.

The patient data is described in table no.1

Case 1:

A 38-year-old female farmer presented at the Panchakarma outpatient department of Parul Ayurved Hospital in Vadodara, presenting a chief complaint of persistent neck pain, stiffness, head heaviness, and numbness, which had been afflicting her for a year. She attributed these discomforts to the repetitive task of carrying heavy loads on her head

while tending to her farm. Initially manifesting at the base of her neck, the pain progressively intensified, prompting her to self-medicate with painkillers, albeit with diminishing effectiveness. Consequently, the unbearable severity of her symptoms impelled her to seek comprehensive treatment at the hospital.

A clinical examination commenced with an assessment of her general health, revealing moderate health with no fever, a pulse rate of 80 beats per minute, and a blood pressure of 132/80 mm Hg. The respiratory rate stood at 16 breaths per minute. A positive outcome on the Spurling test suggested possible nerve compression. Further evaluation using a Goniometer gauged the range of motion in her cervical spine, complemented by subjective gradings of her symptoms.

Given her condition, an X-ray scan was suggested to further examine the anatomical details of her neck, while a random blood sugar (RBS) test aimed to comprehensively assess her health. The X-ray findings revealed the presence of mild degenerative disc disease extending from C4-C5 to C6-C7, along with mild bilateral neuroforaminal narrowing spanning from C3-C4 to C6-C7, collectively suggesting the presence of cervical spondylosis. Fortunately, the RBS test yielded normal results, providing assurance about her overall health status.

Case 2:

A 46-year-old female housewife visited Parul Ayurved Hospital with recent symptoms lasting for one month. She complained of persistent neck pain, stiffness, heaviness, and intermittent numbness, likely stemming from her daily two-kilometer trek to fetch water overhead. No family history was relevant, but she admitted to tobacco and tea consumption, which had disrupted her sleep.

Her general examination showed no significant abnormalities. However, a localized neck examination revealed tenderness and limited mobility. Both the Spurling test and the doorbell test were positive for cervical spine issues. The cervical spine's range of motion was thoroughly assessed, including flexion, extension, lateral movement, and rotation in both directions, using a goniometer to measure and grade the extent of motion.

Considering her clinical presentation, an X-ray was recommended to examine her cervical spine's anatomy, which revealed mild degenerative facet joint arthrosis from C4-C5 to C6-C7, suggesting early signs of spondylosis. Fortunately, the RBS test results fell within the normal range, providing assurance about her overall health status.

Case 3:

A 23-year-old female IT engineering student presented at Parul Ayurved Hospital's outpatient department (OPD) due to recent health issues. Over the past five days, she had been grappling with neck pain, stiffness, head heaviness, numbness, and intermittent headaches. Sleep disturbances over four nights stemmed from the pain's intensity. She admitted to a habit of consuming tea four times daily and had a disrupted sleep pattern, often staying up at night due to academic demands and compensating with daytime naps. Her extensive use of a laptop for academic purposes, averaging over six hours daily, was notable. While she initially attempted self-management with a pain relief spray, it proved ineffective, leading her to seek medical help.

Upon assessment, her overall condition was moderate, without fever. Vital signs were within normal ranges, including a pulse rate of 72 beats per minute, blood pressure of 110/78 mm Hg, and a respiratory rate of 15 breaths per minute. Local examination revealed tenderness in the nape of her neck and reduced range of motion (ROM). A goniometer was used to quantify neck movement both before and after treatment. Additionally, her subjective assessment of symptoms was documented before and after treatment interventions.

X-ray results indicated mild degenerative disc disease from C4-C5 to C6-C7 levels, along with multiple levels of reduced intervertebral disc space (IVDS), without fractures or listhesis. These findings suggest early signs of spondylosis.

Case 4:

A 56-year-old male patient came to Parul Ayurved Hospital's Panchakarma department due to persistent neck

discomfort that had plagued him for a year. His complaints included localized neck pain, stiffness, head heaviness, and numbness. His occupation primarily involved desk work related to financial accounting in his factory, and he had developed habits of daily smoking (6 to 10 cigarettes) and regular tea consumption. These factors, coupled with his neck pain, severely disrupted his sleep.

Upon admission, the patient's overall condition was assessed as moderate. His vital signs were recorded as a pulse rate of 83 beats per minute, a blood pressure reading of 132/92 mm Hg, and a respiratory rate of 17 breaths per minute. A local examination confirmed neck tenderness, consistent with his reported pain. The positive Spurling test further substantiated his symptoms, and a noticeable decrease in neck motion range (ROM) was observed. ROM was assessed using a goniometer both before and after treatment.

