



Research Article

A CLINICAL STUDY TO EVALUATE THE COMBINED EFFECT OF *KARPASASTHYADI TAILA NASYA* AND *GREEVABASTI* IN THE MANAGEMENT OF *GREEVASTAMBHA* W.S.R. TO CERVICAL SPONDYLOSIS

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ABSTRACT

In the present era of modernization and fast life, everybody is over busy and living a very stressful life. Faulty dietetic habits and sedentary life style is responsible for early degenerative changes in bodily tissue. As per Ayurveda, *Greevastambha* has been described under *Vataj Nanatmaja Vikaras*. Few *Lakshanas* of *Kupitoanilah* such as *Pani-Prishta-Shirograha*, *Gasrasuptata*, *Greevaya-Hundanama*, *Bhedastoda-arti* are the well-known features of *Greevastambha*. *Greevastambha* can be correlated with Cervical Spondylosis of modern medical sciences. Cervical Spondylosis is a degenerative condition of cervical spine that affects the vertebral bodies and intervertebral disc of the neck as well as contents of the spinal canal. It leads to pain and stiffness in neck, radiating pain into arm, headache, vertigo, dizziness, paraesthesia, numbness etc. **Material and Methods-** Patients fulfilling the diagnostic and inclusion criteria were selected for the present study from the OPD/IPD of our institute. The present study was carried out in a single group of 10 patients. In the present study, *Snehana Nasya* along with *Greevabasti* with *Karpasasthyadi Taila* was taken to evaluate the combined effect in the management of *Greevastambha* w.s.r. to Cervical Spondylosis. **Result-** Statistically significant results were observed in the present study.

INTRODUCTION

Cervical Spondylosis can be correlated with *Greevastambha*. In Ayurvedic Classics, description regarding *Greevastambha* is not available as a specific disease entity, however it has been mentioned under 80 types of *Vataj Nanatmaja Vikaras*.^[1] Hence the *Nidana*, *Purvarupa*, *Rupa*, *Upshaya*, *Samprapti* that are described in *Vatavyadhi adhyaya* can be considered as the *Nidanaadi* for *Greevastambha*. The two main factors responsible for vitiation of *Vata* are *Margaavarodha* and *Dhatukshaya*.^[2] Some specific *Viharaja Nidana* plays very important role in the pathogenesis of Cervical Spondylosis are *Vishama Chesta*, *Ati Sankshobha*, *Dukh Shayana*, *Dukh Asana*, *Ati Vyayama*, *Virudha Aahara*, *Asthinam Ati Vighattanam*,

Urdhwa Nireekshana, *Vakramargavalokana*, *Vega vidharana*, *Dhatu samkshayaat*, *Chinta*, *Shoka*, *Krodha*, *Bhaya*, *Deewaswapana* etc. While describing *Lakshana* of *Vata Vyadhi*, Acharya Charaka has mentioned some symptoms which are seen in cervical spondylosis (*Greevastambha*) such as *Sankocha* (muscle spasm), *Parvana Stambha* (stiffness in joints), *Bhedoasthanama* (excruciating pain), *Pani-Prishta- Shirograha*, *Spandana* (tingling sensation), *Greevahundanama* (structural deformity in *Greevapradesha*), *Gasrasuptata* (numbness), *Toda* (pricking sensation) etc.^[3]

Cervical Spondylosis is a degenerative condition of cervical spine that affects the vertebral bodies and intervertebral discs of the neck as well as contents of the spinal canal. It also includes the degenerative changes in the facet joints, longitudinal ligaments and ligamentum flavum and may progress into disc herniation, bone spur formation, compression of the spinal cord or Cervical Spondylotic Myelopathy. Cervical Spondylosis is a general term of age-related wear and tear of cervical spine that can lead to neck pain, neck stiffness, headache, vertigo, dizziness and

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can be accompanied by radicular symptoms like paresthesia, tingling sensation in arms or hands etc. Risk factors for cervical spondylosis are age, genetics, smoking, jobs having lots of repetitive neck motion and overhead work, trauma and faulty posture. **Treatment:** *Panchkarma* therapy is known for its preventive, promotive, curative and rejuvenative properties. Hence *Panchkarma* therapy can provide better and effective management of Cervical Spondylosis.

