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A Review On Cervical Spondylosis W.S.R. To *Manyastambha* And It's Management

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ABSTRACT

Cervical spondylosis is a natural age-related disease process that is associated with degenerative changes within the intervertebral disc. Loss of curvature, reduction of disc space, osteophytes formation these are main anatomical changes associated with cervical spondylosis that is a common spinal problem nowadays. The prevalence of cervical spondylosis is rising due to the advancements in a busy, professional, and social life, poor sitting posture in offices, continuous work, working long hours on computers, night jobs, watching hours of television, sleeping on abnormally soft mattresses and pillows, and placing the bare minimum importance on healthy physical, mental, and dietary habits. Based on sign and symptoms mentioned above cervical spondylosis can be corelated to *Manyastambha*. *Manyastambha* is explained one of the *Vataja Nanatmaja Vikara. In Manyastambha* mainly *Vata Dosha* and *Kapha Dosha* get aggravated and take *Ashraya* at *Manya Pradesh,* affecting the *Manya Siras* (nerves of neck) causing *Ruja*(pain) and *Stambha* (stiffness or difficulty in mobility) of the neck. In *Ayurveda,* there are various treatment modalities, among them *Ruksha Sweda* (dry fomentation) has been given much importance, *Patra Pinda Sweda* with *Vatahara Dravyas*, and *Agnikarma* has been also found effectively managing the pain and stiffness in *Manyastambha.*

Keywords: *Manyastanbha, Snigdha sweda, Ruksha Sweda, Agnikarma,* Cervical Spondylosis.

INTRODUCTION

Cervical Spondylosis is a degenerative disorder involving intervertebral discs, cervical spines and joints of the cervical region.[1] The prevalence of cervical spondylosis is rising due to the advancements in a busy, professional, and social life, poor sitting posture in offices, continuous work, working long hours on computers, night jobs, watching hours of television, sleeping on abnormally soft mattresses and pillows, and placing the bare minimum importance on healthy physical, mental, and dietary habits. The overall prevalence of neck pain in the general population ranges between 0.4% and 86.8% (mean: 23.1%); point prevalence ranges from 0.4% to 41.5% (mean: 14.4%); and yearly prevalence ranges from 4.8% to 79.5% (mean: 25.8%).[2] This is a degenerative condition of the cervical spine found almost universally in persons over 50 years of age. It occurs early in person pursuing 'white collar job's or those susceptible to neck pain because of keeping the neck constantly in one position while reading, writing etc. There is degeneration of the intervertebral disc with its protrusion and bony overgrowth of adjacent vertebrae, causing narrowing of the cervical canal and intervertebral foramina with resultant compression of nerve roots, cords, or both. +Based on sign and symptoms mentioned above cervical spondylosis can be corelated to *Manyastambha*. *Manyastambha* is explained one of the *Vataja Nanatmaja Vikara*.[3] *Manya* is *Chala* i.e., locomotor part of the body. *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. According to *Sushruta Samhita*, the *Vata Dosha* and *Kapha Dosha* get aggravated and take *Ashraya* at *Manya Pradesh*, affecting the *Manya Siras* (nerves of neck) causing *Ruja*(pain) and *Stambha* (stiffness or difficulty in mobility) of the neck [4]. In *Ayurveda*, there are various treatment modalities, among them *Ruksha Sweda* (dry fomentation) has been given much importance. In the initial stages of *Manyasthambha* there is *Vata Avarana* by *Kapha* which later, turns out to be a *Kevala Vata* (disease of *Vata* alone). So, in order to relieve the obstructing *Kapha Dosha*, *Acharya Charka* mentioned about *Baluka Swedana*.[6] *Swedana* is of two types based on its qualities– *Ruksha Sweda* (dry fomentation) and *Snigdha Sweda* (sweat inducing treatment done after giving oil massage or medicine). In some pathological conditions both forms can be skillfully combined as per requirement as *Patra Pinda Sweda* can be judiciously used. *Patra Pinda Sweda* is an effective treatment in painful conditions caused mainly by *Vata Dosha*, usually in degenerative diseases. Also, *Asthi* being the site of *Vata* and *Asthi Vaha Srotas*, the vitiated *Vata* gets subsided when the *Manya Pradesh* (Nape of neck), *Asthi Sandhi* is treated with *Snigadha Swedana*. The *Snigdha Pinda Sweda* acts better with its *Sneha* and *Vata Shamaka* properties.

