

## MANAGEMENT OF CERVICAL SPONDYLOSIS THROUGH MARMA CHIKITSA – A PILOT STUDY

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### ABSTRACT

Cervical spondylosis is a natural age-related disease process associated with degenerative changes within the intervertebral disc. It most commonly presents as neck pain, which remains one of the leading causes of disability and rising healthcare costs. Manyastambha can be considered an Ayurvedic Diagnosis of Cervical Spondylosis. This activity reviews the evaluation and management of Cervical Spondylosis and highlights the role of Marma *Chikitsa* in treating patients with this condition.

**Keywords:** Cervical Spondylosis, *Marma Chikitsa*, *Manyastambha*.

### INTRODUCTION

Cervical Spondylosis, commonly known as Cervical Osteoarthritis, is a degenerative osteoarthritis of the joints between the spinal vertebrae and the neural

foramina. It is a term that encompasses a wide range of progressive degenerative changes that affect all the components of the cervical spine (i.e., intervertebral

discs, facet joints, joints of Luschka, ligamenta flava, and laminae). It is a natural ageing process and presents in most people after the fifth decade of life<sup>1</sup>. It is a general term for age-related wear and tear of the cervical spine. Symptoms of cervical spondylosis manifest neck pain and neck stiffness and can be accompanied by radicular symptoms when there is compression of neural structures<sup>2</sup>. When the gap between two adjacent vertebrae narrows, it compresses a spinal nerve coming from the spinal cord<sup>3</sup>. It may create pressure on nerve roots, resulting in sensory and motor problems such as discomfort, paraesthesia, or muscular weakness in the limbs if the condition is severe<sup>4</sup>. Neck pain is widespread and the second most common complaint after low back pain. Given the significant burden of disease associated with substantial disability and economic cost, healthcare providers need to recognise symptomatic cervical spondylosis and provide evidence-based, cost-effective interventions<sup>5</sup>.

*Manyastambh*, Acc. to **Monier Willium** *Manya* means the back or nape of the neck & *Stambha* means stiffness or rigidity or immobility; it is considered an *Ayurvedic* diagnosis for the cases of Cervical Spondylosis. The disease comes under the umbrella of *Vata-Nanatmaja Vyadhi* (diseases only due to vitiation of *Vata dosha*)<sup>6</sup>. The symptoms of *Manyastambha* (various neurological and musculoskeletal disorders) are *Ruka* (pain), *Stabdhata* (stiffness), *Daurbalya* (weakness), *Bhram* (vertigo), and *Sirograha* (stiffness of the head).

*Acharya Sushruta* has described the etiological factors responsible for the disease:

“दिवास्वप्नासनस्थानदववृताध्वदनरीक्षणः । मन्यास्तम्भप्रकुरुते सएवश्लेष्मणाऽऽवृत्तैः ।” (*Su. Su. Ni. 1/67*)

*diwaswapana* (diurnal sleep), leaning/sleeping on an uneven place, constant gazes upward, & *Avarana* of *Vayu* by *Kapha*<sup>7</sup>.

Here, we are representing a case of CSR, which *Ayurvedic* therapist *Marma Chikitsa* successfully managed.

## Aim and Objective

The study was designed with the following aims and objectives:

To assess the efficacy of *Marma Chikitsa* in the pain management of Cervical Spondylosis.

## Material and Method

The patients with classical signs and symptoms of Cervical Spondylosis were selected. To assess all the patients, a special proforma, including all the etiological factors of Cervical Spondylosis with *Dushti Lakshana* of *Dosha*, *Dushya*, and *Srotasa*, etc., was prepared.

## Source of Data

Patients with signs and symptoms of Cervical Spondylosis attending the OPD of Pt. Khushilal Sharma Government Ayurvedic Hospital Bhopal was screened and allocated to the study. Eight patients were included in the survey, fulfilling the diagnostic, inclusion, and exclusion criteria.

These patients underwent a detailed history taking and physical examination. The clinical data, along with the elaborate assessment of the condition, were recorded in a specially designed case proforma.

## Study Design

The present study is a pilot clinical study conducted in the OPD and IPD patients of Pandit Khushilal Sharma Govt. Ayurvedic College and Institute Bhopal.

**Study Duration** – 15 Days

**Sample Size** - A total of 8 patients were registered, and all completed the trial.

## Diagnostic Criteria –

1. Pain in the cervical region (*Shula*)
2. Stiffness in the cervical region (*Stambh*)
3. Giddiness (*Bhrama*)
4. Tingling sensation in hand (*Chimchimayana Hasta*)
5. Restricted movement of the cervical spine
  - (a) Flexion
  - (b) Extension
  - (c) Lateral rotation
  - (d) Right Lateral Flexion
  - (e) Left Lateral Flexion

An X-ray confirmed the disease.

