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Clinical evaluation of *Tikta Kshira Basti* and *Patrapinda Sveda* in Cervical Spondylosis (*Asthigata Vata*)

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ABSTRACT

Cervical bone is an identification of human body which differentiate from animal in a unique way. Due to its multidimensional movement human workings are effortless. But due to modernisation and fast life some hazards become nail of comfort of humans. Cervical spondylosis is one of them. Ayurveda has its good solution specially *Panchakarma* procedure which is advisable by Acharya Sushruta itself. Here in present article an effort has been made to rule out the evaluation of *Tikta Kshira Basti* and *Patrapinda Sveda* in cervical spondylosis in clinical practice.

Key words: *Panchakarma, Sushruta, Tikta Kshira Basti, Patrapinda Sveda.*

INTRODUCTION

Today is the era of modernization and fast life. Everybody is busy and living stressful life. Changing of life style of modern human being has created several disharmonies in his biological system. Advancement of busy, professional and social life, improper sitting posture in offices, continuous work in one posture and overexertion, jerking 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 irregular life style is responsible for early degenerative changes in bodily tissue and play a vital role in the manifestation of such degenerative disorder. In this way, this disease is now becoming a significant threat to the working

population.

Cervical disc disease is emerging as one of the most common diseases especially of the urban population. Regarding the gravity of the disease, though it is not fatal instantly but it causes more severe complication in later stage. It cripples the patient, makes him burden to others, makes deterioration in the day to day work due to severity of pain and it augments the quality of life. Thus it does not cut the years of life but life of the years.

Cervical Spondylosis but it can be considered as *Asthigata Vata*,^[1] because its core pathogenesis is (1) degeneration of bone tissue and (2) vitiation of *Vata*. Moreover, such degenerative type of condition with clinical manifestation can also be considered under the broad umbrella of *Vata Vyadhi*.^[2] Thus classical aspects of *Asthigata Vata* can be implemented in the disease Cervical Spondylosis.^[3]

Cervical Spondylosis (*Asthigata Vata*) is the affliction of middle age where degeneration of *Dhatu* (tissue) starts. This degenerative type of disease is in great demand of *Brimhana* (anabolic) and *Rasayana* (rejuvenative) therapy.

To fulfil this demand, drugs having such properties should be utilized. *Asthishrinkhala* (*cissus quadrangularis*) is a well known tissue specific

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Rasayana drug for *Asthi Dhatu* (bony tissue), hence it has been used in the present study as a *Shamana* drug in all the clinical groups.

Panchakarma is the treatment of choice in *Asthivaha Sroto Dusti*. Sushruta says- “*Dosha Ksheena Brihayitvyaha, Vriddhaha Nirharitavya*” - Su.Ch.33/3^[4]

This is the basic principle of treatment of any disease according to Acharya Sushruta. In case of Cervical Spondylosis (*Asthigata Vata*), both dimensions of this concept should be adopted. *Panchtikta Kshira Basti*^{[5],[6]} fulfills the above demand because *Kshira* and *Sneha* pacify provoked *Vata* as well nourish *Asthi* and *Majja Dhatu* while *Tikta Rasa* restores *Asthi* with its *Khara* property and *Akash* and *Vayu Mahabhuta* dominance. Hence this principle was implemented by Charaka while giving the line of treatment of *Asthiashrita Vyaadhi* (bony disorders).

Further, very few works have been carried out on the role of *Tikta Ksheera Basti* in the management of *Asthigata Vata* and not a single work has been done on the role of *Panchtikta Kshira Basti*^[7] (in the form of *Kala Basti*) with special reference to cervical spondylosis. Thus attempt has been made in these articles to evaluate the effect of *Panchtikta Kshira Basti* in cervical spondylosis (*Asthigata Vata*).^[8]

Swedana Karma^[9] is also a very useful *Panchakarma* modality used as a *Purvakarma* (preparatory procedures) and main therapeutic measure. *Swedana* is specially indicated in symptoms like *Sankocha* (stiffness), *Ayama* (pain), *Shoola* (tenderness), *Stambha* (restricted movement), *Gaurav* (heaviness), *Supti* (numbness); virtually all these indications are cardinal symptoms of cervical spondylosis. In this way *Swedana* might play crucial role in relief of such symptomatology of cervical spondylosis

Patrapinda Svada is modified method of *Sankara Svada*^[10] mentioned by Charaka.^[11] It is more practical and more effective measure especially in painful condition like cervical spondylosis. Keeping this concept in mind, *Nirgundi Patrapinda Svada*^[12] has been selected in this study.