According to Acharya Charaka, *Nasya karma* is indicated in *Vatavyadhi chikitsa*^[4] and *Greevagataroga, Urdhawajatrugataroga* in *Panchkarmiyasiddhiadhyaya*.^[5] *Snehana* and *Swedana karma* are the principle treatment modalities for the management of *Vatavyadhis*. *Greevabasti* is a type of *Snigdhasweda*. As *Greevastambha* is *Vataj Nanatmaja Vikara*, hence *Greevabasti* along with *Nasya* has been selected for the management of *Greevastambha* in the present study.

Greevastambha is a *Dhatukshayajanya Vatavikara*. *Snehana* helps in nourishment of *Dhatu*s, increases the *Agnibala* and increases in strength of the body. In, *Vaidya Yogratanvali Vatavyadhi and "Sahasrayoga Taila Prakrana 11"* *Karpasasthyadi Taila* has been indicated in all *Vata Vyadhis*.

AIMS

To evaluate the combined effect of '*Karpasasthyadi Taila*' *Nasya* and *Greevabasti* in the management of *Greevastambha*.

OBJECTIVES

- To explore Ayurvedic and modern literature pertaining to *Greevastambha* and cervical spondylosis respectively
- To develop effective *Panchkarma* therapy for the management of *Greevastambha*.

MATERIAL AND METHODS

Patients of *Greevastambha* w.s.r to cervical spondylosis fulfilling the diagnostic and inclusion criteria irrespective of sex, caste and religion were registered from the OPD/IPD of Department of *Panchkarma*, of our institute. Study was carried out in single group of 10 patients.

Inclusion Criteria

1. Patient willing for the study.
2. Patient of either sex with presenting signs and symptoms of *Greevastambha* and cervical spondylosis.
3. Patient between 18 to 70 years of age.
4. Patients present with clinical symptoms of cervical spondylosis.
5. Patient fit for *Nasya*. (Ch. Si. 2/22)
6. Patients were enrolled for study after taking written consent.

Exclusion Criteria

1. Patient not willing for the study.
2. Patient not fit for *Nasya*. (Ch. Si. 2/20)
3. Patient with traumatic injury of cervical spine.
4. Patient suffering from neoplastic disorders.
5. Patient with major systemic disorders that may interfere with course of treatment.
6. Patient of RA and gouty arthritis.

Criteria for Assessment

The improvement in the patients was assessed on the basis of relief in signs and symptoms of the disease. All the signs and symptoms were given scoring depending upon their severity to assess the effect of the treatment.

Neck Pain Grade

- No neck pain- 0
- Feeling of neck pain without hampering routine work-1
- Feeling of neck pain with movement- 2
- Feeling of neck pain even on rest- 3

Stiffness

- No neck stiffness- 0
- Feeling of stiffness in morning- 1
- Recurrent neck stiffness- 2
- Neck stiffness all the time- 3

Radiation of Pain

- No radiation of pain- 0
- Pain up to shoulder joint- 1
- Pain radiating up to elbow joint- 2
- Pain radiating up to forearm- 3
- Pain radiating up to hands and fingers- 4

Headache

- No headache- 0
- Mild pain occasionally- 1
- Headache once in a week- 2
- Daily severe headache- 3

Numbness

- No loss of sensation- 0
- Occasionally- 1
- Partial loss of sensation- 2
- Complete loss of sensation- 3

Vertigo

- Absent- 0
- Occasionally- 1
- 1-3 times in a week- 2
- More than 3 times in a week- 3

Tenderness

- Absent- 0
- Mild- 1
- Moderate- 2
- Severe- 3

Restriction of Neck Movements

Flexion

- No restriction i.e., able to touch inter clavicular line- 0
- Up to 2 cm difference between chin and inter clavicular line- 1
- 2-4 cm difference between chin and inter clavicular line- 2
- More than 4cm difference- 3