X-ray findings in the cervical spine revealed marginal osteophytes at the C4-C5, C5-C6, and C6-C7 levels, alongside indications of end plate sclerosis. Vertebral bodies displayed normal height, with multiple levels of reduced intervertebral disc space (IVDS) and no fractures or listhesis. In summary, these observations indicated mild degenerative disc disease spanning from C4-C5 to C6-C7, mild degenerative facet joint arthrosis within the same range, and mild bilateral neuroforaminal narrowing spanning from C3-C4 through C6-C7.

Case 5:

A 25-year-old female patient visited the Panchakarma outpatient department (OPD) with recent distressing symptoms. She reported localized neck pain, stiffness, head heaviness, and neck numbness, all troubling her for two days. Sleep disturbances for one night due to symptom severity prompted her early medical intervention. As a student, she habitually read until late, sometimes as late as 2 AM or 3 AM, and consumed tea twice daily. Importantly, there was no relevant family medical history.

Upon admission, her overall condition was deemed moderate, with vital signs as follows: a pulse rate of 76 beats per minute, a blood pressure reading of 120/78 mm Hg, and a respiratory rate of 17 breaths per minute.

Local examination revealed neck tenderness coinciding with her reported pain. A positive Spurling test confirmed her symptoms, along with reduced neck motion range (ROM). ROM was precisely quantified using a goniometer before and after treatment. Her symptom severity was also subjectively assessed and documented before and after treatment.

X-ray findings indicated marginal osteophytes at the C4-C5 and C5-C6 levels. Additionally, mild degenerative facet joint arthrosis spanning from C4-C5 through C6-C7 segments suggested early signs of cervical spondylosis. Importantly, her RBS fell within the normal range.

Table No.1	**Demographic Data**				
	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5
AGE IN YEARS	38	46	23	56	25
GENDER	Female	Female	Female	Male	Female
OCCUPATION	housewife	housewife	Student	Businessman	Student
DURATION	1 year	1 month	5 day	1 year	2 Days

Intervention:

Purvakarma:

- A room with adequate natural light and no direct exposure to external elements like dust or wind was chosen.
- The necessary drugs and instruments needed for *Stanika Abhyanga* (local massage), *Stanika Swedana*(local steam therapy), and *Nasya* were assembled in the procedure room before starting.
- The patient was instructed to lie in a supine position, ensuring relaxation.

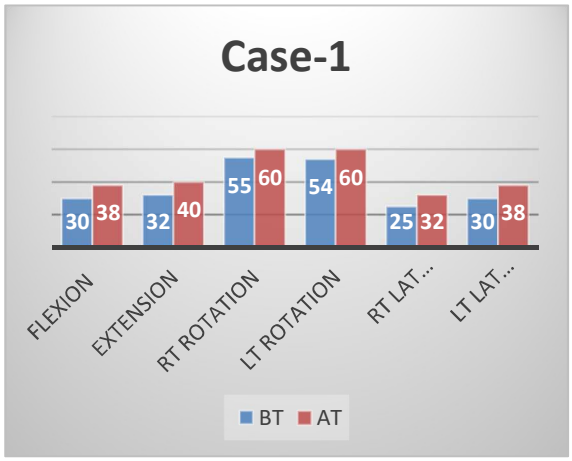
- A warm massage (Abhyanga) was performed using lukewarm *Murchita Tila taila* on the *Jatrurdhwa* (above the clavicle).
- Following this, a gentle *nadi sweda* was applied to the upper back region, while the patient's eyes were covered with a damp or wet gauze.

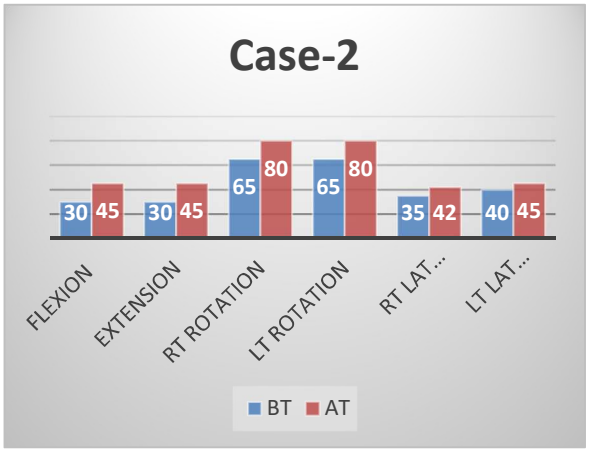
Pradhan Karma:

