

**A COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFECT OF TRAYODSHANGA GUGGULU WITH NASYA KARMA AND RASNADI GUGGULU WITH NASYA KARMA IN THE MANAGEMENT OF MANYASTAMBHA W.S.R. TO CERVICAL SPONDYLOSIS**

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**ABSTRACT**

*Manyasthambha* is a *Sthambha Pradhana Vata Vyadhi* which presents itself as a *Kapha Pradhana Vata Vyadhi*. In Contemporary Science, the presentation is similar to Cervical Spondylosis, which is a degenerative condition. Evidence of spondylotic change is frequently found with 15% of adults under the age group of 40 years and 85% of adults above 60 years. Although ageing is the major risk factor for this disease repeated occupational trauma may also contribute to the development of disease. The Contemporary Science manages this condition with Analgesics and Anti – Inflammatory drugs.

The clinical study was carried out in 2 Groups which were made by selecting 20 patients in each group in SKAMCH & RC. Patients were given *Nasya* with *Anu taila* in dose of 4 *Bindu* for 7 consecutive days in both the groups. Group A was given *Trayodashanga Guggulu* and Group B was given *Rasnadi Guggulu* for 14 consecutive days (starting from Day 1) along with *Nasya*. The effect was evaluated on pre and post-test design.

**Keywords** *Manyasthambha*; Cervical spondylosis; *Kapha Pradhana Vata Vyadhi*; *Trayodashanga Guggulu*; *Rasnadi Guggulu*; *Nasya Karma*

**INTRODUCTION**

*Vata* can produce 80 types of *Nanatmaja Vyadhi* in body which may be caused due to *Dhatukshaya* or *Margavarana*. *Manyasthambha* is one among the various *Vata Nanatmaja Vyadhi* explained by various *Acharyas*.

*Manyasthambha* is understood with two words – “*Manya*” and “*Sthambha*”. As explained by *Acharyas*, *Manya* is the posterior lateral part of the Neck and *Sthambha* meaning rigid, stiff or immovable. This disease presents with symptoms of *Ruk* and *Sthambha* in *Manya Pradesha* which is similar to Cervical Spondylosis – a degenerative condition of Cervical Spine. Other symptoms of Cervical Spondylosis include occipital headache, vertigo, numbness and tingling

sensation and radiation of pain to upper limbs with occasional loss of muscle strength in upper limb.

In the recent years, 66% adults experience neck pain in their lifetime and 5% are highly disabled by it. Nearly 50% of people over the age of 50 and 75% of those over the age of 65years have typical radiological changes of Cervical Spondylosis<sup>1</sup>.

*Acharyas* have mentioned *Sleshmavata Hara Nasya* and *Rooksha Swedana* as a treatment principle of *Manysthambha*<sup>2</sup>. As it is *Kapha Pradhana Vata Vyadhi*, *Nasya* with *Kaphavata Hara Dravyas* helps in *Samprapti Vighatana* of disease and also strengthens the cervical area. *Rooksha Swedana* also helps in relieving *Kapha* and hence reduction in symptoms are achieved.

It is a Comparative Clinical Study with pre-test and post-test design where 40 patients of either gender were randomly assigned to two groups of 20 patients each. In Group A, patients were given *Nasya Karma* with *Anu Taila* in the dose of 4 *bindu* for 7 consecutive days along with *Trayodshanaga Guggulu* in dose of 2 tabs (500mg each) thrice a day for 14 consecutive days (from Day 1). In Group B, patients were given *Nasya Karma* with *Anu Taila* in the dose of 4 *bindu* for 7 consecutive days along with *Rasnadi Guggulu* in dose of 2 tabs (500mg each) thrice a day for 14 consecutive days (from Day 1). Though, within the Group, there was statistically highly significant result in both the groups with p value <0.001 in most of the parameters but there was Non-significant result while comparing both the Groups.