Extension

- Normal i.e. able to extend the head up to the level when tip of nose and forehead comes in horizontal plane, approx. flexion to extension -130 degree- 0
- Movement up to 120 degree- 1
- Movement up to 110 -120 degree- 2
- Movement less than 110 degree- 3

Lateral Flexion

- Normal i.e., ear touches to the shoulder tip- 0
- Up to 3cm difference between ear and shoulder tip- 1
- 3-5cm difference between ear and shoulder tip- 2

Lateral Rotation

- Normal i.e., able to make complete rotation of neck- 0
- Rotation with little difficulty- 1
- Rotation side to side only- 2
- Rotation one side only- 3
- Complete restriction of movement- 4

Criteria for the Assessment of Overall Effect of the Therapies

Effect of Therapy

The effect of therapy on various clinical parameters in 10 registered patients is presented as below-

Table 1: Effect of Therapy on Parameters of Cervical Spondylosis

Parameters	N	Mean		D	% age Relief	SD ±	SE±	Z value	p value
		BT	AT						
Neck pain	10	2.5	0.5	2.0	80%	0.471	0.149	-2.970	<0.05
Neck stiffness	10	2.0	0.3	1.7	85%	0.675	0.213	-2.859	<0.05
Radiation of pain	10	2.9	0.4	2.5	86.20%	0.850	0.269	-2.840	<0.05
Headache	8	1.3	0.4	0.9	69.23%	0.738	0.233	-2.460	<0.05
Numbness	7	1.2	0.4	0.8	66.66%	0.632	0.200	-2.530	<0.05
Vertigo	6	0.9	0.4	0.5	55.55%	0.527	0.167	-2.236	<0.05
Tenderness	10	2.1	0.4	1.7	80.9%	0.483	0.153	-2.919	<0.05
Restriction of neck flexion	10	2.0	0.7	1.3	65%	0.483	0.153	-2.919	<0.05
Restriction of neck extension	10	2.0	0.8	1.2	60%	0.422	0.133	-2.972	<0.05
Restriction of lateral flexion of neck	10	1.5	0.5	1.0	66.66%	0.471	0.149	-2.887	<0.05
Restriction of lateral rotation of neck	10	2.4	1.2	1.2	50%	0.632	0.200	-2.762	<0.05

The total effect of the therapy was assessed considering the overall improvement in signs and symptoms. For this purpose, following categories were maintained.

- 1) Cured: 100% relief in signs and symptoms.
- 2) Marked improvement: More than 76% improvement in signs and symptoms was considered as marked improvement.
- 3) Moderate improvement: 51% to 75% improvement in signs and symptoms was considered as moderate improvement.
- 4) Mild improvement: 26% to 50% improvement in signs and symptoms was considered as mild improvement.
- 5) No Improvement: Up to 25% reduction in signs and symptoms was considered as unchanged.

Statistical Analysis

The scores of criteria of assessment were analysed statistically in the form of mean score B.T. (Before Treatment), A.T. (After Treatment), (B.T. - A.T.) difference of mean, S.D. (Standard Deviation), S.E. (Standard Error). Wilcoxon signed rank test was carried out at $p > 0.05$, $p < 0.01$ and $p < 0.001$.

