



Case Study

ROLE OF AGNI KARMA AND SNEHAPANA IN MANAGEMENT OF PAIN IN CERVICAL SPONDYLOSIS: A CASE STUDY

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ABSTRACT

Introduction: Cervical spondylosis (*Greevasthamba*) is a degenerative condition with pain in cervical region as a major symptom. In modern science condition is usually treated with analgesic, corticosteroids, surgical decompression, traction etc. which not contribute much promising results. But in Ayurveda several methods like *Snehana*, *Upanaha*, *Agnikarma*, *Raktamokshana* and *Panchakarma* etc. are specified in management of pain. **Case presentation:** A male patient aged 42 years admitted CARIN-MSD, IPD with pain in the neck region since 2 months, which was also radiating to the right upper limb along with numbness up to the tip of fingers. Cervical active range of motions were painful during flexion, extension and lateral rotation. Spurling test and Lhermitte's sign were positive. Along with the support of X- ray and MRI investigations the patient was diagnosed with cervical spondylosis due to chronic postural strain. **Management and Outcome:** Patient was treated with *Agnikarma* and *Snehapana*, the pain score over visual analogue scale and NPQ percentage before treatment was **Nine and 87.5 %** respectively while after intervention it was reduced to **Two and 33.33 %** within seven days. **Conclusion:** In acute painful stage of cervical spondylosis *Agnikarma* and *Snehapana* can play a major role in management of pain.

KEYWORDS: *Agnikarma*, Cervical spondylosis, *Greevasthambha*, *Snehapana*, Visual analogue score.

INTRODUCTION

Cervical spondylosis is a degenerative condition^[1] of cervical spine which is correlated with *Greevasthambha* in Ayurveda.^[2,3,4] Pathology starts at the intervertebral disc with degeneration of disc resulting in the compression of cervical nerve along with space reduction. It leads to pain^[5], stiffness in neck, pain radiate into shoulders, forearm, headache, vertigo, paresthesia at the base of the thumb etc.^[6] In modern medical science the role of analgesic corticosteroids, surgical decompression, traction has been credited and discredited mainly because of their drawbacks and limited uses.

In Ayurveda such degenerative conditions come under *Vataja* disorders which can be either due to *Avarana* (*Vata* being covered by *Kapha* or other *Doshas*) or *Dhatukshaya*. Several treatments like *Snehana*, *Upanaha*, *Agnikarma*,^[7] *Raktamokshana* and *Panchakarma* etc. are advised for such *Vatik* conditions with pain as a major symptom. Among these *Agni karma* due to its *Ushna*, *Suksham* and *Ashukari Guna* pacifies the *Vata Kaphadosha* and remove *Srotoavrodha*. *Sneha* due to its *Guru*, *Snigdha* and *Ushna Guna* pacifies the provoked *Vata*.

Case report

Presenting complaints

A male patient aged 42 years visited OPD in CARIN- MSD, Cheruthuruthy with following complaints:

- Pain over the neck region since 2 months radiating to the right upper limb along with numbness up to the tip of fingers.
- Difficulty in neck movements and also in raising right hand

History of Present complaints

Patient experienced pain over the hands a month before, after taking heavy load over his head. By occupation the patient is a tapping worker and has to do a lot of work by using his hands, more pain was felt while doing work.

Past illness

- There was no history of hypertension, diabetes mellitus, tuberculosis and any other serious illness.
- No relevant hereditary, congenital and surgical illness were found.

Personal history

General condition of patient was moderate; appetite of the patient was normal. Bowel habit and micturition was normal. Sleep was disturbed due to pain.

Patient was admitted in I.P.D of CARIN-MSD, Cheruthuruthy for further clinical assessments and Investigations.

Clinical findings

Patient was conscious and oriented. Blood pressure was normal other vitals were stable. Cranial nerve examinations were normal. Cervical active ranges of motion were painful during flexion, extension and lateral rotation. By Cervical compression of the neck increased the pain and radiates pain towards patient's arms (spurling test positive).^[8] During flexion of neck patient feel electric shock towards arms (Lhermitte's sign).^[9] Patient was of *VataKapha* body constitution with

predominance of *Vatadosha*, involving *Asthimajja* as a *Dushya*.

Investigations: X- Ray cervical spine shows mild osteophyte formation with normal intervertebral disc. MRI image of cervical spine shows right posterolateral disc prolapse at C6/C7 causing moderate C7 root compression. Diffuse annular bulges at C3/C4 and C4/C5 causing

minimal thecal sac compression. Routine blood investigations were in normal limits. Urine routine examination showed to be normal but calcium oxalate crystals were observed in microscopic examination. Cholesterol levels were on slightly higher. The patient was diagnosed with cervical spondylosis due to chronic postural strain.



Treatment planned

1. *Agnikarma* at the cervical region
2. *Snehapana* with *Prasanyadi Taila*

Criteria for assessment

Intensity of Pain was assessed by visual analogue score from 0-10 before and after *Agni karma* and *Snehapana*. The Northwick Park neck pain questionnaire [10] was adopted. Interpretation was done by NPQ percentage. Where NPQ PERCENTAGE = (NECK PAIN SCORE)/32* 100.