#### MATERIALS & METHODS

A minimum of 40 patients with clinical features of *Manyastambha* coming under the inclusion criteria were selected randomly from OPD and IPD of S.K.A.M.C, Hospital & Research Centre, Bangalore.

#### AIMS AND OBJECTIVES OF STUDY

1. To evaluate the effect of *Trayodashanga Guggulu* with *Nasya karma* in the management of *Manyastambha* w.s.r to Cervical Spondylosis.
2. To evaluate the effect of *Rasnadi Guggulu* with *Nasya Karma* in the management of *Manyastambha* w.s.r to Cervical Spondylosis.

3. To compare the effect of both the groups.

#### INCLUSION CRITERIA

1. Signs and symptoms of *Manyastamba*.
2. Clinical features of cervical spondylosis.
3. Patients of both gender.
4. Patients between age group of 16-70 years
5. Patients fit for *Nasya Karma*.

#### EXCLUSION CRITERIA

1. Pregnant women and lactating mothers.
2. Systemic disorders interfering with the course of study.
3. Patients with evidence of cervical fractures or cervical trauma.
4. Patients diagnosed with cervical radiculopathy, cervical myelopathy or ankylosing spondylitis were excluded.

#### Diagnostic criteria

1. Signs and Symptoms of *Manyastambha*
2. Clinical Features of Cervical Spondylosis
3. X-ray of Cervical spine with evidence of spondylosis was taken to diagnosis Cervical Spondylosis.

(Since X ray was taken as diagnostic criteria, I do not have records of before and after treatment results, So will not be able to share pictures of the same.)

#### Intervention

A minimum of 40 patients with *Manyastambha* was selected and assigned randomly into two groups, Group A and Group B with 20 patients each.

**Table No – 01: Intervention of the study.**

	<b>Group A</b>	<b>Group B</b>	<b>Duration</b>
Treatment	<i>Nasya Karma</i>	<i>Nasya Karma</i>	<b>With <i>Anu Taila</i></b> for 7 days
Internal medicine	<i>Trayodashanga guggulu</i> <sup>3</sup> (2tabs (500mg	<i>Rasnadi Guggulu</i> <sup>4</sup> (2tabs (500mg each)	14 days (Starting from day1) with <i>Ushna jala</i> as

	each) thrice daily)	thrice daily)	<b>Anupana After food</b>
Follow up	-	-	7 days
Total duration	-	-	21 days

### ASSESSMENT CRITERIA

The clinical findings were noted in specially designed Case Proforma and assessment was done on Day 1 (Before treatment), Day 8 (After *Nasya Karma* along with internal medicine), Day 15

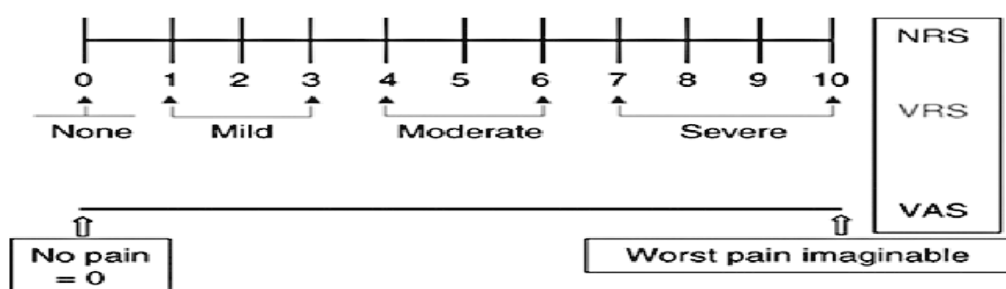
(After internal medicine alone), and Day 22 (After follow up).

**Duration of study:** 22 DAYS

**Subjective criteria**

**Grade of severity of Neck Pain**

NRS, numerical rating scale; VRS, verbal rating scale; VAS, visual analogue scale.