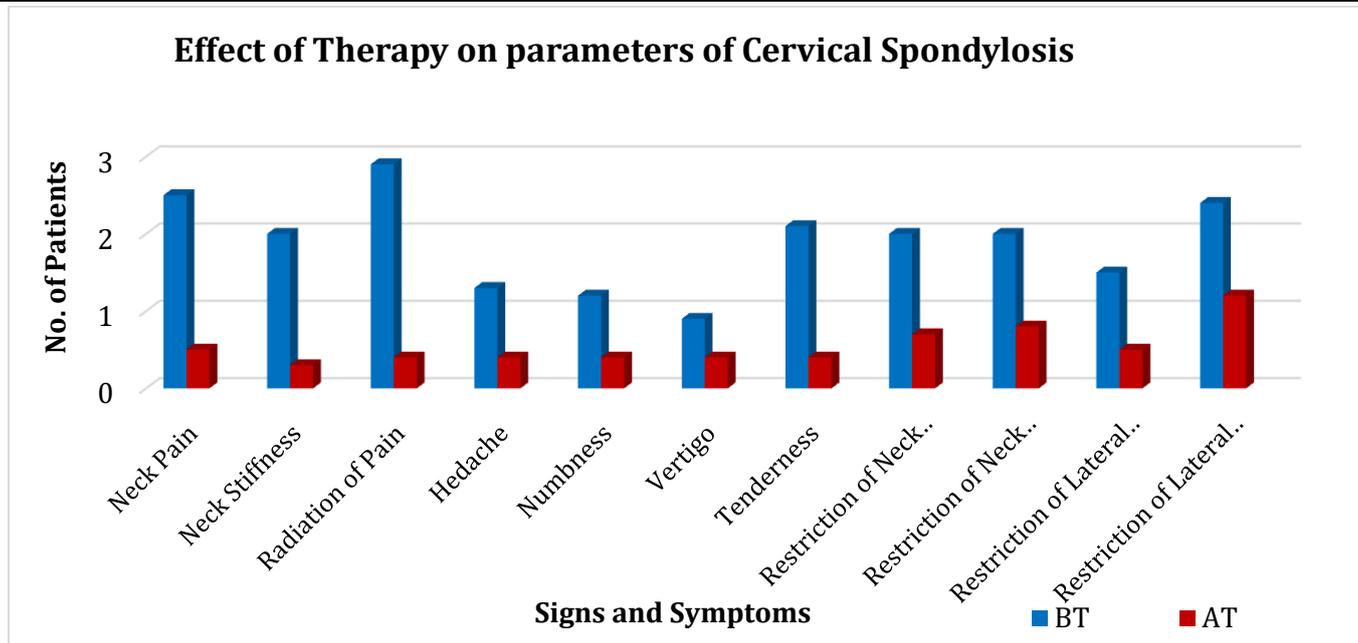
The results were shown as significant or insignificant depending upon p value.

$P > 0.05$ - Non-significant result

$P < 0.05$ - Significant

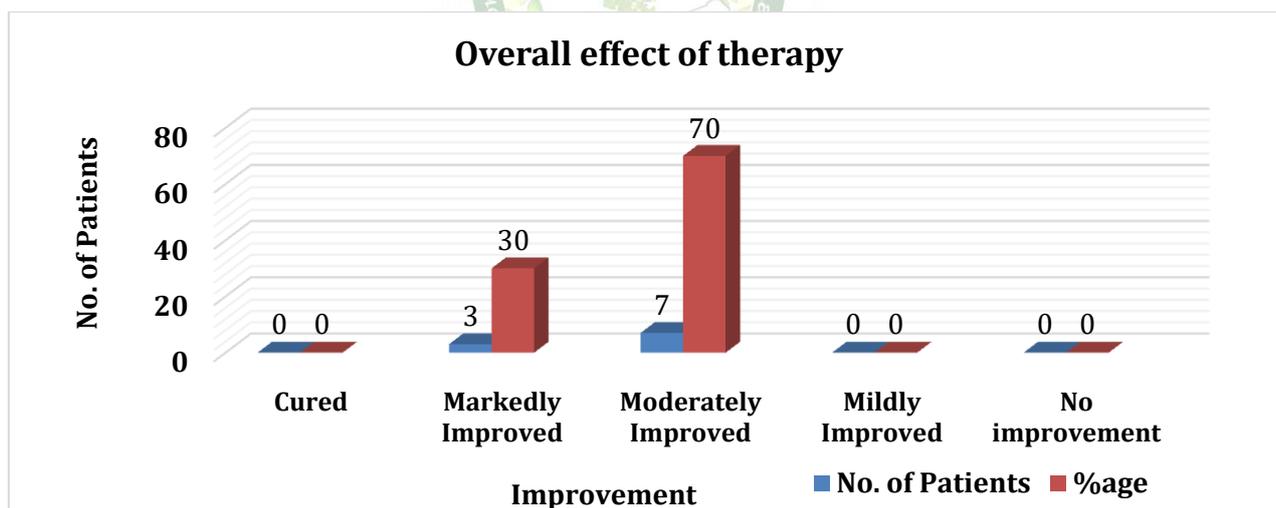
$P < 0.001$ - Highly significant

In this clinical study 10 patients were registered, results were observed and statistically analysed.