DISEASE REVIEW (MODERN)

The term cervical spondylosis is usually reserved for the disorder resulting from chronic disc degeneration. The term cervical is derived from Latin word cervicalis means „in the region of neck.‟ The term spondyl is derived from Greek word spondylos means vertebra. So spondyl means combining form for vertebrae. Spondylosis (i.e. spondyl+osis) means a condition of vertebrae or spine. So, the term Spondylosis is preferable as it is a progressive degenerative condition rather than inflammatory or dissolution condition. Hence, cervical spondylosis is a condition in which there is a progressive degeneration of the cervical inter-vertebral discs leading to change in the surrounding structures.

ETIOLOGY

There are many factors that cause Cervical Spondylosis.

1. Age- Symptoms of cervical spondylosis may appear in those as young as 30 years and is most commonly in those aged 40-60 years. Radiologic spondylotic changes increases with age, as 70% symptomatic persons older than 50 years have degenerative cervical spine changes in one form or another.

2. Sex- Incidences of spondylotic changes are found more in female. But the difference between male and female sexes is very small. These findings are probably related to physical work particularly into women doing heavy work could be expected to show a relatively high incidence.

3. Awkward positioning or a lot of overhead work put extra stress on the neck.
4. Neck injuries- Previous neck injuries appear to increase the risk of cervical spondylosis.
5.Genetic factors.
6.Smoking.

CLINICAL FEATURES

- Pain around neck
- Stiffness/spasm
- Paraesthesia
- Restricted movements
- Vertigo
- Occipital Headache

PATHOGENESIS

Pathogenesis of Cervical Spondylosis is compound effect of the following processes: a. Reduction in the molecular size of the proteoglycans of the nucleus pulposus is associated with loss of viscoelastic properties, in other words, the initial change is a decrease in the water content of the nucleus pulposus, the central portion of the disc. As the disc dehydrates, it decreases in height and has less ability to resist loading and stress. The surrounding ligaments also lose their elastic properties and develop traction spurs. The disc subsequently collapses as a result of biomechanical incompetence, causing the annulus to bulge outward. As the disc space narrows, the annulus bulges, and the facets override. Disc degeneration leading to its thinning and protrusion of the nucleus pulposus posteriorly or herniation through tear in the fibrous annuloses laterally; posterior herniation tends to produce compression of the spinal cord and lateral bulging produces compression of roots. b. Osteophytic spur formation on the posterior aspect of the vertebral body leading to the „spondylotic bar", which is the core pathology resulting in a horizontal compression of the anterior aspect of the cord. Osteophytic extension of the bar, laterally associated with articulatory hypertrophic changes or encroachment of the intervertebral neural foramina by osteophytes developing from the rim of the foramina, often cause additional entrapment radiculopathy. Anterior osteophytic spur formation is usually symptom less but occasionally produces dysphagia. c. Partial subluxation of vertebrae causing impinging of osteophytes on the nerve roots during movement of the neck. d. Hypertrophy of the dorsal spinal ligament and dorso-lateral facet articulation or bucking of the dorsal spinal ligament particularly during extension of the neck. All these may cause further narrowing of the saggital diameter of a spinal canal, which might have been congenitally narrow. e. Encroachment of the vertebral foramina where the vertebral artery is lodged producing compromise of the arterial lumen and significant vetebro – basilar ischemia, leading to brainstem signs like vertigo, tinnitus, intermittent blurring of vision and occasionally episodes of retroocular pain. This apart, the architectural pattern of the vasculature of the cervical cord may further affect the cord lesion significantly. f. Presence of congenital spinal canal stenosis; although the radiographic findings of spondylosis are fairly common in the elderly, patients develop myelopathy or radiculopathy only if spondylotic changes are associated with congenitally narrowcanal or foramina. If the shortest AP diameter is 13mm or greater, it is unlikely that spondylotic changes are the cause of cord compression.

INVESTIGATIONS

Imaging studies:

1. X-Ray:
2. Magnetic Resonance Imaging
3. Myelography
4. CT scans

DIFFERENTIAL DIAGNOSIS

For the successful treatment, Cervical Spondylosis should be differentiated from following diseases: -

1. Cervical Rib Syndrome: Pain is felt usually in the forearm and hand. A lump may be palpable in the neck which can be confirmed by X- ray.

2. Carpal Tunnel Syndrome: Neck movements are usually painless. Pain is felt on the palmer surface of the hand in the distribution of the median nerve. Nerve condition is slowed across the wrist.

3. Supra spinatus Tendon Lesion Although the distribution of pain may resemble that of a prolapsed cervical disc, movements at the shoulder joint are abnormal.

