

ROLE OF NASYA KARMA IN CERVICAL SPONDYLOSIS - A REVIEW

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ABSTRACT

Background: Prevalence of cervical spondylosis has seen a marked increase in recent years where even the young are presenting with the symptoms such as neck pain, headache, pain radiating from the neck to shoulders or arms, stiffness in the neck etc. Cervical spondylosis can be correlated with many conditions mentioned in Ayurveda such as *Manyasthambha*, *Greeva Hundana*, *Greeva Sandhigata Vata* etc. **Materials and methods:** data has been collected from various sources such as ayurvedic classical texts, previous studies done for evaluating the efficacy of *Nasya Karma* and other review articles. **Discussion:** *Nasya Karma* is one of the main treatment modalities in Ayurveda that deals with the conditions affecting the region of the head and neck. Many studies done previously have shown the efficacy of *Nasya Karma* to be highly significant statistically and clinically in dealing with cervical spondylosis. **Conclusion:** going through various studies done previously that used various statistical tests with a certain level of significance proves that *Nasya Karma* plays a highly significant role in the management of cervical spondylosis.

Keywords: Cervical spondylosis, *Manyasthambha*, *Nasya Karma*

INTRODUCTION

After back pain, neck pain is the most frequent musculoskeletal cause of consultation in primary care worldwide. In 2015, over half a billion people worldwide had low back pain and more than a third of a billion had neck pain of more than 3 months duration. Low back and neck pain are the leading causes of years lived with disability in most countries and age groups¹. Evidence of spondylitis change is frequently found in many asymptomatic adults, with 25% of adults under the age of 40, 50% of adults over the age of 40, and 85% of adults over the age of 60 showing some evidence of disc degeneration². Another study of asymptomatic adults showed significant degenerative changes at one or more levels in 70% of women and 95% of men at age 65 and 60. The most common evidence of degeneration is found at C5-C6 followed by C6-C7 and C4-C5. Cervical spondylosis can also be called osteoarthritis of the cervical spine. It encompasses a wide range of degenerative changes that affect the cervical spine. It affects intervertebral discs, facet joints, joints of the Luschka, ligamentum flava, and laminae. It is related to the ageing process and develops typically in the 5th decade of life. The majority of cervical spondylosis cases are asymptomatic, but those that are symptomatic neck pain is the most common complaint. Associated complaints can vary from headache, giddiness, pain and weakness of upper limbs etc. Ayurveda correlates the above-mentioned symptoms and conditions under various names as *Greevas Hundana*, *Manyastambha*, *Vishvachi* etc. It falls into the classification of *Vatavyadhis* as said by the *Acharyas*. *Nasya* is one of the *Panchakarma* therapies that is advised for the conditions affecting the head and neck. *Brimhana Nasya* is most beneficial for degenerative conditions.

Materials and Methods:

Data mining of various Ayurvedic classics, textbooks, peer-reviewed research articles is done with regards to this topic.

Disease Review of Cervical spondylosis

Cervical spondylosis occurs in three stages:

- 1) Dysfunction
- 2) Instability and

- 3) Stabilization

Cervical spondylosis can present itself as three different clinical syndromes:

a) Cervical Radiculopathy

Radiculopathy is caused due to the combination of compression and inflammation of the spinal nerve. The most common presentation will be a pain in the neck associated with pain radiating to upper extremities and /or numbness and/or weakness.

The distribution of the symptoms of the upper extremities directly corresponds to the nerve root involved. The two most common sites are C5-C6 (C6 nerve root), C6-C7 (C7 nerve root).

Two additional mechanical signs strongly suggest the presence of cervical radiculopathy: One is the relief of radiating extremity pain by applying manual traction to the neck. The other is a relief of pain by placing and resting the patient's forearm on the top of the head. A few patients will have discovered the latter manoeuvre by themselves and adopt that position spontaneously³.

b) Cervical Myelopathy

The posterior longitudinal ligament is the one that directs most herniated discs to one side or the other (towards the nerve roots) but sometimes due to one or more processes (either acute or chronic) the disc may be pushed towards the spinal cord. The clinical manifestations of myelopathy are easy to recognize. There is weakness in all four extremities, reduced or absence of appreciation of pain, touch, position etc, increased muscle tone including that of the bladder. The presence of pathological reflexes such as Hoffmann's sign and Babinski's sign is also seen.

c) Axial Joint pain

It is characterized by pain in the neck radiating to one or more of the following areas medial scapula, chest wall, shoulder area and head. There may be complaints of pain radiating to the upper extremity but pain below the elbow signifies radiculopathy. Headaches are present occipitally but sometimes may radiate towards the frontal area.

The main characteristic feature is the reduction of pain when resting and immobilization of the neck.

Depending on the condition the treatment plans that are available for the patients are either conservative by using NSAIDS, physiotherapy or surgical intervention.