MATERIALS AND METHODS

Criteria for selection of patients

43 patients of Cervical Spondylosis (*Asthigata Vata*) were registered on the basis of symptomatology and relevant X-ray changes of cervical spondylosis from O.P.D. and I.P.D. of I.P.G.T. and R.A. Hospital, Jamnagar. The patients were selected randomly, irrespective of their age, sex, religion etc. and divided into three groups. All the selected patients were further investigated clinically on the basis of specially prepared Performa, incorporating all the points of history taking and physical examination mentioned in Ayurveda as well as in modern texts. The detailed account of clinical history was taken and physical examination of each patient was undertaken on the basis of this Performa.

Inclusion and Exclusion Criteria

Patients in between age group from 20 - 60years with classical signs and symptoms of cervical spondylosis, whose X-ray of cervical spine showing relevant changes of cervical spondylosis were included in trail. While patient below the age of 20 and above age 65 years also associated conditions like fibrositis, rheumatoid spondylitis, ankylosing spondylosis, etc. were excluded and patient having fatal complications of serious illness were excluded. Lastly patients having pregnancy were also excluded from the study.

Grouping

Group A (NPPS-AV):

In this group, total 14 patients were subjected to *Nirgundi Patrapinda Svada* along with *Asthishrinkhala Vati* for 16 days.

1. *Nirgundi Patra Pinda Svada*: 20 minutes everyday
2. *Asthishrinkhala Vati*: 4 tablet of 500mg each, thrice daily after meal.

Group B (PKB-AV)

Panchatikta Kshira Basti (Kala Basti) along with *Asthishrinkhala Vati* was given to the selected 10 patients of cervical spondylosis for 16 days in this group.

1. *Panchatikta Kshira Basti* in the form of *Kala Basti*
2. *Anuvasana Basti* of *Bala Taila* (120 ml)
3. *Niruha Basti* having *Panchatikta Kshira Basti* (500ml)
4. *Asthishrinkhala Vati*: 4 tablet of 500mg each, thrice daily after meal

Group C (AV)

In this group selected 14 patients were given only *Asthishrinkhala Vati* as *Shamana* drug for 16 days. Dose: 4 tablet of 500mg each, thrice daily after meal

Criteria for assessment

The improvement in the patients was assessed on the basis of relief in signs and symptoms as well as radiological examination of the disease. All the signs and symptoms were given scoring depending upon their severity to assess the affect of the treatment objectively.

OBSERVATION AND RESULTS

Total 38 patients of cervical spondylosis (*Asthigata Vata*) were studied in the present study. They were in the age between 20-65 years with maximum patients in the age group of 31-40 years (32.56%). In this series maximum numbers of patients were male (55.81%), Hindu (81.40 %), having education up to graduation level (37.21%), from Middle class (34.88%), house wife (25.58%), vegetarian (72.09%) and Married (90.70 %).

Dashavidha Pariksha biostatistics revealed that maximum numbers of the patients were having *Vatapitta Deha Prakriti* (44.21%), *Madhyama Sara* (53.49%), *Madhyama Samhanana* (39.53%), *Avara Satva* (67.44%), *Madhyama Satmya* (58.13%), *Madhyama Vyayama Shakti* (44.19%), *Madhyama Abhyavaharana Shakti* (53.49%) and *Avara Jarana Shakti* (41.86%).

Review of the personal dietary history showed that 37.21% of patients were having poor and moderate appetite each. 72.09% patients were taking vegetarian diet and 44.19% patients were having *Madhura* (sweet) *Rasa* dominant diet.

Review of the personal history showed that in present series maximum number of the patients were doing work for 6-8 hours (48.84%), working in standing position (25.58%), having disturbed sleep (51.16%) and addicted to tea (74.42%).

Ruksha (dry) diet (55.81%), *Shita* (cold) diet (44.19%), *Laghu* (light) diet (32.56%), *Katu Rasa* (pungent) dominant diet (34.88%), *Viruddhasana* (incompatible diet) (41.86%), fasting (16.28%) and *Vishamasana* (51.16%) were the probable *Aharatmaka Nidanas* (dietary factors) observed in most of the patients. *Shita* (cold) *Sevana* (30.23%), *Dukhasana* (faulty sitting posture) (25.58%), and *Atiprajagarana* (late nights) (23.26%) were found as *Viharatmaka Nidana* (lifestyle factors) in majority of the patients. *Chinta* (stress) (44.19%) was the prominent *Manas Nidanas* (mental factor) obtained in maximum number of the patients. *Abhighata* (trauma) (32.56%) was obtained as *Agantuja Nidana* (incidental factor) in maximum number of the patients.

