

A CLINICAL STUDY OF *NASYAKARMA* IN CERVICAL SPONDYLOSIS

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ABSTRACT

Cervical Spondylosis is a degenerative condition of the cervical spine & its treatment should be viewed from the point of *Vatavyadhi*. *NasyaKarma* is mentioned as the treatment of choice in *Urdhwajatrugata vikara* & is one amongst the line of treatment of *vataja nanatmaja vyadhi*. Hence, *NasyaKarma* can be best adopted to treat Cervical Spondylosis. The formulations *Baladhatriyadi Taila* & *Masha Taila* are also indicated for *NasyaKarma*, especially in treating *Urdhwajatrugata rogas*. The present study was a comparative clinical study wherein 50 patients of Cervical Spondylosis between the age group of 16-70 years were randomly assigned into two groups viz., Group-BDT (using *Baladhatriyadi Taila*) & Group-MST (using *Masha Taila*) consisting of 25 patients in each group & both the groups were subjected to *NasyaKarma* in the dosage of 8 drops in each nostril performed for a period of 7 days. Both the groups showed statistically significant improvement in major subjective & objective parameters of Cervical Spondylosis. But, the contingency coefficient values & p values revealed Group-BDT provided better relief when compared to Group-MST.

Key words: *NasyaKarma*, Cervical Spondylosis, *Baladhatriyadi Taila*, *Masha Taila*

INTRODUCTION

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Ayurveda is not just a science of life; it is indeed a way of life. The speedy-greedy man who violates this way of life may succumb to different disorders & may smell the dusk of life (old age disorders) even before having a delicious lunch (pleasures of young age & middle age). *Panchakarma*, the inherent & integral part of *Ayurveda* is contributing a lot in the management of different degenerative & chronic disorders. *Nasya Karma* is one among the *Panchakarma*, carries very high importance as it deals with the organ of high importance; the *Shiras*. Degenerative disc

disorders can be included under the heading of *Vatavyadhi*. Hence, the word 'Cervical Spondylosis' & its treatment should be viewed from the point of *VataVyadhi* only. Cervical Spondylosis can be considered as a *Urdhwajatrugata Vikara* that means the disease occurring above clavicle region & is commonly identified in *Ayurveda* with *Vataja Nanatmaja Vikaras* like *Manyastambha*, *Greevastambha*, etc. Cervical Spondylosis^{1, 2, 3} is a degenerative condition of the cervical spine which may even lead to cervical spondylotic myelopathy. Internationally, Cervical spondylotic myelopathy is the most common cause of non-traumatic spastic paraparesis & quadriparesis, in one report 23.6% of patients of latter had Cervical spondylotic myelopathy (Moore, 1997). Cervical Spondylosis may affect males earlier than females. By age 60, 85% of men and 70% of women show changes consistent with Cervical Spondylosis on X-ray. In one report based on radiographic evidences (Irvine et al), prevalence in males was 13% in the third decade increasing to nearly 100% by age 70 years, but in case of prevalence in females it ranged from 5% in the fourth decade to 96% by the age 70 years. Study done at autopsy revealed that at the age of 60 years, half the men & one-third of women had significant disease (Holt, 1966). Another study (Rahim 1992) noted that Spondylotic changes are most common in persons older than 40 years. Eventually, greater than 70% of men & women are affected, but the radiographic changes are more severe in men than in women. Another study (Rochester, Hinnestova) has reported that the annual incidence of Cervical Radicular symptoms to be 83.2 per 1,00,000 population & its prevalence most significant within a 50 to 54 year age group. *NasyaKarma* in which the medicine is instilled into nose, the gateway of head could be the effective, economical &

affordable treatment modality to treat this condition. While mentioning *NasyaKarma Yogyas*, *Charaka*⁴ mentions '*Greevaskanda Roga*', *Susrutha*⁵ mentions '*Greevaskandorasaam cha Balajanartham*'³. All the *Acharyas* have highlighted its extensive utility in the management of *Urdhwajatrugata Roga* and *VataRoga*. So, *NasyaKarma* being the treatment of choice in *Urdhwajatru gata Vikara*^{6,7}, is one among the line of treatment of *Vataja Nanatmaja vikara* and can be best adopted to treat Cervical Spondylosis. *BaladhatryadiTaila*^{8, 9} & *Masha Taila*^{8, 9} described in *Sahasrayoga* are mentioned as can be administered for *Nasya Karma* which could be the best mode for disorders of *Jatrurdhwabhaga*. While explaining *Baladhatryadi Taila*, it is told as "*Urdhwajatrugataan Rogaan Vishesena Vinashayet*". And while explaining *Masha Taila*, it is described as "*Masha Tailamidam Sreshtam Urdhwajatru-gadapaham*" that means they both are especially useful and best in the treatment of disorders that occur above clavicle respectively.