Disease Review According to Ayurveda

In the Ayurvedic context, the disease cannot be correlated exactly as a whole with any single disease or condition, but some features of the cervical spondylosis can be correlated nowadays with various conditions described in Ayurveda such as *Griva Hundana*, *Manyastambha*, *Sandhi Gata Vata*, and *Asthigata Vata*, *Vishvachi* etc. *Acharya Sushruta* explains *Manyastambha* is caused due to sleeping during the daytime, improper posture while sitting, sleeping etc, looking upwards or downwards for extended periods. *Vata dosha* gets aggravated, associating with *Kapha dosha* and affects the *Manya Pradesh* i.e posterior area of the neck⁴. According to *Acharya Charaka* *Manyastambha* has been mentioned as one of the eighty *Nanatmaja Vata vyadhis* in *Sutra Sthana*⁵. In *Chikitsa Sthana* 28th chapter *Vatavyadhi Chikitsa* *Acharya* opines that *Manyastambha* is the first stage of *Antarayama*⁶. But if we see some of the symptoms of cervical spondylosis like giddiness and degeneration of cervical vertebrae it is very much similar to *Majja Dhatu Kshaya Lakshana* i.e., *Asthi Saushirya* (can be correlated with osteoporosis), *Bhrama* (giddiness), etc.⁷

Nasya Karma

Administration of medicaments or fats processed with medicaments through the nasal route is called *Nasya*⁸. According to Ayurveda, the best remedy for diseases affecting the head and neck is *Nasya Karma*⁹. As the cervical region falls under the area of the head and neck (*Urdhvajatru*) *Nasya* is the best therapy. Based on the therapeutical function *Nasya* is classified as *Virechana*, *Brimhana*, and *Shamana*¹⁰. The cause for cervical spondylosis is degeneration, for which *Nasya* with drugs that can go against the *Samprapti* (pathology) should be used to relieve the symptoms. The management for this condition is *Kapha Vata Nashaka*

Nasya as said by *Acharya Sushruta*¹¹. The use of *Snaihika Nasya* is appropriate for this condition.

DISCUSSION

Probable mode of Action of Nasya in cervical spondylosis

As cervical spondylosis is a degenerative condition, and the cervical region is in the *Urdhvajatru* (supra-clavicular) region the doshas involved are *Kapha* and *Vata*. When the *Nasya dravya* is administered it works by being absorbed through the *Shringhataka marma* thereby entering the circulation through the *siras* (capillaries/veins/arteries etc). the medicine then forces the vitiated *doshas* out through the nose and mouth¹². To enable the fastest drug absorption directly to the brain, the drug has been believed to be absorbed through arachnoid matter sleeve which extends along olfactory nerve¹³. The nasal cavity has a very rich vascular supply through anterior and posterior ethmoidal arteries (branch of ophthalmic artery), superior labial artery, greater palatine artery, sphenopalatine artery and lateral nasal arteries (all there are branches of external carotid artery). There is also anastomosis of arteries in the little's are also known as Kiesselbach's area or plexus which when irritated due to the *Nasya dravya* leads to the dilation of blood vessels thereby facilitating the absorption of the drug. The veins in the nasal cavity follow the arteries and drain into the pterygoid plexus, facial vein or cavernous sinus. The *Nasya dravya* after getting absorbed flows through the venous drainage and spreads throughout the head and neck thereby mitigating the condition.

Many studies have been conducted regarding the efficacy of *Nasya Karma* in cervical spondylosis taking different subjective and objective parameters. The following tables show the observations of mean scores of groups for two symptoms (neck pain and stiffness) from various studies before and after they were subjected to *Nasya Karma*.

Neck pain

The values shown below are the mean values of different groups from different studies.

Table 1 shows the mean values of previously done studies.

Sr.no	Before Treatment	After Treatment	Level of significance
1.	6.3	3.5	P<0.001 ¹⁴
2.	3.8	1.0	P<0.001 ¹⁵
3.	2.70	0.43	P<0.001 ¹⁶
4.	3.13	2.27	P<0.01 ¹⁷
5.	2.6	1.2	P<0.001 ¹⁸
6.	6.55	2.70	P<0.001 ¹⁹
7.	2.4	0.95	P<0.001 ²⁰

Stiffness: Values shown in the following table are the mean score taken for a group along with the level of significance.

Table 2 shows the mean score for stiffness from previous studies done.

Sr.no	Before Treatment	After treatment	Level of Significance
1.	1.67	0.07	P<0.001 ²¹
2.	2.6	1.4	P<0.001 ²²
3.	2.25	0.95	P<0.001 ²³
4.	2.45	0.95	P<0.001 ²⁴
5.	2.4	0.8	P<0.001 ²⁵
6.	2.20	1.33	P<0.001 ²⁶

Many other parameters are taken such as range of motion, radiation of pain, vertigo, headaches etc. which are graded in various studies done to prove the efficacy of *Nasya Karma* alone where there is a significant difference after testing through various statistical tests in the mean scores before and after treatment

CONCLUSION

As we can see from many sources that the cause for cervical spondylosis is wear and tear of the cervical vertebrae along with the associated anatomical structures leading to their degeneration. Ayurveda puts much emphasis on the selection of *Nasya* as the choice of treatment when it comes to cervical spondylosis. Many studies done does emphasize *Nasya* alone being very effective when treating cervical spondylosis. Studies have also suggested that *Nasya Karma* when combined with other treatment modalities such as physiotherapy, yoga and other *Panchakarma* procedures such as *Greeva Basti*, different *swedana* therapies etc. have a very high significance both clinically

and statistically in the management of cervical spondylosis.

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