Chief complaints observed in patients were pain (93.02%), tenderness (74.42%), stiffness (86.05%) and tingling sensation (86.05%). Maximum i.e. 39.53% patients were having chronicity of more than 2 years. In maximum patients, site involved for pain (90.70%), stiffness (76.74%) and tenderness (74.42%) was neck. Knee arthritis (46.51%) was found the commonest associated disease.

Physical examination of the affected part of the patient revealed that maximum patients were having restricted movement of neck flexion (65.12%), diminished muscle power of Elbow extensor muscle group (34.88%) and diminished Supinator reflex (41.86%)

Analysis of the *Doshika* involvement shows that 100% patients were having *Vatadosha Dushti Lakshanas*, 34.88% patients having associated *Pitta* and 39.53% patients were having associated *Kaphadosha Dushti Lakshanas*. Review of *Srotodusti Lakshanas* reveals that 100% patients were having *Asthivaha Srotodushti Lakshanas*. *Majjavaha* (97.67%) and *Purishvaha* (41.86%) *Sroto Dushti Lakshanas* were also present.

X-ray investigation showed that maximum numbers of patients were having spondylotic changes (30.23%) and early cervical spine (27.91%). Level of lesion was C5-C6 in maximum number of patients (67.44%).

Interrogation regarding treatment history revealed that maximum number of patients had taken allopathic medication (93.02%).

Effect of Therapy

In *Patrapinda Sweda* group 14 patients were treated where *Nirgundipatrapinda Sweda* for 20 minutes and *Asthishrinkhala Vati* in the dose of 12 pills (500mg each) per day in 3 divided dose were given for 16 days. Results showed that tenderness, pain and vertigo was reduced by 87.50%, 71.79% and 83.33% respectively which were statistically highly significant. Statistically highly significant results were also found in headache (71.43%), stiffness (53.57%) and tingling sensation (42.86%). Restricted neck movements like flexion, extension and lateral flexion were improved by 77.78%, 80% and 73% respectively. Elbow flexion and shoulder abduction were improved by 80% and 40% respectively.

Maximum improvement was found in Triceps reflex (55.56%) followed by biceps and supinator reflex (50% each). Overall effect shows that 7.14% patients in this group had complete remission. 28.57% patients of this group were markedly improved and same percentage of patients were improved, whereas 5 patient i.e. 35.71% were remained unchanged.

In *Panchatikta Kshira Basti* group 10 patients were treated where *Basti* was given as per *Kala Basti* schedule in which *Niruha Basti* was given with *Panchtiktakshira Basti* (Approx. 500ml) and *Anuvasana Basti* with *Bala* oil (120ml) for 16 days along with *Asthishrinkhala Vati* in the dose of 12 pills (500mg each) per day in 3 divided dose for 16 days. Results showed that Pain (66.67%), stiffness (62.50%), tenderness (27.59%), headache (45.83%), tingling (77.14%) and Numbness (87.50%) were improved highly significantly. The restriction in Flexion and Extension of neck was improved by 61.54% and 69.23%. Significant improvement ($P < 0.05$) were found in shoulder abduction (46.15%), elbow flexion

(50.00%), elbow extension (42.86%) and wrist flexion (44.44%). Good improvement was found in diminished supinator reflex (77.78%), triceps reflexes (75.00%) and Biceps reflex (66.67%). *Tikta Kshira Basti* and *Asthishrinkhala Vati* provided improvement in 40.00% of patients. Complete remission was found in 10% patients. 20.00% patients were markedly improved while 30.00% patients remained unchanged.

In *Asthishrinkhala Vati* group 14 patients were treated where *Asthishrinkhala Vati* was given in the dose of 12 pills (500mg each) per day in 3 divided doses for 16 days. Results showed that 61.54% reduction was observed in pain. Stiffness and headache were also decreased by 53.85% and 82.61% respectively ($P < 0.001$).

Diminished shoulder abduction was improved by 54.55%. Diminished biceps reflex and triceps reflex were improved by 54.55% and 0.67% respectively which were statistically significant ($P < 0.05$). 7.14% patients in this group had complete remission. 28.57% patients of this group were markedly improved and same percentage of patients were improved, whereas 5 patient i.e. 35.71% were remained unchanged.

