



Study of *Nidan* (Etiological Factors) Responsible For *Manyastambha* With Respect To Cervical Spondylosis in Present Era – A Study Protocol

Mayuri Jain¹, Shweta Parwe^{2*}, Vinod Ade³ and Milind Nisargandha⁴

¹*Mahatma Gandhi Ayurveda College, Hospital and Research Center, Salod(H), Wardha, Datta Meghe Institute of Medical Sciences, Nagpur, India.*

²*Department of Panchakarma, Mahatma Gandhi Ayurveda College, Hospital and Research Center, Salod (H), Wardha, Datta Meghe Institute of Medical Sciences, Nagpur, India.*

³*Department of Kayachikitsa, Mahatma Gandhi Ayurveda College, Hospital and Research Center, Salod(H), Wardha, Datta Meghe Institute of Medical Sciences, Nagpur, India.*

⁴*Department of Physiology, Ashwini Rural Medical College and Research Centre, Kumbhari, Solapur, Maharashtra, India.*

Authors' contributions

This work was carried out in collaboration among all authors. Author SP designed the study, performed the statistical analysis, wrote the protocol and author MJ wrote the first draft of the manuscript. Authors MN and VA managed the analyses of the study. Author MN managed the literature searches. All authors read and approved the final manuscript.

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Study Protocol

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ABSTRACT

Background: In Ayurveda, *Manyastambha* is defined as *Manyahakriyahani*. It is the clinical entity in which the back of the neck becomes stiff, and the neck movement is impaired. *Manyastambha* is explained one of the *Vataja Nanatmaja Vikara* by *Acharyas*. *Manyastambha* occurs in *Urdhwajatru pradesha*. It can be correlated with cervical Spondylosis in modern medicine. Cervical Spondylosis is a condition in which degenerative changes are found in the cervical spine. The bony overgrowth of adjacent vertebrae is usually associated with age-related changes in intervertebral discs. In today's era, because of stressful and fast lifestyle, people suffering from various degenerative

*Corresponding author: E-mail: drshwetaparve@gmail.com;

diseases. *Manyastambha* is one of the lifestyle disorders which is caused due to excessive use of motor vehicle, travelling, constantly sitting and functioning for a longer duration, lifting heavy weights, lack of exercise or yogas, taking unhealthy foods. *Ruk* (pain) and *Stambha* (stiffness) are the main symptoms of *Manyastambha*. So to prevent the increasing rate of *Manyastambha* patients, we need to rule out the exact cause from the *Nidanas* given by Acharyas and correlate it with cervical Spondylosis. *Manyastambha* (Cervical Spondylosis) is one of the most everyday orthopaedic problems faced by the primary problem.

Aim: Studying *Nidan* (etiological factors) responsible for *Manyastambha* concerning cervical Spondylosis in the present era.

Methods: This study will be observational; subjects mainly diagnosed for *manyastambha* will be recruited in this study and observe the causative factors responsible for that particular subject.

Results: The Result will be based on observation and analyzed data.

Conclusion: The *Nidana*, which are most likely to cause *Manyastambha* in patients, provides proper guidelines to the patients.

Keywords: *Manyastambha*; *Manya*; *cervical spondylosis*; *lifestyle*; *Ahara*; *etiological factors*; *Nidana*.

1. INTRODUCTION

In today's era, people of all age groups are concerned about the increase in *Vata Jnaya Vikara* (Disorders of *Vata Dosha*). Disarray related to Muscles, bones, joints and ligaments forms a subgroup of *Vatavyadhis*, which causes hamper to daily activity in human life. Human is very susceptible to degenerative disease in today's generation because of demanding and quick lifestyle. *Manyastambha* is lifestyle chaos caused by Vehicle use, travelling to longer distances, continuous sitting and working late hours, lifting heavy weights, doing no exercise, and taking unhealthy and unhygienic foods. *Manyastambha* is explained one of the *Vataja Nanatmaja Vikara*. *Amarkosha* describes '*Manya*' (Neck region) as *Greeva paschat Sira* (Nerves of Neck region). Due to its location and compound structure, and mobility, the cervical region gets injuries. By consuming *Vataprakopaka Nidana*, the *Vata dosa* gets aggravated along with acquiring localize to *Manyapradesha* (neck region), vitiating the *Manyagata Siras* (nerves of neck) leading to *Stambha* (stiffness or difficulty in mobility) and *Ruja* (pain) to neck that ultimately leads to *Manyastambha*. The *Stambha* is the resultant spasticity of neck muscles, which stretches and makes the neck stiff. Hence there is a lack of data and most negligible literature available for the management of *Manyastambha*. According to *Acharya Sushruta*, vitiating *Vata* and *Kapha dosha* localized in *Manya Pradesha*, the *Manya Siras* leading to Pain and Stiffness of the neck [1]. So it is evident that the disease occurs due to the vitiation of *Vata*. The prodromal symptom of *Vata-Vyadhi* is *Avyakta*. Once they are established, it is in their *Atmaroopa*. A few of the symptoms of *Kupitoanilah (Vayu)* is similar to signs and symptoms of *Manyastambha* [2].

