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A COMPARATIVE CLINICAL STUDY OF SHAMANA NASYA AND BRIMHANA NASYA IN CERVICAL SPONDYLOSIS

Rohit Mehta

Chief Consultant, Kottakkal Arya Vaidya Sala, Kota, Rajasthan, India

ABSTRACT

Cervical spondylosis is a chronic degenerative condition of the cervical spine that affects the vertebral bodies and intervertebral discs of the neck as well as the contents of the spinal canal. In later stages, spondylotic changes may result in stenosis of the spinal canal and foramina. Recent researches showed that middle aged population shows increased incidence of degenerative disc changes. Most of the times, patients of cervical spondylosis presents with varied degree of signs and symptoms such as neck pain, stiffness, weakness etc which are required to be alleviated by the administration of *shaman (pacifying) chikitsa*. Mean while in order to overcome the root pathology involved in the manifestation of cervical spondylosis *brimhana (nourishment) chikitsa* occupies the prime seat in the line of treatment. *Nasya karma* being the main line of treatment in *jatroordhwa vyadhi* (diseases above the neck) can be adopted in the management of cervical spondylosis. In this regard, adopting *Nasya Karma* as the main line of treatment a comparative clinical study has been undertaken to evaluate the *shaman* effect of *nasya karma* in Group A and *bhrimhana* effect of *nasya karma* in Group B using *prasarini* and *ksheerabala taila 101* with 20 patients in each group respectively in the management of cervical spondylosis attending Kottakkal Arya Vaidya Sala, Kota, Rajasthan and the results were statistically analyzed.

Key words: *Shamana Nasya, Bhrimhana Nasya,* Cervical spondylosis, *Prasarini Talia, Ksheerabala taila 101*

INTRODUCTION

ervical spondylosis is a chronic degenerative condition of the cervical spine that affects the vertebral bodies and intervertebral discs of the neck as well as the contents of the spinal canal. In later stages, spondylotic changes may result in stenosis of the spinal canal and foramina. Recent researches showed that middle aged population shows increased incidence of degenerative disc changes.[1] Most of the times, patients of cervical spondylosis presents with varied degree of signs and symptoms such as neck pain, stiffness, weakness etc which are required to be alleviated by the administration of *shamana chikitsa*. Meanwhile, in order to overcome the root pathology involved in manifestation of cervical spondylosis, *Brimhana chikitsa* occupies the prime seat in its line of treatment. *Nasya karma* being the main line of treatment in *jatroordhwa vyadhi* can be adopted in the management of cervical spondylosis.

In this regard, adopting Nasya Karma as the main line of treatment a comparative clinical study was undertaken to evaluate the *Shamana* effect of *Nasya karma* in Group A with *Prasarini taila* and *Brimhana* effect of *Nasya karma* in Group B with *Ksheerabala taila 101* done on 20 patients of cervical spondylosis in each group attending the Kottakkal Arya Vaidya Sala, Kota, Rajasthan and the results were statistically analyzed.

OBJECTIVES OF THE STUDY

- To evaluate efficacy of *Shamana* Nasya with *Prasarini taila*[2] in cervical spondylosis
- To evaluate efficacy of *Brimhana* Nasya with *Ksheerabala101*[3] in cervical spondylosis
- To compare both the groups and to ascertain the superiority of one group over the other.

MATERIALS AND METHODS

Sources of data

- 40 patients of cervical spondylosis were selected Kottakkal Arya Vaidya Sala, Kota, Rajasthan and assigned into two groups consisting of 20 in each.

Method of collection of data

- This is a comparative clinical study with pre-test and post-test design where in a 40 patients of either sex diagnosed as cervical spondylosis were randomly assigned into two groups viz., Group A and Group B comprising of 20 patients in each.
- A case proforma specially designed and duly filled with necessary details pertaining to history taking, clinical examination and assessment parameters was prepared.
- The results were assessed as per the grading of assessment parameters of signs and symptoms of cervical spondylosis and the data obtained was statistically analysed by adopting paired 't' test (within the group) and unpaired 't'test (in between the group).

DIAGNOSTIC CRITERIA

- Diagnostic criteria mainly based on the signs and symptoms of cervical spondylosis.
- Radiological confirmation of the disease was done by taking the X-ray of Cervical spine (Antero-posterior and Lateral view).

INCLUSION CRITERIA

- Patients between the age group 30 - 70 years of either sex were selected.
- Patients with signs & symptoms of cervical spondylosis.
- Patients fit for *Nasya karma.*

EXCLUSION CRITERIA

- Patients who are undergoing other modalities of treatment that may intervene the course of treatment.
- Any other systemic disorders that may interfere with the course of treatment.