**Grade for severity of symptoms**

**Table No - 02: Grade for Severity of Symptoms.**

<b>Grade 1</b>	Neck pain with no signs and symptoms of major structural pathology and no or minor interference with activities of daily living
<b>Grade 2</b>	Neck pain with no signs and symptoms of major structural pathology but major interference with activities of daily living
<b>Grade 3</b>	Neck pain with no signs and symptoms of major pathology but with neurologic signs of nerve compression
<b>Grade 4</b>	Neck pain with signs of major structural pathology include, fractures, spinal cord injuries, infections, neoplasm or systemic diseases

**Grades of Neck Stiffness**

**Table No - 03: Grades for Neck Stiffness.**

<b>Grade 0</b>	Present
<b>Grade 1</b>	Absent

**Grades for Radiation of pain to upper limb**

**Table No - 04: Grades for Radiation of pain to upper limb.**

<b>Grade 0</b>	No Radiation
<b>Grade 1</b>	Radiation up to occipital region
<b>Grade 2</b>	Radiation between the shoulders
<b>Grade 3</b>	Radiation to upper limb till elbow
<b>Grade 4</b>	Radiation to upper limb till fingers

**Objective criteria:**

The Range of motion were assessed using Goniometer and were analysed

statistically. (No grading was given for range of motion, analysis was done based on numerical values)

### OBSERVATION & RESULTS

- Out of 40 patients, 13 (32.5%) patients belonged to the age group of 30-40 years, 14 (35%) belonged between 40-50 years and among 40 patients, 29 (72.5%) patients were Females.
- Out of 40 patients, 16 (40%) patients were housewife, 8 (20%) were laborer, 6 (15%) were employed in IT Sector, 2 (5%) had business and 8 (20%) were employed in different occupation (Tailor, Retired Govt servant, student, Garment marketing).
- Out of 40 patients, 22 (55%) patients were indulged in *Vishamasana* 11 (27.5%) were indulged in *abhojana*, 3 (7.5%) were indulged in *viruddha ahara*, 27 (68%) had *Vivrutadhwa nirikshana*, 20 (50%) had *vivruta sthanam*, 19 (53%) had *diwaswapna* as *nidana*, 13 (33%) had *vivruta asana*. Among *Manasika Nidanas*, 40 (100%) had *chinta*, 18 (45%) had *shoka*, 16 (40%) had *krodha* and 4 (10%) had *bhaya*. Out of 40 patients, 3 (8%) patients were observed to have *Abhighata* to neck region.
- Out of 40 patients, 40 (100%) patients complained of pain and stiffness in neck region, 23 (58%) complained of associated numbness and tingling sensation, 26 (65%) complained of associated occipital headache, 18 (45%) complained of associated giddiness.

#### Effect on pain

Reduction in *Ruk in Manya* and *Greeva* was found statistically highly significant from BT to AT<sub>1</sub> ( $z=-4.008$ ,  $p=0.000$ ), AT<sub>1</sub> to AT<sub>2</sub> ( $z = -2.719$ ,  $p=0.006$ ), BT to AT<sub>2</sub> ( $z=-3.948$ ,  $p=0.000$ )

and AT<sub>2</sub> to AF ( $z=-3.343$ ,  $p=0.000$ ) BT to AT<sub>2</sub> ( $z=-3.948$ ,  $p=0.000$ ) in Group A.

Reduction in *Ruk in Manya* and *Greeva* was found statistically highly significant from BT to AT<sub>1</sub> ( $Z=-4.021$ ,  $p=0.000$ ), AT<sub>1</sub> to AT<sub>2</sub> ( $Z = -4.093$ ,  $p=0.000$ ), BT to AT<sub>2</sub> ( $z=-3.992$ ,  $p=0.000$ ) and AT<sub>2</sub> to AF ( $Z=-3.090$ ,  $p=0.001$ ) in Group B.

Reduction in *Ruk in Manya* and *Greeva* was found statistically non-significant at AT<sub>1</sub>, AF and AT<sub>2</sub> while comparing both the groups. However, mean rank of Group A is smaller than Group B, hence Reduction in *Ruk in Manya* is comparatively better in Group A than Group B.