No major changes were observed in laboratory investigations e.g. TLC, DLC, ESR, PCV, Hb, FBS and X-ray remained unchanged in all the groups.

Comparison of the effect of therapies shows that pain, tenderness, vertigo and restricted neck movements were better managed by *Patrapinda Sweda* group whereas stiffness, tingling sensation, numbness, diminished muscle power and diminished reflexes were better relieved in *Panchtiktakshira Basti* group. Both of this group proved better in comparison to *Asthishrinkhala Vati (Shamana)* group.

DISCUSSION

Cervical disc disease is emerging as one of the most common diseases especially of the urban population. Regarding the gravity of the disease, though it is not fatal instantly but it causes more severe complication in later stage. It cripples the patient, makes him burden to others, makes deterioration in the day to

day work due to severity of pain and it augments the quality of life. Thus it does not cut the years of life but life of the years. Being health science, Ayurveda has mentioned many types of disorders and their line of treatments. Some of the disorders described in classics are found precisely in present time but some disorders of present time need to be interpreted with classics on the basis of *Dosha*, *Dushya* and *Samprapti* (etiopathogenesis) etc. There is no exact clinical entity mentioned in classics like Cervical Spondylosis but it can be considered as *Asthigata Vata* because its core pathogenesis is (1) degeneration of bone tissue and (2) vitiation of *Vata*. Moreover, such degenerative type of condition with clinical manifestation can also be considered under the broad umbrella of *Vata Vyadhi*. Thus classical aspects of *Asthigata Vata* can be implemented in the disease Cervical Spondylosis. Though there are few other disorders mentioned in classics which are having some resemblance with cervical spondylosis e.g. *Vishwachee*, *Manyagraham*, *Manyastambha*, *Grivastambha*, *Shirograham*, *Greevahundanum* etc. However description available regarding these conditions are very concised, so precise interpretation with Cervical Spondylosis cannot be established.

There are many clinical conditions described in the modern medical texts, which involves the neck region and cervical spine, from which the most common condition is cervical spondylosis. In cervical spondylosis, the main pathology is found in the cervical spine primarily in the intervertebral discs and vertebral bodies. The cervical spine has to be mobile and yet it has no support like the ribs in the dorsal spine or the pelvis in the lumbar spine. It has to support the head and a considerable strain is born by the neck when the arm muscles are put to vigorous use. Hence, the cervical spine is most vulnerable to the injury. The factors like old age, trauma, occupational stress, poor posture in sitting or sleeping, excessive travelling etc. lead to the spondylosis changes in the cervical spine. This pathogenesis leads to the restriction of the movements of the neck. As the disease process

progresses the osteophyte formation occurs between two adjacent vertebrae, which causes the compression of the nerve root passes through the inter-vertebral foramen of the related vertebrae. It also compresses the vertebral artery. The compression of nerve root exhibits the neurological symptoms like pain, tingling, numbness etc. in the related area of the nerve supply. The vertebral artery compression exhibits the symptoms like vertigo, headache etc. Sometimes the local tenderness has also been found as a symptom of cervical spondylosis.

The above mentioned aetiological factors of cervical spondylosis can be included as the *Nidanas* of *Vata Prakopa* according to Ayurveda. These *Nidanas* cause the vitiation of *Vata*, which in turn may lodge in to the *Asthi Dhātu*, due to the relation of *Asraya - Asrayi Bhava*. In this disease the vitiated *Vata* lodges in to the cervical region because some of these *Nidanas* cause *Khavaigunya* specially in *Asthi* of *Greeva*(neck) region. The vitiated *Vata* also diminishes *Slesaka Kapha* along with *Asthi Kshaya*, which are the main events found in the pathogenesis of cervical spondylosis. Cervical Spondylosis (*Asthigata Vata*) is the affliction of middle age where degeneration of *Dhatu* (tissue) starts. This degenerative type of disease is in great demand of *Brimhana* (anabolic) and *Rasayana* (rejuvenative) therapy. To fulfil this demand, drugs having such properties should be utilized. *Asthishrinkhala* (*Cissus quadrangularis*) is a well known tissue specific *Rasayana* drug for *Asthi Dhātu* (bony tissue) hence it has been used in the present study as a *Shamana* drug in all the clinical groups.