Manyastambha is the clinical entity in which the back of the neck becomes stiff, and neck movement is impaired. *Manyastambha* is a deteriorative disorder as well as it may be related to work-related vulnerability. It affects different age group, and both sexes are affected equally. Leading a sedentary lifestyle, sitting in front of a computer for a long time, more riding bike, lack of neck exercise, improper sitting posture, increased mental stress etc. In the present day, in the Modern system of medicine, administration of muscle relaxants, NSAIDs, analgesics, corticosteroids are given as the line of treatment. There is no permanent relief to the patient; long term use of such medicine causes side effects to patients, which may be hazardous [3]. So by identifying the *Nidanas* (etiological factors) and avoiding them in daily routine, one can prevent from degenerating effect of *Manyastambha* or Cervical. The majority of individuals over 40 years of age demonstrate significant radiological evidence, and a considerable percentage develops symptoms. 60-70% of women and 85% of men show cervical spondylosis changes in X-ray investigations. *Manyastambha* has been enumerated in the eighty disorders of *Vata* and is explained as *Vataja Nanatmaja Vikara* [4].

Cervical Spondylosis is a persistent critical circumstance of the cervical area. It affects the vertebral bodies and intervertebral discs of the neck and the contents of the spinal cord. The degenerative changes in the facet joints, longitudinal ligaments, and ligament flavum are also affected. Spondylosis may increase with age and frequently develops at numerous interspaces.

Later on, stenosis of the spinal area, lateral recess, and foramina may occur. Myelopathy and

radiculopathy can be occurring due to Spinal canal stenosis. Intervertebral disks drop hydration and the suppleness with age, and these losses may lead to cracks and fissures. The adjoining ligaments lose their flexible property and develop the traction spurs. The disk afterwards collapses as the outcome of biomechanical incompetence, causing the annulus to bulge outwards. As the disk space gets narrower, the annulus bulge outwards, and the facets override. As disc destruction occurs, the unicate process overrides, compromising the ventrolateral segment of a foramen. Similarly, the dorsolateral aspect of the foramen decreases facet hypertrophy. This change contributes to the radiculopathy that is analogous to cervical spondylosis [5].

The prevalence of cervical Spondylosis was 13% in 3rd decade in the year 2018. It was rising to the nearly about 100% by the age of 70 yrs. The pervasiveness ranges from 5% in the 4th decade to 96% of women older than 70 years in females. An ache in the neck area may radiate to the allocation of the affected nerve root. Neck rigidity and neck movements may exacerbate pain. Paresthesia and sensory loss might be established in the exaggerated parts, and there may be lower motor neuron signs, with weakness, wasting and reflex impairment [6].

1.1 Rationale

The present-day world has more cervical problems as they are habituated with electronic instruments usage and occupational. Thus the avoidance is not possible, and a better curative area is to be identified.

Manyastambha is mentioned as *vatavyadhi*, which is correlated with cervical Spondylosis. *Vata dosha* is aggravated due to *vataprakopak ahar vihar* (dietic and behavioral regime). *Manyastambha* has to be considered within *Vaatvyadhi* because of indulgence in day sleep, adopting improper positions, seats, etc., looking upward for a long time. *Vata* getting aggravated with *Kapha* gives rise to *manyastambha*.

The local *Vayu*, agitated through such as causes like as sleep in the daytime, reclining with the neck on an uneven place or pillow, gazing upward for a considerable length of time, or looking aside in a contorted way, and enveloped in the deranged *Kapha*, gives rise to the disease known as *Manya-stambha* (wry neck or torticollis).

1.2 Aim

Studying of *Nidan* (etiological factors) responsible for *Manyastambha* with respect to cervical Spondylosis in the present era.

1.3 Trial Design

Case control study.

1.4 Study Setting

Mahatma Gandhi Ayurveda Hospital Research Centre, Salod (H), Wardha.

1.5 Eligibility Criteria

1.5.1 Inclusion criteria

- Patients came already diagnosed with X-Ray for cervical Spondylosis.
- Patients of both the gender.
- Patients between the ages of 20-70 years suffering from previously diagnosed cervical Spondylosis.