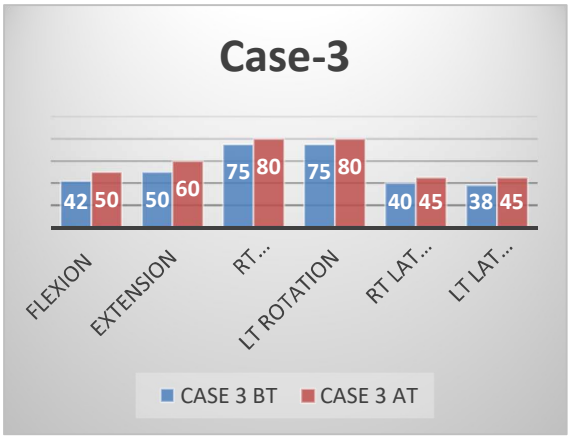
1. Seated posture: The patient was made seat in erect on a low chair, focusing forward, and avoiding external distractions like desire, anger, and fear.
2. Closed eyes: Both eyes closed throughout the process.
3. *Dhooma nasya* instrument: A clay *chillum* (pipe) used, held with the left hand, wrapped cloth filter at the mouth.
4. *Dhoomavarti* is inserted inside the clay chillum (pipe) and the external end is lighted.
5. Nostril inhalation: Right nostril closed, the patient inhales *Dhooma* through the left nostril, and exhales through the mouth.
6. Alternating nostrils: The procedure was repeated for opposite nostrils, alternating nostrils three times.
7. Sputum management: The patient was advised to spit out sputum if it occurs during the procedure.

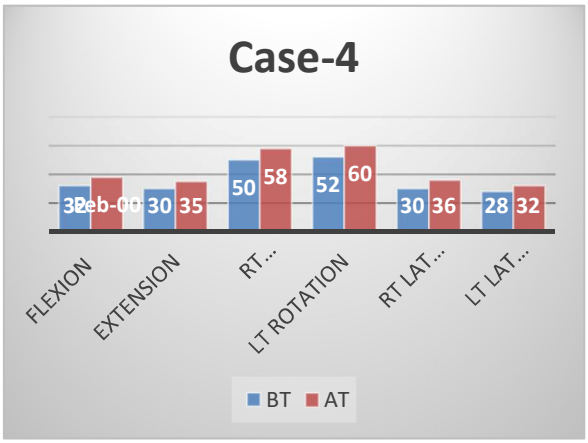
Table no. 2										
	CASE 1		CASE 2		CASE 3		CASE 4		CASE 5	
SYMPTOMS	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
Pain	II	II	II	I	I	0	II	II	I	0
Stiffness	II	II	II	I	I	0	II	II	I	0
Heaviness	II	II	II	0	I	0	I	I	II	0
Numbness	I	I	I	0	I	0	I	I	0	0

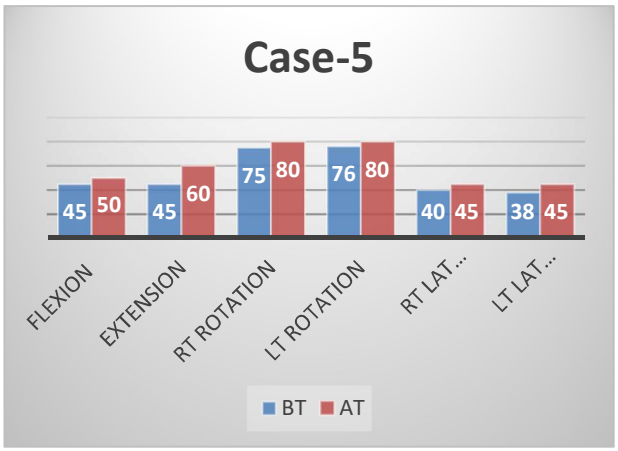
Table no. 3	Range of Movement of Cervical Spine									
	Case 1		CASE 2		CASE 3		CASE 4		CASE 5	
	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
FLEXION	II-30	I-38	II-30	I-45	I-42	0-50	II-32	1-38	I-45	0-50
EXTENSION	II-32	II-40	II-30	I-45	I-50	0-60	II-30	II-35	I-45	0-60
RT ROTATION	II-55	I-60	I-65	0-80	I-75	0-80	II-50	II-58	I-75	0-80
LT ROTATION	II-54	I-60	I-65	0-80	I-75	0-80	II-52	I-60	I-76	0-80
RT LAT FLEXION	II-25	II-32	I-35	I-42	I-40	0-45	II-30	I-36	I-40	0-45
LT LAT FLEXION	II-30	I-38	I-40	0-45	I-38	0-45	II-28	I-32	I-38	0-45