#### Effect on stiffness

Effect of Treatment on *Sthambha* in *Manya* and *Greeva* was found statistically highly significant from BT to AT<sub>1</sub> ( $\lambda^2=29.19$ ,  $p< 0.001$ ), non – significant from AT<sub>1</sub> to AT<sub>2</sub> ( $\lambda^2=0.00$ ,  $p>0.05$ ), highly significant from BT to AT<sub>2</sub> ( $\lambda^2=29.19$ ,  $p< 0.001$ ) and non – significant from AT<sub>2</sub> to AF ( $\lambda^2=0.00$ ,  $p>0.05$ ) in Group A.

Effect of treatment on *Sthambha* in *Manya* and *Greeva* was found statistically highly significant from BT to AT<sub>1</sub> ( $\lambda^2=23.43$ ,  $p<0.001$ ), non – significant from AT<sub>1</sub> to AT<sub>2</sub> ( $\lambda^2=2.50$ ,  $p>0.05$ ), highly significant from BT to AT<sub>2</sub> ( $\lambda^2=36.10$ ,  $p<0.001$ ) and non – significant from AT<sub>2</sub> to AF ( $\lambda^2=0.00$ ,  $p>0.05$ ) in Group B.

Effect of treatment on *Sthambha* in *Manya* and *Greeva* was found statistically non – significant at AT<sub>1</sub>, AT<sub>2</sub> and AF while comparing both the groups. However, the chi square value of Group A is higher than Group B at AT<sub>1</sub>, hence effect of treatment on *Sthambha* in *Manya* and *Greeva* was better in Group A than Group B and the chi square value of Group B is higher than Group A at AT<sub>2</sub>, hence effect of treatment

on *Sthambha* in *Manya* and *Greeva* was better in Group B than Group A.

### Effect on Radiation of pain to upper limb

Reduction in Radiation to upper limbs was found statistically highly significant from BT to AT<sub>1</sub> ( $z=-3.919$ ,  $p=0.0000$ ), AT<sub>1</sub> to AT<sub>2</sub> ( $z=-3.638$ ,  $p=0.0002$ ), BT to AT<sub>2</sub> ( $z=-3.880$ ,  $p=0.000$ ) and non - significant from AT<sub>2</sub> to AF ( $z=-1.508$ ,  $p=0.131$ ) in Group A.

Reduction in Radiation to upper limbs was found statistically highly significant from BT to AT<sub>1</sub> ( $Z=-3.994$ ,  $p=0.0000$ ), AT<sub>1</sub> to AT<sub>2</sub> ( $Z=-4.000$ ,  $p=0.0000$ ), BT to AT<sub>2</sub> ( $z=-3.976$ ,  $p=0.000$ ) and Non - significant from AT<sub>2</sub> to AF ( $Z=-1.732$ ,  $p=0.0832$ ) in Group B.

Reduction in Radiation to upper limbs was found statistically non – significant at AT<sub>1</sub>, AT<sub>2</sub>, and AF on comparing both the groups. However, mean rank of Group B is smaller than Group A, hence effect of treatment on radiation of pain to upper limb is better in group B than group A.

### DISCUSSION

*Manyastambha* has been described as one among the *Vataja Nanatmaja Vyadhi*. *Vata* is vitiated either because of “*Avarana*” or “*Dhatukshaya*”. Even though *Manyasthambha* is told as one of the *Nanatmaja Vata vyadhi*, but the involvement of *Kapha* is also described. Cervical spondylosis is a common progressive degenerative disorder of the human spine often caused by the natural aging process. It is defined as “vertebral osteophytotic secondary to degenerative disc disease” due to the osteophytes formations that occur with progressive spinal segment degeneration. Early spondylosis is associated with degenerative changes within the intervertebral disc where desiccation of the disc occurs, thus causing

overall disc height loss and a reduction in the ability of the disc to maintain or bear additional axial loads along the cervical spine<sup>5</sup>.