VAS Score

1. No pain
2. Hardly notice pain
3. Notice pain, does not interferes with activities
4. Pain sometime distracts me
5. Distracts me, can do usual activities
6. Interrupts some activities
7. Hard to ignore, avoid usual activities
8. Focus of attention, prevents doing daily activities
9. Awful, hard to do any activity
10. Cannot bear the pain, unable to do anything
11. As bad as it possible, nothing else matters.

Neck pain intensity	
I have no pain at the moment	0
The pain is mild at the moment	1
The pain is moderate at the moment	2
The pain is severe at the moment	3
The pain is the worst imaginable at the moment	4
Neck pain and sleeping	
My sleep is never disturbed by pain	0
My sleep is occasionally disturbed by pain	1
My sleep is regularly disturbed by pain	2
Because of pain I have less than 5 hours sleep in total	3
Because of pain I have less than 2 hours of sleep in total	4

Pins and needles or numbness in the arms at night	
I have no pins and needles or numbness at night	0
I have occasional pins and needles or numbness at night	1
My sleep is regularly disturbed by pins and needles or numbness	2
Because of pins and needles I have less than 5 hours sleep in total	3
Because of pins and needles or numbness I have less than 2 hours of sleep in total	4
Duration of symptoms	
My neck and arms feel normal all day	0
I have symptoms in my neck or arms on waking which last less than 1 hour	1
Symptoms are present on and off for a total period of 1-4 hours	2
Symptoms are present on and off for a total of more than 4 hours	3
Symptoms are present continuously all day	4
Carrying	
I can carry heavy objects without extra pain	0
I can carry heavy objects but they give me extra pain	1
Pain prevents me from carrying heavy objects but I can manage medium weight objects	2
I can only lift light weight objects	3
I cannot lift anything at all	4
Reading and watching TV	
I can do this as long as I wish with no problems	0
I can do this as long as I wish if I'm in a suitable position	1
I can do this as long as I wish but it causes extra pain	2
Pain causes me to stop doing this sooner than I would like	3

Pain prevents me from doing this at all	4
Working/housework	
I can do my usual work without extra pain	0
I can do my usual work but it gives me extra pain	1
Pain prevents me from doing my usual work for more than half the usual time	2
Pain prevents me from doing my usual work for more than a quarter of the usual time	3
Pain prevents me from working at all	4
Social activities	
My social life is normal and causes me no extra pain	0
My social life is normal but increases the degree of pain	1
Pain has restricted my social life but I am still able to go out	2
Pain has restricted my social life to the home	3
I have no social life because of pain	4
Driving (see below)	
I can drive whenever necessary without discomfort	0
I can drive whenever necessary but with discomfort	1
Neck pain or stiffness limits my driving occasionally	2
Neck pain or stiffness limits my driving frequently	3
I cannot drive at all due to neck symptoms	4

Procedure of Agni karma

Poorva karma

The Agni karma therapy room well equipped with all materials and instruments required for the therapy and care of patient in aseptic condition i.e. Freshly prepared *Triphala Kwatha* (Decoction made by *Triphala*), *Aloe vera* leaf, innovated *Agni karma* probe, Probe stand, High pressure burner for making the probe red hot, LPG Cylinder, SS tray, SS bowl, Sponge holding forceps, Gloves, Sterilized plain and hole towel, Cotton, A knife, Lighter etc. Written informed consent of the patient taken prior to the procedure. *Agni karma Shalaka* (probe) was kept on burner until it become red hot. Patient was made to sit comfortably with neck forward.

Pradhana Karma

Point with maximum tenderness were marked in the cervical region which was almost around C5-C6 region. The marked point was painted with aseptic solution of *Triphala Kwath* liquid. With the use of Red hot *Agni karma* probe, seven therapeutic burn marks were made with a distance of about an inch in skin level on the spinous and transverse process of C5-C6 body. *Samyak lakshanas* of process as described in text was observed. [12] The pulp of *Ghrithakumari* (*Aloe vera*) leaf was applied with the help of a swab holding forceps instantly over the burn marks, as *Ghrithakumari* (*Aloe vera*) works as instant cooling agent.

Paschat Karma

After a minute, the part was cleaned with sterile cotton and "*Haridra* powder" (An Ayurvedic herbal medicine used as antiseptic) was applied, patient was also advised to apply it twice a day at the site continuously for a week and application of water on the *Agni karma* site (burn marks) were prohibited for next 24 hours.