OBJECTIVES OF THE STUDY

1. To evaluate the therapeutic effect of *Nasya Karma* using *Baladhatryadi Taila* in the management of Cervical Spondylosis.
2. To evaluate the therapeutic effect of *Nasya Karma* using *Masha Taila* in the management of Cervical Spondylosis.
3. To compare both the groups and ascertain the added effect of *NasyaKarma* in the management of Cervical Spondylosis.

MATERIALS AND METHODS

Source of Data

- 50 Patients, 25 each in Group-BDT (*Baladhatryadi Taila*) & Group-MST (*Masha Taila*) coming under the inclusion criteria approaching the OPD and IPD of S.D.M. *Ayurveda* Hospital,

Udupi, Karnataka, were selected for the study.

Method of Collection of Data

- Patients were selected randomly on the basis of clinical examination. A special proforma containing details necessary for the study was prepared.
- Patients were randomly assigned into two groups viz., Group-BDT & Group-MST consisting of 25 patients in each group.
- Clinical study was done by adopting *Mukhabhyanga*, *Swedana*, *NasyaKarma* using *BaladhatryadiTaila* followed by *Dhoomapana* to patients of Group-BDT and *Mukhabhyanga*, *Swedana*, *NasyaKarma* using *MashaTaila* followed by *Dhoomapana* to patients of Group-MST respectively.

Diagnostic Criteria

- Patients presenting with signs and symptoms of Cervical Spondylosis.
- Subjective Parameters are Neck Pain, Neck Stiffness, Radiation of Pain, Weakness, Parasthesia, Clumsy Finger Movements and Vertigo.
- Objective Parameters are Tenderness, Painful Neck Movements, Restricted Neck Movements, Sensory Loss and Neck Disability Index.
- The diagnosis was radiologically confirmed through X-ray of the Cervical Spine-AnteroPosterior and Lateral view.

Inclusion Criteria

- Patients between the age group of 16-70 years.
- Patients having the signs and symptoms of Cervical Spondylosis.
- Patients who are fit for *NasyaKarma*.

Exclusion Criteria

- Patients with major systemic disorders that may interfere with course of treatment.

- Traumatic, infective and neoplastic conditions of spine.
- Patients who are undergoing other modalities of treatment.

Design of the Study

- It is a comparative study of *NasyaKarma* using *BaladhatryadiTaila* and *MashaTaila* in the management of Cervical Spondylosis.
- 25 patients were selected randomly in each group and both the groups were subjected to *NasyaKarma*.
- The data collected and compiled in both the groups were sorted out, compared & analyzed by subjecting to various statistical methods.

Duration of Study

- *NasyaKarma* for 7 days.
- Total duration of study was for 7 days.

Investigations

- Blood for Hb%, TC, DC, ESR and RBS
- X-ray of the Cervical Spine-AnteroPosterior and Lateral view was taken before the treatment to confirm the diagnosis.

Intervention

For Group - BDT,

- *PoorvaKarma*–*Mukhabhyanga* with *BaladhatryadiTaila* and *Swedana* using Towel squeezed after dipping in hot water.
- *PradhanaKarma* – *NasyaKarma* using *BaladhatryadiTaila* in a dosage of 8 drops in each nostril.
- *PaschatKarma* – *Dhoomapana* using *Haridra churna*.

For Group - MST,

- *PoorvaKarma*–*Mukhabhyanga* with *MashaTaila* and *Swedana* using Towel squeezed after dipping in hot water.
- *PradhanaKarma* – *NasyaKarma* using *MashaTaila* in a dose of 8 drops in each nostril.

- *PaschatKarma – Dhoomapana* using *Haridra churna*.

Assessment Criteria

Subjective & Objective Parameters include the clinical grading and standard scoring method of signs and symptoms of the

condition. These data were collected before the commencement of treatment & after the completion of 7 days of treatment. The statistical test “**Contingency Coefficient test**” was applied through the software **SPSS for windows (version 16.0)**.

