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

Charde VA*, Amit¹, Nair PG¹, Deep VC²

*¹Research officer (AYU) ²Research officer (SCT-3), Central Ayurveda Research Institute for Neuromuscular & Musculo-Skeletal Disorders (CARINMSD), CCRAS, Cheruthuruthy, Kerala, India.

ABSTRACT

Introduction: Cervical spondylosis (Greevasthamba) is a degenerative condition with pain in cervical region as a major symptom. 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 of cervical spine which is correlated with Greevasthambha in Ayurveda. 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, stiffness in neck, pain radiate into shoulders, forearm, headache, vertigo, paresthesia at the base of the thumb etc. 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 Dhatushaya. Several treatments like Snehana, Upanaha, Agnikarma, 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 Ashukara 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). During flexion of neck patient feel electric shock towards arms (Lhermitte’s sign). 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.

<table>
<thead>
<tr>
<th>Neck pain intensity</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have no pain at the moment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>The pain is mild at the moment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>The pain is moderate at the moment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>The pain is severe at the moment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>The pain is the worst imaginable at the moment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Neck pain and sleeping</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>My sleep is never disturbed by pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>My sleep is occasionally disturbed by pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>My sleep is regularly disturbed by pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Because of pain I have less than 5 hours sleep in total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Because of pain I have less than 2 hours of sleep in total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

**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

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

---

**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 Kwath (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 Ghritakumari (Aloe vera) leaf was applied with the help of a swab holding forceps instantly over the burn marks, as Ghritakumari (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.

---

**Procedure of Snehapan**

*Prasarnayadi 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 Snehapan to facilitate the digestion and assimilation of Sneha. Samyak Snehan symptoms were keenly observed on each day. [13] *Prasaranayadi Tailam* which was used for Snehapan was procured from E.T.M. Oushadhashala, Thrissur, Kerala (Sahastrayoga) Each 10 ml Prasarnayadi Taila used had the following contents:
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 Agnikarma 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>
<thead>
<tr>
<th>Symptoms</th>
<th>Baseline</th>
<th>After Agnikarma</th>
<th>After Snehapana</th>
<th>7th day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain in the neck</td>
<td>09</td>
<td>05</td>
<td>04</td>
<td>02</td>
</tr>
<tr>
<td>Radiating pain to the upper limb (Unilateral or bilateral)</td>
<td>05</td>
<td>04</td>
<td>04</td>
<td>02</td>
</tr>
<tr>
<td>Pain in neck movement</td>
<td>09</td>
<td>04</td>
<td>04</td>
<td>02</td>
</tr>
<tr>
<td>Shoulder pain</td>
<td>06</td>
<td>05</td>
<td>03</td>
<td>01</td>
</tr>
</tbody>
</table>

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 Avritu Vata). Snehapana and Agnikarma play a major role in common line of management in

<table>
<thead>
<tr>
<th>Sanskrit Name</th>
<th>Botanical Sources</th>
<th>Wt/10ml</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prasarni</td>
<td>Merremia tridentata</td>
<td>35.82</td>
</tr>
<tr>
<td>Meda</td>
<td>Poligonatum verticillatum</td>
<td>138.88</td>
</tr>
<tr>
<td>Mahameda</td>
<td>Poligonatum cirrhifolium</td>
<td>138.88</td>
</tr>
<tr>
<td>Shatapushpa</td>
<td>Anethum sowa</td>
<td>138.88</td>
</tr>
<tr>
<td>Manjista</td>
<td>Rubia cordifolia</td>
<td>138.88</td>
</tr>
<tr>
<td>Kushtha</td>
<td>Sassurea ioppa</td>
<td>138.88</td>
</tr>
<tr>
<td>Rasna</td>
<td>Alpinia galanga</td>
<td>138.88</td>
</tr>
<tr>
<td>Raktachandana</td>
<td>Pterocarpus santalinus</td>
<td>138.88</td>
</tr>
<tr>
<td>Jeevaka</td>
<td>Malaxis acuminata</td>
<td>138.88</td>
</tr>
<tr>
<td>Rishabaka</td>
<td>Malaxis muscifera</td>
<td>138.88</td>
</tr>
<tr>
<td>Kakoli</td>
<td>Fritillaria roylei</td>
<td>138.88</td>
</tr>
<tr>
<td>Keerakakoli</td>
<td>Lilium polyphyllum</td>
<td>138.88</td>
</tr>
<tr>
<td>Devadaru</td>
<td>Cedrus deodara</td>
<td>138.88</td>
</tr>
<tr>
<td>Go kshira</td>
<td>Sesamum indicum</td>
<td>10 ml</td>
</tr>
<tr>
<td></td>
<td>Milk of cow</td>
<td>10 ml</td>
</tr>
</tbody>
</table>

Table 1: Contents of Prasarnyadi Taila

Table 2: Subjective- Visual Analogue Score (VAS) [0 – 10]
Valayadhi. Lohadi Dhatu [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 Srotavardhara removed, which was formed by Dosa-Dushya Samurchhana during Kha-vaijanya at the Dhatu level.

In Snehapan Sneha 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.

Prasaranayadi Tailam used for Snehapan 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 (Kusha), Alpina galanga (Rasna), Pterocarpus santalinus (Raktachandana), Cedrus deodara (Devadaru) etc. have anti-inflammatory and analgesic activity.[16,17]

CONCLUSION

Agni karma and Snehapan 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.

ACKNOWLEDGEMENT

Authors are very thankful to the Director General C.C.R.A.S Dhiman Sir and Asst. Director C.A.R.I.N. and M.S.D. KG Vasanthkumar Sir for giving permission to publish the work.

REFERENCES

8. http://www.physio-pedia.com/Spurling%27s_Test last accessed on 25th april 2017 at 10.52 Am
11. Sharma R, Sharma S; Sahasrayogam, Taila Prakarana, Chaukhamba Sanskrit Pratisthan, reprint ed. 2014 pg. no. 104
15. Sharma R, Sharma S; Sahasrayogam, Taila Prakarana, Chaukhamba Sanskrit Pratisthan, reprint ed. 2014 pg. no. 104


Source of support: Nil, Conflict of interest: None Declared

*Address for correspondence
Dr VA Charde
Research officer (Ayu),
Central Ayurveda Research Institute for Neuromuscular & Musculo–Skeletal Disorders (CARINMSD), CCRAS, Cheruthuruthy, Kerala, India.
Email: vaibhavayudoc@gmail.com

Disclaimer: IJAPR is solely owned by Mahadev Publications - A non-profit publications, dedicated to publish quality research, while every effort has been taken to verify the accuracy of the content published in our Journal. IJAPR cannot accept any responsibility or liability for the articles content which are published. The views expressed in articles by our contributing authors are not necessarily those of IJAPR editor or editorial board members.

Available online at: http://ijapr.in