Panchakarma is the treatment of choice in *Asthivaha Sroto Dusti*. Sushruta says - "*Dosha Ksheena Brihayitvyaha, Vriddhaha Nirharitavya*"- Su.Ch.33/3. This is the basic principle of treatment of any disease according to Acharya Sushruta. In case of Cervical Spondylosis (*Asthigata Vata*), both dimensions of this concept should be adopted. *Panchtikta Shira Basti* fulfills above demand because *Kshira* and *Sneha* pacify provoked *Vata* as well nourish *Asthi* and *Majja Dhātu* while *Tikta Rasa* restores *Asthi* with its *Khara* property and *Akash* and *Vayu Mahabhuta* dominance. Hence this principle was implemented by Charaka

while giving the line of treatment of *Asthiashrita Vyadhi* (bony disorders). Further, very few works have been carried out on the role of *Tikta Ksheera Basti* in the management of *Asthigata Vata* and not a single work has been done on the role of *Panchtikta Kshira Basti* (in the form of *Kala Basti*) with special reference to cervical spondylosis. Thus attempt has been made here to evaluate the effect of *Panchtikta Kshira Basti* in cervical spondylosis (*Asthigata Vata*).

Swedana Karma is also a very useful *Panchakarma* modality used as a *Purvakarma* (preparatory procedures) and main therapeutic measure. *Swedana* is specially indicated in symptoms like *Sankocha* (stiffness), *Ayama* (pain), *Shoola* (tenderness), *Stambha* (restricted movement), *Gaurav* (heaviness), *Supti* (numbness). Virtually all these indications are cardinal symptoms of cervical spondylosis. In this way *Swedana* might play crucial role in relief of such symptomatology of cervical spondylosis.

Patrapinda Sweda is modified method of *Sankara Sweda* mentioned by Charaka. It is more practical and more effective measure especially in painful condition like cervical spondylosis. Keeping this concept in mind, *Nirgundipatrapinda Sweda* has been selected in this present study. Total 43 patients were registered on the basis of clinical symptomatology irrespective of age, sex; religion in this study, out of them 38 patients successfully completed their treatment schedule. Patients were randomly divided into three groups.

Probable mode of action of *Nirgundipatrapinda Sweda*,

- Improves blood circulation and metabolism locally.
- Relieves para-vertebral muscular spasm and pain
- Strengthens para vertebral muscles
- Helps repair damaged myelin sheath
- Improves proprioception status.
- Local anti inflammatory effect.

Mode of action of *Panchtikta Kshira Basti*

- Helps to retard and arrest dehydration of the inter-vertebral disc

- Strengthens para vertebral muscles
- Helps repair damaged myelin sheath
- Increase nutrition of bony tissue and strengthens .
- Improves overall nutrition status of body.
- Improves intestinal health and absorption.

Mode of action of *Asthisrinkhala Vati*

- *Asthisrinkhala vati* also provided good results in headache, pain, stiffness, vertigo, muscle power.
- It has *Shothahara* and *Vedanasthapana* properties
- *Madhura, Guru, Vatahara* properties which are antagonist to *Vata* properties
- Specific anabolic drug for bony tissue, analgesic and anti-inflammatory drug.

CONCLUSION

Cervical disc disease is emerging as one of the most common diseases especially of the urban population. It is commonly seen in society as a prominent problem. The prevalence of this disease has been expected to be increasing due to improper lifestyle and poor working, sleeping and sitting postures. It is age related degenerative disorder. Pathology starts at C5-6 and C6-7 (More susceptible C5-6) vertebrae and gradually degenerate the annulus fibrosis and reduced intervertebral disc space and formation of osteophyte presenting with headache, restricted movement, stiffness, head reeling, tingling sensation in hand. There is no such classical disease which can be equated precisely with cervical spondylosis, but on the basis of core pathogenesis, this condition can be considered as *Asthigata Vata*. Being a type of *Vata Vyadhi*, general *Vata* provoking factors are accepted as *Nidana*. *Vyana Vayu* and *Slesaka Kapha* are essential component to produce *Asthigata Vata*. Ayurvedic therapy addresses the most fundamental causes of the problem. There are number of treatment modalities available in Ayurveda for such condition e.g. *Basti, Nasya, Patrapinda Sweda, Abhayanga* and internal medications. Conclusion can be made from the present study that *Basti* can offer good benefit in neurological manifestations of cervical

spondylosis like tingling sensation, numbness, diminished muscle power and diminished reflexes where as *Patrapinda Sweda* can do better to relive pain, tenderness, stiffness, vertigo and restricted movements. An integrated approach bestows unlimited benefits to the suffering.

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