1.5.2 Exclusion criteria

- Stenosis of the spinal canal.
- Patients below 30years and above 80 years of age are not considered for the study.
- The patients suffering from major systemic disorders such as gouty arthritis, Rheumatoid arthritis, diabetes, spinal stenosis, Ankylosing hyperostosis, kissing spine, fracture.
- Entrobacterial Spondylosis, Neuropathic spondylopathy, Collapsed vertebra in disease.
- Myelopathy of spine
- The patients who are not willing to give consent.
- Patient with other health illness like Potts spine.

2. METHODOLOGY

The 100 Patient of *Manyastambha* or diagnosed with Cervical Spondylosis will be enrolled from the OPD of *Kayachikitsa* and *Panchakarma*, MGACH&RC. Consent of the patients will be taken after giving them detailed information about the project. The *nidas* of the *Manyastambha* of the patient will be assessed based on pre-designed questionnaires. The

questionnaire will include personal, daily routine and dietary history. The questionnaire will be revalidated first and, then it will be implemented.

2.1 Primary Outcome

This project will find the exact cause of cervical Spondylosis in the present era.

2.2 Statistical Analysis

The statistical analysis is done by using descriptive statistics.

2.3 Data Management

The principal investigator will do data coding.

2.4 Dissemination Policy

Data will be disseminated in the form of paper publication and Monograph. Authorship eligibility guidelines and any intended use of professional writers.

2.5 Implementation

Principle invigilator will allocate and enrol the patient.

3. DISCUSSION

Manyastambha is one of the most ordinary daily activities hampering disorder broadly described under *Vatavyadhi* by *Acharyas*.

Many acharya's of Ayurveda describes the reason. Symptoms of *vatavyadhis* like *aharaj* and *viharaj* reason mentioned in Samhita. According to Acharya Bhawprakash Mishra, *Aharaj* reason is indulgence in food which are astringent, pungent and bitter, very less in quantity, very dry and light reason use of cold food at all. *Viharaj* is excess of copulation, depletion, a decrease of tissue, suppression of urges, bunch of the desire of sex, grief, worry and fear, letting large quantity of blood, too much reduction of *mamsa*(muscle) *that* due to disease, excess of emesis and purgation, production of *aam*(toxin) in the body during *Varsha Ritu* (rainy season), during the evening the greatly aggravated *Vata* fills into the empty channels and gives rise to many kinds of diseases in any one part of the whole body.

Manyastambha affects the musculoskeletal system of the body, particularly the senior group, as this age group is more vulnerable to *Dhatukshaya*(reduction in muscle , bone

marrow). Still, we can find cervical spondylosis patients of middle age or younger generation due to daily regimen, diet, no exercise. The *Vata dosha* becomes more provoked due to *kshaya* or *Avarana* (covering) and produces various types of disorders. As per modern medicine, Cervical Spondylosis is an age-related degenerative disorder of the intervertebral disc and bodies of the cervical spine. It commonly occurs at the lowest three cervical intervertebral joints (C₅-C₆) [7]. *Acharya Sushruta* says *Nidana Parivarjana* (avoiding etiological factors) is the first line of treatment. But *Acharya Charaka* says that less exposure to causative factors will help prevent the disease and the restoration of *Doshika* equilibrium [8].

Prolonged standing, forward bending, sitting for a longer duration. More related to housewives is more prone to degenerative changes in cervical spine Clerk, tailor having long time sitting type of daily work. The patient has to keep the neck continuous in one position. Farmer also laborious work, thus pressure over cervical spine develop wear and tear resulting into cervical Spondylosis.

Sushrutacharya has mentioned *Diwaswapa* (sleeping in day time) to cause *Tridosha Prakopa*[9]. *Kapha prakopa* is dominant in *Diwaswaapa* [10]. Thereby leading to *Agnimandya* and *Ama*. *Margavrodhajaniya*(obstruction) *Vata Prakopa* is the result of such *Samprapti* (pathogenesis) [11]. Taking day sleep was common in housewives. Every structure included in the musculoskeletal framework of the back of the neck can be a potential cause of *Manyastambha*. Studies on cervical Spondylosis were reported by Parwe et al. [12,13] and Jain et al. [14]. Few of the related studies were reviewed [15-18].

4. CONCLUSION

Conclusion will be mentioned after the deliberate and analyzing data.

CONSENT

Before starting the study, subjects will be given detailed information regarding the investigation and regarding study in his /their language. Then written consent will be taken from patients.

ETHICAL APPROVAL

After critical evaluation and presentation in front of SRC and then IEC, the ethical committee has approved the research topic.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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