STUDY DESIGN

- This was a comparative clinical study with pre-test and post-test design conducted on 40 patients presenting with the signs and symptoms of cervical spondylosis.

INTERVENTION

Group-A

- *Poorva karma (pre procedure) - Sthanika Abhyanga (local massage)* with *Prasarini taila, Sthanika Swedana* with *Ushna jala.*
- *Pradhana karma (main procedure) – Nasya karma* with *Prasarini taila,* 8 drops in each nostril.
- *Paschat karma (post procedure) – Kavalagraha (gargling)* with warm water, *Dhoomapana* with *Haridra* was performed.

Group-B

- *Poorva karma - Sthanika Abhyanga* with *Ksheerabala taila,* [4] *Swedana* with *Ushna jala.*
- *Pradhana karma - Nasya karma* with *Ksheerabala 101,* 8 drops in each nostril.
- *Paschat karma - Kavalagraha* with warm water, *Dhoomapana* with *Haridra* was performed.

Course of treatment: 7 consecutive days.

ASSESSMENT CRITERIA

The following Subjective and Objective parameters were assessed using different grading – before Treatment and after Treatment.

ABLE NO. 1 SHOWING PARAMETERS	
SUBJECTIVE PARAMETERS	**OBJECTIVE PARAMETERS**

1. Neck pain	1.Tenderness
2. Neck Stiffness	2. Restricted neck movements a .Flexion b. Extension c. Right lateral Flexion d. Left Lateral Flexion e. Right Lateral Rotation f. Left Lateral Rotation
3. Radiation of pain	3.Sensory loss of Upper limb
4. Painful neck movements	
5. Weakness of upper limb	
6. Giddiness	

OBSERVATIONS AND RESULTS The observations and results of the clinical study were classi-

TABLE NO.2 SHOWING THE OBSERVATIONS OF CLINICAL STUDY

Parameter	**Group A**			**Group B**		
	Value		**%**	**Value**		**%**
Age in Years	41-50	8	40%	41-50	16	80%
Sex	Female	11	55%	Female	13	65%
Religion	Hindu	17	85%	Hindu	19	95%
Education	Graduation	7	35%	Graduation	6	30%
Marital Status	Married	20	100%	Married	20	100%
Socio-economic Status	Middle class	11	55%	Middle class	15	75%
Diet	Mixed	16	80%	Mixed	14	70%
Occupation	Housewife	8	40%	Housewife	11	55%
Prakruti	*VataKapha*	16	80%	*VataKapha*	9	45%
Sara	*Madhyama*	19	95%	*Madhyama*	20	100%
Samhanana	*Madhyama*	20	100%	*Madhyama*	20	100%
Pramana	*Madhyama*	20	100%	*Madhyama*	20	100%
Satmya	*Vyamishra*	20	100%	*Vyamishra*	20	100%
Satva	*Madhyama*	19	95%	*Madhyama*	20	100%
Abhyavarana shakti	*Madhyama*	17	85%	*Madhyama*	18	90%
Jarana shakti	*Madhyama*	19	95%	*Madhyama*	19	95%
Vaya	*Madhyama*	20	100%	*Madhyama*	20	100%

fied by preparing the master chart and were tabulated depicting both the values and percentages along with suitable graphical presentations.

TABLE NO.3 SHOWING THE RESULTS OF NASYA KARMA ON ASSESSMENT PARAMETERS WITHIN GROUP A (paired 't' test)

SYMPTOMS	**N**	**MEAN**	**SD**	**SE**	**'t' value**	**p value**	**Remarks**

Neck Pain	20	1.65	0.49	0.11	15.08	< **0.001**	**HS**
Neck Stiffness	20	1.30	0.47	0.11	12.37	< **0.001**	**HS**
Radiation of Pain	20	0.75	0.44	0.10	7.55	< **0.001**	**HS**
Painful Neck Movements	20	1.15	0.67	0.15	7.67	< **0.001**	**HS**
Weakness of Upper Limb	20	0.15	0.37	0.08	1.83	> **0.05**	**NS**
Tenderness	20	0.60	0.68	0.15	3.94	< **0.001**	**HS**
Restricted Neck Flexion	20	1.05	0.22	0.05	21.00	< **0.001**	**HS**
Restricted Neck Extension	20	1.05	0.22	0.05	21.00	< **0.001**	**HS**
Restricted Right Lateral Flexion	20	0.85	0.37	0.08	10.38	< **0.001**	**HS**
Restricted Left Lateral Flexion	20	0.85	0.37	0.08	10.38	< **0.001**	**HS**
Restricted Right Lateral Rotation	20	0.85	0.37	0.08	10.38	< **0.001**	**HS**
Restricted Left Lateral Rotation	20	0.85	0.37	0.08	10.38	< **0.001**	**HS**
Sensory Loss of Upper Limb	20	0.15	0.37	0.08	1.83	> **0.05**	**NS**