Table No.01 showing the Subjective and Objective parameters of Cervical Spondylosis

<i>Subjective Parameters</i>	<i>Objective Parameters</i>
Neck Pain	Tenderness over Cervical region
Radiation of Pain	Movements of Neck Painful or Restricted
Neck Stiffness	Sensory Loss
Weakness	Neurological Deficit
Parasthesia	Power
Clumsy Finger Movements	Reflexes
Vertigo	Neck Disability Index

OBSERVATIONS

Table No.02 showing the Observations of the Clinical Study in both the groups

OBSERVATION	BDT	%	MST	%	TOTAL	%
Age	61-70	32.0%	51-60	32.0%	61-70	26.0%
Sex	Male	72.0%	Male	60.0%	Male	66.0%
Religion	Hindu	72.0%	Hindu	84.0%	Hindu	78.0%
Education	High School	32.0%	High School	32.0%	High School	32.0%
Occupation	Business	36.0%	Service	32.0%	Business	28.0%
Socio-economic status	Middle	60.0%	Middle	48.0%	Middle	54.0%
Marital status	Married	68.0%	Married	88.0%	Married	78.0%

The observation revealed maximum pervasiveness in *Parihani Avastha* i.e., in between 40 to 70 years of age, more in males,

belonging to Hindu religion, educated up to high school, married middle class and involved in Business.

SAMYAK NASYA LAKSHANAS

Table No.03 showing the Samyak Lakshanas of Nasya Karma in both the groups

SAMYAK LAK-SHANA	GROUP	Day	Day	Day	Day	Day	Day	Day	Chi-Square	
		1	2	3	4	5	6	7	²value	P
<i>UroLaghava</i>	BDT	06	08	08	14	14	14	15	1.896	0.929
	MST	05	10	17	20	22	23	23		
<i>ShiroLaghava</i>	BDT	17	17	17	21	21	21	22	3.089	0.797
	MST	10	14	20	23	24	25	25		
<i>IndriyaAchyam</i>	BDT	09	11	17	18	17	17	18	5.279	0.508
	MST	02	07	17	18	18	19	19		
<i>SrotoVishuddhi</i>	BDT	12	15	16	19	20	20	23	4.297	0.636
	MST	05	16	22	23	23	24	24		
<i>ManahSukham</i>	BDT	13	14	14	16	17	18	18	3.461	0.749
	MST	05	09	15	16	15	16	16		

AkshiLaghuta	BDT	13	15	19	19	19	21	22	4.688	0.584
	MST	05	11	19	22	22	23	23		
VaktraVishuddhi	BDT	08	11	12	12	12	14	14	5.061	0.536
	MST	02	06	10	14	14	14	14		
SwaraVishuddhi	BDT	05	07	08	11	11	13	13	1.136	0.980
	MST	02	05	08	10	10	10	10		
Sukhochwasa	BDT	10	14	16	16	16	17	17	1.255	0.974
	MST	08	15	20	22	22	22	22		
SukhaSwapna	BDT	13	18	22	23	23	25	25	0.261	1.000
	MST	12	16	22	23	23	22	22		
SukhaPrabodhana	BDT	13	18	23	22	22	24	25	0.463	0.998
	MST	13	15	21	23	23	22	22		
Vikaropashamah	BDT	04	07	09	15	15	19	23	3.790	0.705
	MST	02	03	12	17	21	23	23		
Pramoda	BDT	04	04	04	03	03	05	06	4.675	0.586
	MST	01	01	04	05	05	06	06		
SmrutiMedhaApti	BDT	00	00	01	01	01	03	06	2.631	0.621
	MST	00	00	02	02	03	03	03		
Bala Apti	BDT	05	09	11	14	14	15	17	5.967	0.427
	MST	00	01	06	07	09	10	10		
Agni Apti	BDT	04	05	08	09	09	09	11	3.617	0.728
	MST	00	02	06	07	07	08	08		

In both the groups, all the patients developed *Samyak Nasya Lakshanas*. No patients in either of the two groups developed any of the *ayoga* or *atiyoga lakshanas*. The Chi-square test revealed that there was no

statistically significant difference between the two groups in the manifestation of *Samyak Lakshanas* indicating homogeneity across both the groups.