Case-1
30 38
32 40
55 60
54 60
25 32
30 38
FLEXION
EXTENSION
RT ROTATION
LT ROTATION
RT LAT...
LT LAT...
BT AT


Case-2
30 45
30 45
65 80
65 80
35 42
40 45
FLEXION
EXTENSION
RT ROTATION
LT ROTATION
RT LAT...
LT LAT...
BT AT


Case-3
42 50
50 60
75 80
75 80
40 45
38 45
FLEXION
EXTENSION
RT...
LT ROTATION
RT LAT...
LT LAT...
CASE 3 BT
CASE 3 AT


Case-4
30 35
50 58
52 60
30 36
28 32
FLEXION
EXTENSION
RT...
LT ROTATION
RT LAT...
LT LAT...
BT AT


Case-5
45 50
45 60
75 80
76 80
40 45
38 45
FLEXION
EXTENSION
RT ROTATION
LT ROTATION
RT LAT...
LT LAT...
BT AT

Discussion:

Curcuma longa, a rooted plant in the ginger family, has become the first choice for alternative medicine due to its anti-inflammatory, antioxidant, and digestive properties. Its main ingredient, curcumin, is also a natural active oxygen scavenger and active nitrogen provider and has been proven to be effective in treating pain [17]. The therapeutic benefits of curcumin have been demonstrated as antioxidant, anticancer, anti-inflammatory, neuro- and derma protective, anti-asthmatic or hypoglycaemic [18] [19] [20] [21] [22] [23] [24] [25] [26].

Manyastambha is a disease of *vata* and *kapha* dosha predominant. Due to the *avarana* (obstruction of channels) by *kapha dosha*, the *vata dosha* gets viciated or obstructed by which its normal physiological function is hampered. The line of treatment for *avarana* is *rukshana karma*, in which *Dhooma Nasya karma* is very efficient to clear that *avarana* or to clean the *srotas* (channels). *Haridra Dhooma Nasya* was adopted for the treatment as *haridra* has *Katu-tikta rasa*, *Ruksha-ushna guna*, *Ushna virya* and *Katu vipaka*, by which it is effective in cleaning the channels (*srotas*) [27]. Haridra is effective in reducing *kapha* and *vata dosha*, which are the main doshas causing *manyastambha*.

The utilization of turmeric fume nasal inhalation for managing cervical pain aligns with the principles of Ayurveda, which emphasizes a holistic approach to health and well-being. Turmeric, known for its anti-inflammatory and analgesic properties, has been extensively studied for its potential therapeutic benefits. The nasal inhalation technique allows for direct absorption of bioactive compounds into the bloodstream, possibly leading to quicker and more targeted pain relief.

Furthermore, the traditional practice of *Haridra Dhooma Nasya* has shown the potential in promoting relaxation and stress reduction. Chronic pain conditions often have a psychological component, and incorporating stress reduction techniques can positively impact pain perception and coping mechanisms. The ritualistic and mindful aspect of the nasal inhalation process may contribute to the overall effectiveness of the intervention.

However, while the case series presents better results in acute cases only as compared to Chronic cases, it is important to acknowledge its limitations. The study's small sample size and lack of a control group warrant a cautious interpretation of the findings. Additionally, individual variations in response to the intervention and potential placebo effects should be considered.

Conclusion:

The case series highlights the potential of turmeric fume nasal inhalation (*Haridra Dhooma Nasya*) as a complementary approach to managing cervical pain. The holistic nature of the intervention, its alignment with Ayurvedic principles, and the known anti-inflammatory properties of turmeric make it an intriguing avenue for further research. Future studies with larger sample sizes, rigorous controls, add-on *Panchakarma* therapy, and long-term follow-up are needed to establish the efficacy and mechanisms of this traditional practice in cervical pain management. As the medical community seeks alternative approaches, *Haridra Dhooma Nasya* offers a unique perspective that merits exploration.

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