TABLE NO 4. SHOWING THE RESULTS OF NASYA KARMA ON ASSESSMENT PARAMETERS WITHIN GROUP B (paired 't' test)

SYMPTOMS	**N**	**MEAN**	**SD**	**SE**	**'t' value**	**p value**	**Remarks**
Neck Pain	20	1.55	0.51	0.11	13.58	< **0.001**	**HS**
Neck Stiffness	20	1.20	0.41	0.09	13.08	< **0.001**	**HS**
Radiation of Pain	20	1.05	0.51	0.11	9.20	< **0.001**	**HS**
Painful Neck Movements	20	1.15	0.37	0.08	14.04	< **0.001**	**HS**
Weakness of Upper Limb	20	0.15	0.37	0.08	1.83	> **0.05**	**NS**
Tenderness	20	0.85	0.49	0.11	7.77	< **0.001**	**HS**
Restricted Neck Flexion	20	0.90	0.31	0.07	13.08	< **0.001**	**HS**
Restricted Neck Extension	20	0.85	0.37	0.08	10.38	< **0.001**	**HS**
Restricted Right Lateral Flexion	20	0.80	0.41	0.09	8.72	< **0.001**	**HS**
Restricted Left Lateral Flexion	20	0.75	0.44	0.10	7.55	< **0.001**	**HS**

Restricted Right Lateral Rotation	20	0.10	0.31	0.07	1.45	> **0.05**	**NS**
Restricted Left Lateral Rotation	20	0.15	0.37	0.08	1.83	> **0.05**	**NS**
Sensory Loss of Upper Limb	20	0.15	0.37	0.08	1.83	> **0.05**	**NS**

TABLE NO.5 SHOWING THE RESULTS OF NASYA KARMA ON ASSESSMENT PARAMETERS IN BETWEEN GROUP A AND GROUP B (unpaired 't' test)

Parameter	BT/AT	Group	Mean	S.D.	S.E.	P.S.E.	T value	P value	Remark
Neck Pain	**BT**	**A**	2.85	0.37	0.08	0.08	1.83	> **0.05**	**NS**
		B	3.00	0.00	0.00				
	AT	**A**	1.30	0.47	0.11	0.15	1.33	> **0.05**	**NS**
		B	1.35	0.49	0.11				
Neck Stiffness	**BT**	**A**	2.20	0.62	0.14	0.18	1.13	> **0.05**	**NS**
		B	2.40	0.50	0.11				
	AT	**A**	1.00	0.46	0.10	0.12	0.81	> **0.05**	**NS**
		B	1.10	0.31	0.07				
Radiation of Pain	**BT**	**A**	2.00	0.56	0.13	0.19	1.07	>**0.05**	**NS**
		B	1.80	0.62	0.14				
	AT	**A**	0.95	0.22	0.05	0.12	0.80	> **0.05**	**NS**
		B	1.05	0.51	0.11				
Painful Neck Movements	**BT**	**A**	2.15	0.37	0.08	0.13	1.13	> **0.05**	**NS**
		B	2.30	0.47	0.11				
	AT	**A**	1.00	0.00	0.00	0.08	1.83	> **0.05**	**NS**
		B	1.15	0.37	0.08				
Weakness of Upper Limb	**BT**	**A**	0.40	0.60	0.13	0.21	1.42	> **0.05**	**NS**
		B	0.70	0.73	0.16				
	AT	**A**	0.25	0.44	0.10	0.15	1.98	> **0.05**	**NS**
		B	1.55	0.51	0.11				
Tenderness	**BT**	**A**	2.05	0.22	0.05	0.10	1.04	> **0.05**	**NS**
		B	2.15	0.37	0.08				
	AT	**A**	1.25	0.55	0.12	0.17	1.79	> **0.05**	**NS**
		B	1.55	0.51	0.11				
Restricted Neck Flexion	**BT**	**A**	1.80	0.62	0.14	0.15	1.71	> **0.05**	**NS**
		B	2.05	0.22	0.05				
	AT	**A**	0.90	0.31	0.07	0.07	1.45	> **0.05**	**NS**
		B	1.00	0.00	0.00				
Restricted Neck Extension	**BT**	**A**	1.75	0.64	0.14	0.15	1.98	> **0.05**	**NS**
		B	2.05	0.22	0.05				