**INCLUSION CRITERIA –**

- Subject of age group – 20 – 70 years<sup>8</sup>.
- Patients of either sex have clinical features like pain in the neck region, stiffness, restricted movement of the neck, tingling and numbness in the upper extremities.
- X-ray showing radiological signs of cervical spondylosis.
- Patient with written consent to participate in the study.

**EXCLUSION CRITERIA –**

- Fracture or dislocation in the cervical spine.
- Infectious disease of the cervical spine.
- Patient with trauma in the neck region.

- Pregnant and lactating women.
- Uncontrolled Diabetes Mellitus
- Patients with major systemic disorders or neuro-degenerative conditions of the spine, like Tuberculosis, Malignancies, etc., that may interfere with the course of treatment.

**INVESTIGATIONS**

1. Pathological - Hematological Analysis - T.L.C., D.L.C., Hb, R.B.S, H.I.V, HBsAg
2. Routine examination of urine.
3. Radiological -X-Ray of Cervical Spine - A.P. View  
- Lateral View

**TREATMENT PROTOCOL –**

**Marma Therapy Procedure-**

- On average, in a single sitting, *Amsa, Amsaphalaka, Krikatika, Kakshadhara, and Vidhura Marma*<sup>9</sup> will be stimulated 15 – 18 times.

S.No.	Marma	Stimulation time	Sitting of Marma Chikitsa	Total time
1.	<i>Amsa</i>	0.8 sec	Two times a day	15 days
2.	<i>Amsaphalaka</i>	0.8 sec	Two times a day	15 days
3.	<i>Krikatika</i>	0.8 sec	Two times a day	15 days
4.	<i>Kakshadhara</i>	0.8 sec	Two times a day	15 days
5.	<i>Vidhura</i>	0.8 sec	Two times a day	15 days

**CRITERIA OF ASSESSMENT**

**Pain-**

S.No.	Criteria	Grading
1.	No pain	0
2.	Mild pain without radiation/occasionally relived on rest	1
3.	Moderate pain without radiation/relief after taking a painkiller	2
4.	Severe pain with radiation/not relieved fully even after taking a painkiller	3

**Stiffness-**

S.No.	Criteria	Grading
1.	No stiffness	0
2.	Mild stiffness (relived without medication)	1
3.	Moderate stiffness (relived by local application)	2
4.	Severe stiffness (relived by oral medication)	3

### Tingling sensation in hand-

S.No.	Criteria	Grading
1.	Absent	0
2.	Occasionally	1
3.	Upto 1 hour	2
4.	Upto 2 hour	3

### Restricted Movement

#### Pain-

S.No	Pain	Grade
1.	VAS range in between 0 – 2	0
2.	VAS range in between 2– 4	1
3.	VAS range in between 4 – 6	2
4.	VAS range in between 6 – 8	3
5.	VAS range in between 8 – 10	4

#### Flexion-

S.No.	Criteria	Grading
1.	There is no restriction to touching an interclavicular line	0
2.	There is a 2 cm difference between the chin and the interclavicular line	1
3.	More than a 2-4 cm difference between the chin and interclavicular line	2
4.	More than 4 cm difference	3

#### Extension-

S.No.	Criteria	Grading
1.	Normal – 130 degrees	0
2.	Moving upto – 120 degrees	1
3.	Moving up to – 110 degrees	2
4.	Moving <110 degree	3

#### Lateral Rotation-

S.No.	Criteria	Grading
1.	Complete rotation	0
2.	Rotation with mild difficulty	1
3.	Rotation one side only	2
4.	No rotation	3

#### Right Lateral Flexion-

S.No.	Criteria	Grading
1.	Normal ear touches to shoulder tip	0
2.	There is a 3 cm difference between the ear and shoulder	1
3.	More than a 3-5 cm difference between the ear and shoulder	2
4.	More than 5 cm difference	3

**Left Lateral Flexion-**

S.No.	Criteria	Grading
1.	Normal ear touches to shoulder tip	0
2.	There is a 3 cm difference between the ear and shoulder	1
3.	More than a 3-5 cm difference between the ear and shoulder	2
4.	More than 5 cm difference	3

**Criteria for overall assessment-**

The total effect of the therapies will be graded as follows:

Complete remission	100% relief
Marked improvement ≥75% relief	<100% to <75% to
Moderate improvement ≥50% relief	<75% to <50% to
Mild improvement ≥25% relief	<50% to <25% relief
No improvement	< 25% relief

**Observations**

Among 8, the maximum number of patients were females, five females and three males, belonging to the 40-50 age group and middle-class socio-economic status. According to occupational status, 4 of them were software engineers whose sitting period was long, and the rest lived sedentary lives. The majority

of patients have no family history related to the disease. As per subjective parameters, it was observed that most symptoms were present in all patients. Pain was observed in almost all patients. The second major clinical symptoms present in patients were the hand's stiffness and tingling sensation. Out of 8 patients, 7 patients face difficulty in neck movement. After the follow-up period, eight patients and 5 patients were completely relieved of the symptoms, and the remaining three patients significantly reduced the intensity of the disease. They got relief in subjective parameters but did not get complete relief in neck movements (ROM).