RESULTS

Table No.04 showing the Results of the Clinical Study in both the groups

RESULT	PARAMETERS	
STATISTICALLY	GROUP - BDT	GROUP - MST
<i>Very Highly Significant</i> (P value = 0.000)	Neck Pain	Neck Pain
	Stiffness	Parasthesia
	Parasthesia	Neck Disability Index
	Movements of Neck	
	Neck Disability Index	
<i>Highly Significant</i> (P value 0.01)	Radiation of Pain	Radiation of Pain
	Clumsy Finger Movements	Stiffness
	Vertigo	
	Tenderness	
<i>Significant</i> (P value = 0.05 to 0.01)	Weakness	Clumsy Finger Movements
		Tenderness
		Movements of Neck
<i>No Siginificant</i>	Sensory Loss	Weakness
	Power	Vertigo

(P value > 0.05)	Biceps Reflex	Sensory Loss
	Triceps Reflex	Power
	Supinator Reflex	Biceps Reflex
	Neurological Deficit	Triceps Reflex
		Supinator Reflex
	Neurological Deficit	

Both the groups showed statistically very highly significant result in Neckpain, Parasthesia, Neck disability index; highly significant result in Radiation of pain; No significant result in Sensory loss, Power, Reflexes & Neurological deficit. In Group-BDT, statistically very highly significant result in Stiffness & Movements of neck; highly significant result in Clumsy finger movements, Vertigo, Tenderness; significant result in Weakness were observed. In Group-MST, statistically highly significant result was noticed in stiffness; significant result in Clumsy finger movements, Tenderness & Movements of neck; No significant result was observed in Weakness & Vertigo.

The contingency coefficient values & p values revealed Group-BDT showing better result when compared to Group-MST.

DISCUSSION

NasyaKarma always stands high and can be considered as 'Uttama' as it deals with *Uttama Anga*, the *Shiras*. It is the first & foremost treatment of choice in the management of *UrdhwaJatrugata Vikara*. Cervical Spondylosis can be considered as *Urdhwa Jatrugata Roga* by virtue of its site of occurrence in the region of neck. The references pertaining to *NasyaKarma* such as "Greeva Skandorasam cha Balajananartham"& indications of the procedure in *Urdhwajatrugata vikaras* like *GreevaSkanda Roga (Ch.Sa.)*, *Manyaroga (A.Sa.,Sha.Sa.)*, *Manyastambha (Bhe.Sa.,Ka.Sa.)*, *Apabahuka (Su.Sa.,A.Hr.)*, *Bahugada (Sha.Sa.)*, *Amsajagada (Sha.Sa.)* etc. are all giving the

idea behind the relevance of *NasyaKarma* in the treatment of Cervical Spondylosis. The references of *Baladhatryadi Taila & Masha Taila* highlights it's utility in *NasyaKarma* & are told to be best for treating *Urdhwa Jatrugata Rogas* which implies its usefulness in the management of Cervical Spondylosis.

Probable Mode of Action of *NasyaKarma* in Cervical Spondylosis

NasyaKarma 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 & extensive communications with different parts of head, the procedure *NasyaKarma* exhibits its action in combating the disease pathology. *NasyaKarma* selected here is of *Brimhana* variety which successfully helps to counteract the degenerative process by exhibiting *Brimhana* effect on the part affected. The drugs selected here are lipid in nature i.e., *Taila* and 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 & other neuronal structures. Both the formulations 'Baladhatryadi Taila' & 'Masha Taila' contain different *Vatahara dravyas* processed in *Taila*, the action of which can be expected in alleviating *vata*, thereby preventing further degenerative process & 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.

CONCLUSION

Nasyakarma is the treatment of choice in *Urdhwajatrugata Vikara*. It is one amongst the line of treatment of *Vataja Nanatmaja Vikara*. Cervical Spondylosis is a degenerative condition of the cervical spine commonly affecting the old age & middle age. *Baladhatryadi Taila* & *Masha Taila* are told as best in treating *Urdhwajatrugata Vikara* & are highly useful in *Nasyakarma*. Among different varieties of *Nasyakarma*, both of these can be included under *Snehana Navana*, *Brumhana* & *Marsha Nasya*. Though both the groups showed statistically significant result in most of the parameters, the contingency coefficient values & p values revealed that the group treated with *Nasyakarma* using *Baladhatryadi Taila* showed better result when compared to that of the group treated with *Nasyakarma* using *Masha Taila*.

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