	AT	**A**	0.90	0.31	0.07	0.07	1.45	**> 0.05**	**NS**
		B	1.00	0.00	0.00				
Restricted Right Lateral Flexion	**BT**	**A**	1.80	0.62	0.14	0.21	0.47	**> 0.05**	**NS**
		B	1.70	0.73	0.16				
	AT	**A**	0.90	0.31	0.07	0.12	0.00	**> 0.05**	**NS**
		B	0.90	0.45	0.10				
Restricted Left Lateral Flexion	**BT**	**A**	1.65	0.75	0.17	0.25	0.20	**> 0.05**	**NS**
		B	1.60	0.82	0.18				
	AT	**A**	0.85	0.49	0.11	0.15	0.00	**> 0.05**	**NS**
		B	0.85	0.49	0.11				
Restricted Right Lateral Rotation	**BT**	**A**	0.30	0.66	0.15	0.20	0.50	**> 0.05**	**NS**
		B	0.20	0.62	0.14				
	AT	**A**	0.15	0.37	0.08	0.11	0.47	**> 0.05**	**NS**
		B	0.10	0.31	0.07				
Restricted Left Lateral Rotation	**BT**	**A**	0.40	0.75	0.17	0.24	0.43	**> 0.05**	**NS**
		B	0.30	0.73	0.16				
	AT	**A**	0.20	0.41	0.09	0.12	0.41	**> 0.05**	**NS**
		B	0.15	0.37	0.08				
Sensory Loss of Upper Limb	**BT**	**A**	0.10	0.31	0.07	0.11	0.47	**>0.05**	**NS**
		B	0.15	0.37	0.08				
	AT	**A**	0.05	0.22	0.05	0.10	1.04	**>0.05**	**NS**
		B	0.15	0.37	0.08				

DISCUSSION

In *Ayurveda*, a suitable route of drug administration is identified mainly on the basis of regional propinquity of the site of pathology. Similarly, *Nasya Karma* which involves nasal route of drug administration can be taken as the best line of treatment in the management of Cervical spondylosis as it is the nearest possible route of drug administration with which one can counter attack the site of pathology. Among the different types of *Nasya Karma*, *Shamana Nasya* and *Brimhana Nasya* are to be adopted to tackle cervical spondylosis, a painful as well as degenerative condition of cervical spine which requires *shamana* and *brimhana* respectively. In this regard, a clinical study was undertaken to evaluate and to compare the efficacy of *Shamana Nasya* with *Prasaraini Taila* and *Brimhana Nasya* with *Ksheerabala Taila101* in the management of cervical spondylosis.

In the present study, 40 patients were selected and assigned randomly in to two groups viz., Group A (*Shamana Nasya* Group) treated with *Prasarini taila* and Group B (*Brimhana Nasya* Group) treated with *Ksheerabala Taila* 101 respectively in the dosage of 8 drops in each nostril for a period of 7 days. Maximum patients of this study were above 40 years of age, usually symptoms of the disease starts after 4th decade of life, which is *Hani* stage of *Madhya Vaya (middle age)*. Maximum 60% patients were female this supports that CS is more commonly found in female. The type of lifestyle of the patients indicates that 47.5% of the patients were having household works & 27% were having sedentary type of work. This supports the fact that the excessive work plays an

important role in the development of pathology.

As per the results, there is no statistically significant difference between the two groups and hence the present study revealed that the efficacy of *Nasya karma* remains almost the same in both *Shamana Nasya* and *Brimhana Nasya* in treating cervical spondylosis. Probably, the above result may have to be related to the concept of *Brimhana* exerting *Shamana* effect and *Shamana* exerting *Brimhana* effect which is very clearly evident in the verse mentioned in *Ashtanga Sangraha by Vagbhata Acharya* Brimhanam shamanantweva vayoh pittanilasya cha|| [6](A.S.Su.24/7).

CONCLUSION

The major processes in pathology of cervical spondylosis are disc dehydration and bone degeneration - vividly showing a reduction in *Kapha Bhavas* and increase of *Vata*. At the level of *Mahabhootas* the *Prithvi and Jala Mahabhootas* exhaust gradually with a subsequent increase of *Vayu* and *Aakasha Bhootas*. Hence, body needs to acquire more *Snigdha Bhavas* to resist the process of degeneration which was achieved by *Shamana Nasya* and *Brimhana Nasya.* The present study revealed that there is no statistically significant difference between the two groups which may be related to the concept of *Brimhana* exerting *Shamana* effect and *Shamana* exerting *Brimhana* effect.

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CORRESPONDING AUTHOR

Dr. Rohit Mehta
B.AM.S. (M.D.), Chief consultant,
Kottakkal Arya Vaidya Sala,
Kota, Rajasthan, India
Email: rohitlove04@gmail.com

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