**RESULT**

Symptoms	Mean BT	Mean AT	Mean Difference	SD	SE of difference	% Of Relief	T Value	P Value & Significant	Result
Pain	2.75	0.50	2.25	0.53	0.250	81.8%	9.0000	0.0001	Extremely statistically significant
Stiffness	2.38	0.75	1.63	0.71	0.363	68.48%	4.4778	0.0005	Extremely statistically significant
Tingling Sensation in my hand	1.75	0.63	1.13	0.74	0.363	64.57%	3.1000	0.0078	Very statistically significant
Flexion	1.88	1.13	0.75	0.83	0.458	39.89%	1.6373	0.1238	Not statistically significant
Extension	2.25	0.88	1.38	0.83	0.430	61.33%	3.1945	0.0065	Statistically significant
Lateral Rotation	1.88	0.63	1.25	0.74	0.438	66.48%	2.8530	0.0128	Statistically significant

Left Lateral Flexion	2.38	1.00	1.38	0.76	0.375	57.98%	3.6667	0.0025	Very statistically significant
Right Lateral Flexion	2.13	1.00	1.13	0.76	0.398	53.05%	2.8259	0.0135	Statistically significant

In a present pilot study, the effect of therapy was analysed and computed statistically using a paired t-test for subjective parameters.

**Overall assessment of the intervention –**

S. No	Overall assessment	Percentage relief	No. of patients
1.	Complete relief	100%	00
2.	Marked improvement	>75%	02
3.	Moderate improvement	>50%	03
4.	Mildly improvement	>25%	03
5.	No improvement	00%	00

Adverse Effects: No adverse effects were noted during and after the study duration.

**DISCUSSION**

Cervical spondylosis contributes significantly to worldwide deterioration and poses huge financial threats to its participants. Approximately 66 per cent of the population suffers from neck pain at any point during their lifespan. Patients' second most frequent explanation for using complementary and integrative medicine (CIM) in 2007 was neck pain, followed only by low back pain<sup>10</sup>. Non-steroidal anti-inflammatory drugs (NSAIDs), muscle relaxants, analgesics, antidepressants and anticonvulsants are frequently used in non-operative management of these conditions. But all these medicines can have serious side effects, especially long-time administration of NSAIDs, which can have some severe side effects, such as gastrointestinal bleeding, ulcers, and kidney damage; NSAIDs have also been linked to an increased risk of heart attack or stroke.

Here, *Marma Chikitsa* is a new concept. It is a non-pharmacological treatment that has no side effects and can be done easily anywhere. Marma Chikitsa works on Gate control theory.

Gate control theory

Gate control theory suggests that the spinal cord contains a neurological gate; nerve fibres from all over the body come to the spinal cord, either blocking pain

signals or allowing them to continue to the brain. These neurological gates are the point that allows the messages from your body to pass towards your brain. In 1965, researchers Ronald Melzack and Patrick Wall published a paper outlining the gate control theory of pain<sup>11</sup>. They explained why we tend to rub injuries after they happen. Rubbing the injured spot increases normal touch sensory information that inhibits pain fibre activity and closes the spinal cords gate, therefore reducing pain perception. According to Gate's control theory, massage and touch can be helpful in pain management because touch increases considerable fibre activity and has an inhibitory effect on pain signals.

Here, we are giving Marma Chikitsa to the patients. It includes gentle massage over the specific Marma points. According to the Gate control theory, this helps reduce pain, which, according to Gate control therapy, helps treat the patient. In this study, we see significant relief in pain, stiffness, and lateral flexion of the neck of patients.

**CONCLUSION**

A well-planned Marma Chikitsa intervention has shown significant improvement in cases with cervical spondylosis in relieving pain and improving quality of life. In cervical spondylosis, as in this disease,

neck pain is the most prominent feature. Marma Chikitsa gives patients 81.8% relief from pain. No significant complications were observed in the patients at the end of the study. So, we can say that Marma Chikitsa is the new boom in medical science. Marma Chikitsa is a prompt and non-pharmaceutical method of treatment that not only relieves pain but also heals the disease.

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