4. Cervical Tumours: With tumours of the spinal cord, nerve root or cervical lymph nodes, the symptoms are not intermittent and the X ray picture may be abnormal. Tumors of the cervical vertebrae are seen on X-ray.

5. Cervical Spine Infection: The symptoms do not occur in attacks, there may be an abscess, and X-ray show narrowing of disc space and bone destruction.

COMPLICATIONS

Following complications may occur in Cervical Spondylosis:

- Cervical myelopathy
- Paraplegia
- Quadriplegia
- Recurrent chest infection
- Pressure sores
- Recurrent urinary tract infection
- Sphincter dysfunction
- Permanent disability (Occasional)

TREATMENT

The goal of treatment is;

1. To relieve pain

2. To prevent permanent injury to spinal cord and nerves.

In mild cases: Mild cases of Cervical Spondylosis may respond to:

 Wearing a neck brace (cervical collar)

 Taking non-steroidal anti –inflammatory drugs.

 Cervical and shoulder exercises.

In severe cases:

For more severe cases, non- surgical treatment may include:

 Hospitalization with bed rest and traction.

 Taking muscle relaxants and NSAIDs.

 Injecting corticosteroid medication into the joints.

NON-PHARMACOLOGICAL THERAPY

- Physical therapy
- Occupational therapy
- Recreational therapy

PHARMCOLOGICAL THERAPY:

Therapy for cervical spondylosis is palliative. No pharmacological agent prevents or delays the progression or reversal of pathological changes.

1. NSAIDs: NSAIDs often decrease neck pain and improve mobility of cervical spine. In the patient with Cervical Spondylosis, patients may obtain symptomatic benefit for time being, but carry an increase risk of causing gastric erosion or haemorrhage. Some invitro and animal studies suggest that NSAIDs such as diclofenac, tioprofenic acid, glycosaminoglycan peptide complex, pentasan polyphosphate and hyalorunan

have a chondroprotective effect but there is no clear evidence that these drugs are of value as disease modifying agents in cervical spondylosis.

2. Glucocorticoids: Gluco-corticoids have potent anti-inflammatory properties. It can be given orally or as a single IM injection. Prednisone which is used to treat a variety of inflammatory conditions decreases inflammation by reversing increased capillary permeability and suppressing

PMN activity. In such cases dose may be adjusted for individual sensitivities and associated medical conditions. Other commonly used corticosteroids are Dexamethasone, bethamethasone, etc. Cervical zygapophyseal intra articular steroid injection can be helpful for active synovitis. The facet injection can be diagnostic and therapeutic. Mechanical facet pain is better evaluated with facet joint nerve blocks.

3. Muscle Relaxants: Muscle relaxants reduce nerve impulse transmission by following mechanism. a. Peripherally Acting Muscle Relaxants Acts at the myoneural junction and impairs the transmission of impulses from somatic neurons to skeletal –muscle membranes. b. Direct- Acting Muscle Relaxant Act directly on the muscle fibre by blocking the contractile process. c. Centrally Acting Muscle Relaxant Depress the transmission of motor impulses at synapses within CNS. They be used alone or in conjugation with other therapies to treat pain and discomfort associated muscle spasm in cervical spondylosis.

4. Antiderpessants: These agents are useful in selected cases of chronic pain. Such as Amitriptyline have antidepressant with sedative effects.

5. Topical Analgesics: Topical analgesics may be helpful for people with mild pain or muscle aches, whose oral medication fails to reduce cervical pain to manageable levels.For eg. Capsaicin cream

SURGICAL INTERVENTION

Degenerative disease of the spine is an inevitable consequence of ageing. Back pain is a frequent complaint, but in general practice it has been reported that a definite cause for the pain is established in only about 15% of patients14 Surgery is recommended to relieve compression of spinal nerves or the spinal cord if patient have severe pain which doesn‟t improve with more conservative treatment or if patient neurological symptoms, such as weakness in arms or legs , are getting worse

AYURVEDIC REVIEW

Charaka Samhita: In 28th chapter of *Chikitsa Sthana, Acharya Charaka* has mentioned *Manyastambha* as a *Lakshan* produced due to *Shiro-Abhighata* and it is mentioned to be *Purvaroopa* of *Antaryama* or one of the symptoms of *Antrayama*. In *Charaka Samhita Manyastambha* is explained as *Manya Krisyahaani.*[6]

***Sushruta Samhita*:** *Sushruta* has given the detailed description of *Vatavyadhi* in the first chapter of *Nidan Sthana*.[7]

Generalized causative factors for *Vata* aggravation are those which predominantly cause *Vata Nanatmaja* type of *Manyastambha* but may in later part of time get associated with *Kapha* aggravation and might lead to *Avarana* type of *Manyastambha*.