Overall Effect of Therapy

S.No.	Result	No. of Patients	Percentage
1.	Cured (100% relief)	0	0
2.	Markedly Improved (76-99% relief)	3	30%
3.	Moderately Improved (51-75% relief)	7	70%
4.	Mildly Improved (26-50% relief)	0	0
5.	No improvement (<25% relief)	0	0



DISCUSSION

Panchkarma therapy is one of the vital branches of Ayurveda, it has attracted the attention of people worldwide as it is a unique type of treatment of various chronic, autoimmune, hormonal, neurological and degenerative disorders where other system of medicines have no satisfactory answer as well as equally beneficial for the promotion and preservation of health.

Panchkarma, the inherent and integral part of Ayurveda is contributing a lot in the management of

degenerative conditions which includes *Bahya* and *Antaha Parimarjana Chikitsa*.

Greevastambha is considered as *Urdhawajatrugata Vikara*. In Ayurveda, line of management for *Urdhawajatrugata Vikara* is *Nasya*. Basically, *Greevastambha* is a *Dhatukshayajanya Vatavikara*. *Snehana*, *Swedana* are the prime treatment modalities in the management of *Vata Vyadhi* and *Greevabasti* is a type of *Snigdha Sweda*. *Snehana* helps in nourishment of *Dhatu*s, increases the *Agni* and increases the strength of the body.

Present study was undertaken to evaluate the combined effect of *Karpasasthyadi Taila Nasya* and *Greevabasti* in the management of *Greevastambha* w.s.r. to Cervical Spondylosis.

Nasya Karma

Nasya Karma always stands high and can be considered as 'Uttama' as it deals with *Uttama Anga*, the *Shirah*. It is the first and foremost treatment of choice in the management of *Urdhwajatrugata Vikaras*. Cervical spondylosis can be considered as *Urdhwajatrugata Vikara* by virtue of its site of occurrence in the region of neck. According to *Aacharya Charaka*, *Nasya Karma* is indicated in *Vatavyadhi Chikitsa* and *Greevagatavikara*, *Urdhwa jatrugata Vikaras* in *Panchkarmiyasiddhi adhyaya*. The references pertaining to *Nasya Karma* such as "Greeva Skandorasam Cha Balajanartham" and indications of the procedure in *Urdhwajatrugata Vikaras* like *Greevaskanda Roga* (Ch.Sa.), *Manyaroga* (A.Sa,Shu.Sa.), *Manyastambha* (Bhe.Sa.,Ka.Sa), etc. are all giving the idea behind the relevance of *Nasya Karma* in the treatment of Cervical Spondylosis.

Probable Mode of Action of Nasya Karma

In Cervical Spondylosis, *Nasya Karma* is the modality of treatment which is performed through nose, the gate way of head which is in close proximity with the affected part, the cervical spine. By virtue of regional propinquity and extensive communications with different parts of head, the procedure *Nasya Karma* exhibits its action in combating the disease pathology.

Nasya Karma selected here is of *Brimhana* variety which successfully helps to counteract the degenerative process by exhibiting *Brimhana* effect on the affected part. The drugs selected here are lipid in nature i.e., *Taila*, it is proven that lipid soluble micro-molecules present in the drug penetrate through the blood-brain barrier relatively easily via the lipid membranes of the cells and higher lipophilicity results in better transport of drug to the brain and other neuronal structures. *Karpasasthyadi Taila* contains different *Vatahara Dravyas* processed in *Taila*, the action of which can be expected in alleviating *Vata*, thereby preventing further degenerative process and the pain predominant features. As the same *Taila* was used for *Mukha Abhyanga*, its action can be expected by absorption through the transdermal drug delivery system and stimulation of superficial nerve endings by *Swedana*, thereby enhancing the peripheral blood circulation.