### Nidana:

*Kapha Prakopa* is caused due to *Divaswapna*. And this is considered important *Nidana* as it is involved formation of early stages of the disease. It can be understood in terms of sleeping in *Vikruta* asana which could be the reason for minor trauma to the cervical spine and can lead to *Manyastambha*. *Asana* is mentioned as *Upaveshanam* and *Sthana* as *Urdwa Vibhavanam*, which is understood as the Postural disturbances specifically with the sitting one. Person sitting or even lying down in bad posture, leads to improper positioning of cervical vertebrae as it puts uneven pressure over the spinal nerve roots which produces different signs and symptoms according to the nerve involved. When a person sit or sleep in improper head position, if that person is middle aged or old aged as he has already developed degenerative changes in the cervical vertebrae due to ageing process or occupational overload, hence a wrong posture can cause minor trauma accelerates the pathology of degeneration which leads to clinical symptoms of *Manyasthambha*. *Dalhana* clarifies that continuously looking in *Vakra* position meaning improper position leads to *Manyasthambha*. This is understood as looking in improper position leads to minor trauma and precipitates the symptoms. In *Charaka Samhita*, *Shirobhighata* has told one of the reason for the *Manyastambha*. The psychological factors like *Shoka*, *Bhaya*, *Chinta* etc. lead to provocation of *Vata* which leads to degenerative diseases. Stress and long working hours in front of

computers can lead to cervical pain as well as pathological abnormalities. The posture of work i.e., looking in upward direction, lying on irregular surface etc. for long duration are considered as the cause for *Manyastambha*.

In this study, majority of patients belongs to 40 – 50 years, which comes under *Parihani Avastha* according to *Sushruta Acharya*. The degenerative condition of cervical spine is more common in *Parihani* and *Vruddha Avastha*. In present study even in *Sampoorna Avastha* incidences were observed, these may be due to modernization and occupational hazards leading to early degenerative changes. In present study majority of patients were housewife who were involved in strenuous activities. Laborers were involved in carrying heavy weights on head. Laborers and Housewife were involved in lifting heavy weights. Patients employed in IT Sector were involved with continuous sitting in improper posture and table work for long time with continuous exposure to Air Conditioning. It was observed that nature of work is an important risk factor for degeneration of cervical spine.

According to *Acharya Vagbhata*, “*Sramsavyasa....ruktodabhedanam...karm ani vayo*” *Ruk* is one of the *Karma* of *Kupita Vata Dosha*. According to *Vruddha Vagbhata*, *Manya Roga* with *Vata Dosha* involvement should be taken care with *Marsha* form of *Nasya*, *Sneha Guna* helps in relieving *Vata*.

*Sthambha* can be understood as “*nishkriyatawam*” meaning difficulty to perform any movements. Stiffness and Restricted Range of Movements in Cervical Spondylosis can be understood under *Sthambha* in *Manya* and *Greeva*

*pradesha*. This is produced due to aggravation in *sheeta guna* of *Kapha* and *Vata*.

#### Probable Action of *Rasnadi Guggulu*

*Rasnadi Guggulu* contains *Rasna*, *Devadaru*, *Eranda*, *Shunti*, *Guduchi* and *Purana Guggulu* as ingredients. *Rasna* is *Tikta Rasa Pradhana*, *Usna Virya* and possess *Kapha – Vata Hara* and *Vayasthapana* as *Karma*. *Guduchi* is *Tikta, Katu Rasa Pradhana*, *Usna Virya* and possess *Rasayana*, *Tridosahara* property. *Eranda* is *Katu Rasa Pradhana*, *Usna Virya* and possess *Kapha – Vata Hara*, *Vrushya* property. *Devadaru* is *Tikta, Katu Rasa Pradhana*, *Usna Virya* and possess *Kapha – Vata Hara* property. *Shunti* is *Katu Rasa Pradhana*, *Usna Virya* and possess *Kapha – Vata Hara*, *Bhedana* property. *Purana Guggulu* possess *Lekhana* property. Due to *Usna Virya*, *Kapha – Vata Hara* property of all ingredients, it does the *Samprapti Vighatana* of *Manyastambha*.