Therapeutic Intervention

Patient was admitted in IPD on 10th April 2017 and performed *Agni karma* on 2nd day of admission. Next day *Snehapana* given with *Prasarnyadi Taila*. [11]



Procedure of Snehapana

Prasarnyadi taila was administered internally for *Snehana* by progressively increasing the dose for a duration of 7 days starting from 30 ml to 180 ml. Dose of the *Sneha* was fixed by keeping in consideration the *Bala*, *Vaya*, etc. of the patient. Metered doses of *Taila* were given in morning hours to the patient after making sure the food taken on previous day have been properly digested. He was also advised not to have food until he gets proper hunger and was instructed to sip lukewarm water after *Snehapana* to facilitate the digestion and assimilation of *Sneha*. *Samyak Snehan* symptoms were keenly observed on each day. [13] *Prasaranyadi Tailam* which was used for *Snehapana* was procured from E.T.M. *Oushadhashala*, Thrissur, Kerala (Sahastrayoga) Each 10 ml *Prasarnyadi Taila* used had the following contents:

Table 1: Contents of Prasarnyadi Taila

Sanskrit Name	Botanical Sources	Wt/10ml
Prasarani	Merremia tridentata	35.82 mg
Meda	Poligonatum verticillatum	138.88 mg
Mahameda	Poligonatum cirrhifolium	138.88 mg
Shatapushpa	Anethum sowa	138.88 mg
Manjista	Rubia cordifolia	138.88 mg
Kushta	Sassurea lappa	138.88 mg
Rasna	Alpinia galanga	138.88 mg
Raktachandana	Pterocarpus santalinus	138.88 mg
Jeevaka	Malaxis acuminata	138.88 mg
Rishabaka	Malaxis muscifera	138.88 mg
Kakoli	Fritillaria roylei	138.88 mg
Ksheerakakoli	Lilium polyphyllum	138.88 mg
Devadaru	Cedrus deodara	138.88 mg
Tila	Seasum indicum	10 ml
Go kshira	Milk of cow	10 ml

Outcome

A Visual Analogue Scale (VAS) is a measurement instrument that tries to measure a characteristic or attitude that is believed to range across continuous values and cannot easily be directly measured. It is often used in epidemiological and clinical research to measure the intensity or frequency of various symptoms. The patient pain score before was (09). After therapeutic intervention with Agni karma pain was found to be reduced to (05), after initiation of Snehapana to (04) and after the completion of Snehapana on 7th day it was reduced to (02).

Table 2: Subjective- Visual Analogue Score (VAS) [0 – 10]

Symptoms	Baseline	After Agnikarma	After Snehapana	7 th day
Pain in the neck	09	05	04	02
Radiating pain to the upper limb (Unilateral or bilateral)	05	04	04	02
Pain in neck movement	09	04	04	02
Shoulder pain	06	05	03	01

The NPQ consists of nine items related to pain intensity, duration of symptoms, numbness at night, pain affecting sleep, effect on social life, carrying, reading/watching television (TV), working/housework, and driving. It is widely used with good sensitivity to change, although it does not cover emotional and some social issues. For each item, there are five potential responses describing a greater degree of difficulty (from 0 = no difficulty to 4 = severe difficulty). An overall NPQ score percentage is calculated by adding together the score for each item (0-36) (total score/36×100%). If an item is not applicable, the score is calculated as [(total score/32) ×100 %].

The NPQ score which was 87.5 % before the treatment found to be reduced to 33.33 %.

DISCUSSION

The commonly occurring pain in the neck region in such conditions are due to spasm of muscles around the area and numbness/tingling sensation in the arm is felt due to the compression of cervical nerves passing through the location. But in Ayurveda Greevatshambha is

considered as one among Vatavyadhi. Also 'Shula' (Pain) is the characteristic of Vata. This pain can be produced by only involvement of Vayu or in association with other Doshas (Dosha Avrita Vata). Snehapana and Agnikarma play a major role in common line of management in

Vatavyadhi. Lohadi Dhatus (Metals) are good conductors of heat, during *Agnikarma* when it is heated for a sufficient duration and made red hot it gets maximum capacity to store heat. Such heated *Lohadi Shalaka* when applied over skin to attain *Samyaka dagdha*, stored heat is transferred from it to skin tissue in the form of *Ushna, Tikshna, Sukshma* and *Laghu Guna*. *Ushna Guna* acts in two ways, primarily by stimulation of *Dhatvagni* and due to this action *Sama Dhatu* are digested. Secondly *Ushna Guna* dilates the channels of *Srotas*, due to which *Srotavarodha* removed, which was formed by *Dosha-Dushya Samurchhana* during *Kha-vaigunya* at the *Dhatu* level.

In *Snehapana Sneh* enters into *Srotas* which regulates *Pratiloma Vayu-gati*, due to same "*Vatanulomanam*" is given as the prime importance in *Samyak Snigdha Lakshana*.^[14] This alleviation of *Vata* helps to decrease pain to some extent.

Prasaranyadi Tailam used for *Snehapana* is classically mentioned as "*Sarvamarutaaamaynaashanam*" (One which relieves all kind of *Vata* disorders).^[15] Also majority of its ingredients *Merremia tridentata* (*Prasarini*), *Anethum sowa* (*Shatapushpa*), *Rubia cordifolia* (*Manjistha*), *Saussurea lappa* (*Kushta*), *Alpina galanga* (*Rasna*), *Pterocarpus santalinus* (*Raktachandana*), *Cedrus deodara* (*Devadaru*) etc. have anti-inflammatory and analgesic activity.^[16,17]

CONCLUSION

Agni karma and *Snehapana* can be effectively used in relieving pain in cervical spondylosis. With these treatments patients can avoid the use of analgesic medicines which causes harmful side effects. Case can provide basis for further case series.

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