Selection of Greevabasti and its Mode of Action

Greevabasti is one of the *Bahiparimarjana Chikitsa* through which external *Snehana* and *Swedana* is done. It is directly applied over the affected area. There is no direct reference of *Greevabasti* in Ayurvedic classics. *Snehana* and *Swedana* are advised

for the treatment of *Vata* disorders. *Greevabasti* provide local *Snehana* and *Swedana* at the affected area. *Snehana* provides nourishment to the *Dhatu*s of the body and *Swedana* relaxes the muscles, increases the blood flow and reduces the inflammation. *Swedana* having *Ushna* property reduces the *Kleda* of the affected area and causing relief in the *Gaurava* and *Stambha*. *Shoolalavayupurama* is the sign of *Samyaka Swina Lakshana* hence *Swedana* also reduces the pain and tenderness.

Selection of Karpasasthyadi Taila

Karpasasthyadi Taila is indicated in the treatment of *Vatavyadhi* and is indicated in different modes of administration such as *Nasya*, *Abhyanga*, *Pana* and *Basti*.

Karpasasthyadi Taila comprises mainly *Karpasa*, *Masha*, *Kultha*, *Bala*, *Pippalimoola*, *Shigru*, *Nagara* etc., and *Taila* having the properties like *Snigdha Guna*, *Ushna Veerya* and *Vata-Kapha Shamaka* and act as *Vedana Shamaka*, *Shothahara* and *Brihmana*. Thus provides significant effect on symptoms of *Greevastambha*. *Greevastambha* is *Vata* predominant disease. *Karpasasthyadi Taila* having *Vatahara* property. Most of the contents of *Karpasasthyadi Taila* had *Katu Rasa*, this *Katu Rasa* though aggravates *Vata Vyadhi* but with the influence of *Snigdha*, *Guru Guna* of *Taila*, *Ushna Guna* and *Veerya* of the ingredients it subsides the aggravated *Vata* in *Greevastambha*. The *Ushna Guna* of the ingredients of *Karpasasthyadi Taila* subsides the *Sheeta Guna* of *Vata* to subside the *Shoola* and *Stambha* in *Greevastambha*.

CONCLUSION

The conclusion is an essence of whole study. In the present research work, on the basis of facts, observations, results and detailed discussion the following conclusion can be drawn:

- *Greevastambha* is a *Vataj Nanatmaja Vikara* and can be compared with Cervical Spondylosis due to similarity in their symptoms.
- In the present era of modernization, everybody is busy and living a very stressful life. Improper sitting posture in offices, faulty postures while using digital devices, faulty dietary habits, disturbed sleep pattern, jerky movements during travelling and sports- all these factors create undue pressure and stress injury to the spine and play an important role in producing disease like Cervical Spondylosis. Faulty dietetic habits and sedentary lifestyle is responsible for early degenerative changes in bodily tissue and plays a vital role in manifestation of such degenerative disorder like cervical spondylosis. Cervical spondylosis is emerging as one of the crippling disease now days which makes patient to be dependent on others for their daily activities and thus affecting them mentally also.

- It is difficult to cure cervical spondylosis by the available treatment modalities in modern medical science.
- Generally, cervical spondylosis is more prevalent in the age group 41-50 years. But in the present study we observed that due to poor nutrition and stressful life degenerative changes appear in early ages.
- *Nasya* and *Greevabasti* with *Karpasasthyadi Taila* showed moderate to marked level of improvement in maximum number of patients.
- *Nasya Karma* can be considered as the best treatment modality for *Urdhwajatrugata Vikaras*. *Nasya Karma* is the modality of treatment which is performed through nose, the gate way of head which is in close proximity with the affected part, the cervical spine. *Greevastambha* is a *Dhatukshayajanya Vatavikara*. *Snehana* and *Swedana* are advised for the treatment of *Vata* disorders. *Greevabasti* is type of *Snigdha Sweda*. *Snehana* provides nourishment to the *Dhatu*s of the body and *Swedana* relaxes the muscles, increases the blood flow and also reduces the inflammation.
- No adverse effect of the therapy was noted during the study and in the follow up period.
- Although this work was a single group clinical study on 10 patients only. It needs to be studied in a large sample size to draw a concrete and reliable results.

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