#### Probable Action of *Trayodashanga Guggulu*

*Trayodashanaga Guggulu* was selected as control drug as it is proven by researchers to be effective in *Manyastambha*. It contains *Abha*, *Ashwagandha*, *Hapusha*, *Shatavari*, *Gokshura*, *Shyama*, *Sathi*, *Yavani*, *Rasna*, *Shunti*, *Guduchi* and *Guggulu* as ingredients. *Abha* is *Kashaya Rasa Pradhana* and possess *Kapha Hara*, *Lekhana* property. *Ashwagandha* is *Tikta, Katu Rasa Pradhana*, *Usna Virya* and possess *Vata – Kapha Hara*, *Balya*, *Rasayana* property. *Hapusha* is *Katu, Tikta Pradhana*, *Usna Virya* and possess *Vata – Kapha Hara* property. *Shatavari* is *Tikta, Madhura Rasa Pradhana* and possess *Vata – Pitta Hara*, *Rasayana* property. *Gokshura* is *Madhura Rasa*

Pradhana with Vrushya, Rasayana property. Shyama is Tikta, Katu Rasa Pradhana, Usna Virya with Kapha – Pitta Hara property. Yavani and Sathi is Katu, Tikta Rasa Pradhana with Kapha – Vata Hara property. Due to these property, it pacify Kapha and Vata Dosha and relieves the symptoms of Manyastambha.

#### **Probable Mode of Action of Nasya with Anu Taila in Manyastambha**

Nasya or Nasal Medicaments are mentioned in the classics for many Urdwajatru Vikara, Vatavyadhi and Pumsavana also. It acts on Sthanika as well as Sarvadahika.

Sthanika action is clearly mentioned by Acharya Vriddha Vagbhatta, as the drug administered through nose enters Uttamanga and Shringataka Marma, which is a Sira Marma situated in the middle of union of Sira of Mukha, Strotra, Netra and Kanta and eliminates the morbid Doshas residing there. The drug administered through nose gets pooled in facial vein and ophthalmic vein which communicates with cavernous sinus (especially in head lowered position due to gravity). This also can be understood as a mechanism for the drug to cross blood brain barrier and reach its destination. Active principle of drug gets absorbed and controls neurological and circulatory functions showing systemic effect. Also, Nasal mucosa is a highly vascular area which may have its action on Sympathetic and parasympathetic nervous system.

Nasya as a procedure as benefits like Balajananartha to Greeva, Skandha and Uras, Greeva becomes Ghana, Unnata, Prasanna and specifically in Manya Roga<sup>6</sup>.

Acharya Sushruta has mentioned Kapha vata hara Nasya to be done in

Manyastambha as it is a Kapha pradhana Vata Vyadhi. So, Kapha – Vata hara Dravyas processed in Taila which is Teekshna, Vyavayi, Vataghna, Sleshma nabhivardhanam given in form of Marsha Nasya does Shamana of Lakshanas of Manyastambha.

Most of the ingredients in Anu taila are Usna Virya, Laghu Teekshna Guna which facilitate the Strotoshodhaka effect. It mobilizes Kapha and then expels out from nearest route and simultaneously strengthens Indriyas.

#### **CONCLUSION**

Manyastambha is Sthambha Pradhana Vyadhi described as one of the Vata Nanatmaja Roga. Symptoms of Manyastambha are similar to Cervical Spondylosis due to its predominant features like pain and stiffness in neck region. In both the Groups highly significant results were found in all the parameters. But on comparing both the groups, parameters like Ruk in Manya and Greeva and Severity of Symptoms revealed statistically better results in Group A. The parameters like Sthambha in Manya and Greeva, Radiation of pain to upper limb, Flexion, Extension, Right and Left lateral Bending, Right and Left Rotation revealed statistically better results in Group B.

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