NIDANAS-

- *Divaswapna*
- *Vishama Sthana*
- *Urdhwa Nirikshnah*

SAMPRAPTI-

1.Avranajanya Manyastambha-

Due to excessive consumption of *Nidanas Vata* and *Kapha* gets vitiated mainly *Kapha.* This *Kapha* would cause *Avarana* of *Vata* i.e, the aggravated *Kapha* envelopes *Vata* and blocks with its normal functioning. This can also be considered as a state of *Kaphavruta Vata* occurring in the region of Neck.

2.Vata Nanatmaja type of Manyastambha -

Excessive consumption of Vata aggravating etiological factors

↓

Aggravation of Vata

↓

Vata gets lodged in the Manya- back of the neck

↓

Vata dries up Kapha, Sira, Snayu,Mamsa and Kandara in the region of Manya

↓

Stiffness, pain and restriction of movements of neck

↓

Vata Nanatmaja Manyastambha

CHIKITSA

NASYA

Nasya for deranged *Vata-Kapha* and *Ruksha Swedana* is indicated by *Acharya Sushruta* in treatment of *Manyastambha.*

AGNIKARMA

In *Sushruta Samhita Chikitsa Sthan* 4th chapter there is a indication of *Agnikarma* in *Snayu, Sandhi* and *Asthigat Prapt Vata.*[8]

RUKSHA SVEDANA

The lumps for sudation (*Sweda*) should be made of *Tila*, *Kulatha*, *Amla Dravya*, *Ghee*, *Taila*, *Masha*, *Milk*, *Krishra* or *Mansa*; or excrements of cow, donkey, camel, pig and horse, or of unhusked barley, sand, stone, dry dung and iron powder. The first group is used in *Vata* disorders and second group is used in *Kapha* disorders.

SNIGDHA SVEDA

Patra Pinda Sweda is an effective treatment in painful conditions caused mainly by *Vata Dosha,* usually in degenerative diseases. Also, *Asthi* being the site of *Vata* and *Asthi Vaha Srotas*, the vitiated *Vata* gets subsided when the *Manya Pradesh* (Nape of neck), *Asthi Sandhi* is treated with *Snigadha Swedana*. The *Snigdha Pinda Sweda* acts better with its *Sneha* and *Vata Shamaka* properties.

For example- *Punnagadi Patra* leaves can pacify morbid *Vata* used in the bolus for tackling inflammatory diseases of joints and soft tissues [9]. Vitiated *Kapha* and its symptoms like heaviness, coldness etc. can be get rid of by using *Kapha* destroying leave in the bolus.

DISCUSSION

Cervical Spondylosis is preferable as it is a progressive degenerative condition rather than inflammatory or dissolution condition. It is a condition in which progressive degenerative changes takes place in inter vertebral discs leading to changes in the surrounding normal anatomical structures associated with osteoarthritis of spinal Apophyseal joints. Neck pain Stiffness, Parasthesia, Restricted Range of Motion, Sleep Disturbance, Bhrama, Shirashoola, Vertigo, Radiculopathy, Myelopathy are main clinical features of Cervical Spondylosis. Based on sign and symptoms mentioned above cervical spondylosis can be corelated to *Manyastambha*.

Manyastambha is explained one of the *Vataja Nanatmaja Vikara. Manya* is *Chala* i.e., locomotor part of the body. *Amarkosha* describes '*Manya*' (Neck region) as *Greeva Paschat Sira* (Nerves of Neck region). Modern Pharmacological therapies have long term side effects and gives no permanent relief. Thus, the disease is needed to be treated and managed well by Ayurvedic therapies and treatment modalty with least or no side effects.

CONCLUSION

On the basis of Rogaprakriti, Adhishthan, Samutthana as well as on the basis of their clinical manifestations, *Manyastambha* can be correlated with disease entity Cervical Spondylosis, as described in modern medical science.Cervical spondylosis is a common problem affecting people on a move. Females are more prone compare to Male. ← Patient of different age and occupation who have more exposure to occupational stress, faulty sitting posture with continuous work exertion are more susceptible for Cervical Spondylosis. The Panchkarma Therapies are simple and ambulatory which is economical also. Agnikarma and other swedana therapies doesn't required hospitalization and can be perform at O.P.D. level.

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