

CASE STUDY

# Effect of *Agnikarma* with *Tapta Kshoudra* in Cervical Radiculopathy - A Case Study

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## ABSTRACT

Cervical radiculopathy is a disease process marked by nerve compression from herniated disc material or arthritic bone spurs. This impingement typically produces neck pain, radiating arm pain, numbness, and sensory or motor dysfunction in the neck and upper extremities. The modern treatments include nonsteroidal anti-inflammatory drugs, immobilization, traction, cervical steroid injection and surgery. According to ayurveda, the features of *Viswachi* are almost similar to cervical radiculopathy. *Viswachi* comes under *Vatavyadhi* and is one among the *Vataja Nanatmaja Vyadhi*. *Snehana*, *swedana*, *nasya*, etc. are the usually practiced treatment procedures done to alleviate the symptoms of *Viswachi*. But these procedures do not give an instant relief of pain and are time consuming. Acharya Susruta has indicated *Agnikarma* as a chief para surgical procedure which is an effective treatment in conditions of severe pain in *twak*, *mamsa*, *sira*, *snayu*, *sandhi* and *asthi*. The *dahanopakarana* used for *sira*, *snayu*, *sandhi*, *asthigata vata vikaras* are *kshoudra*, *guda*, *sneha*. *Agnikarma* with this *snigdha dravyas* has more penetrating power than *rooksha dravyas* like *salaka*, it helps to reach the deeper tissues. So, *tapta kshoudra* is taken in this case to assess the effect of *agnikarma* in cervical radiculopathy. Here the patient is treated with *agnikarma* with *kshoudra* on the most tender points from the nape of neck to shoulder. Outcome measures like pain, radiating pain, tenderness, range of motion and Spurling's test were assessed before treatment, immediately after treatment, 7<sup>th</sup> day, 14<sup>th</sup> day and 21<sup>st</sup> day. The result showed that *agnikarma* with *kshoudra* in cervical radiculopathy gives immediate relief from pain.

**Key Words** *Cervical Radiculopathy, Viswachi, Agnikarma, Tapta Kshoudra*

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## INTRODUCTION

Cervical radiculopathy is a clinical condition resulting from compression of cervical nerve roots. Acute onset of compression of a nerve root occurs when a disc prolapses laterally and gradual onset may be due to osteophytic encroachment of the intervertebral foramina.

Mostly cervical radiculopathy appears unilaterally, bilateral clinical features are present if severe bony spurs are present at one level impinging/irritating the nerve root on both sides<sup>1</sup>. An annual incidence of 83.2/100000 with a larger proportion of men 107.3/100000 than women 63.5/100000<sup>2</sup>. The clinical manifestations of

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cervical radiculopathy are broad and may include pain, sensory deficits, motor deficits, diminished reflexes, and diminished range of motion of the neck, or any combination of the above. The main treatments available are nonsteroidal anti-inflammatory drugs, immobilization, traction, cervical steroid injection, and surgery in the later stages. *Viswachi* comes under *vatavyadhi* and its clinical features like *Ruk*, *Stambha*, *Toda*, *Karmakshaya* and *Chestapaharana* of *Bahu* are almost similar to cervical radiculopathy. Here the prakopita vata affects the *kandara* extending from *bahu*. Dalhana opines that *Viswachi* resembles *Gridhrasi*, with associated symptoms like *stambha*, *toda*, etc. So, in the present context, Cervical Radiculopathy can be considered as *Viswachi*.

Different classics have given a superior place to *agnikarma*. In diseases which are affecting *snayu*(nerve), *sandhi*, and *asthi*, treatment modalities such as *snehana*, *upanaha*, *bandana*, *mardana*, and *agnikarma* are advocated by *Acharyas*<sup>3</sup>. Among these, *agnikarma* seems to be more effective for instant pain management. According to *Susrutha*, in vata vikaras affecting *sira*, *snayu*, and *asthi*, *agnikarma* is mentioned with *snigdha dravyas* like *kshoudra*, *guda*, and *sneha*<sup>4</sup>. As *Viswachi* is a *snayugata vata vikara*, *agnikarma* with *snigdha dravyas* are indicated. *Agnikarma* is a less invasive procedure by which heat is applied to different structures like *twak*, *mamsa*, *sira*, *snayu*, *sandhi*, and *asthi*. *Snigdha dravyas* have more penetrating power, so *kshoudra* can transfer more amount of heat into

the deeper structures like *sira*, *snayu*, and *asthi*. *Agnikarma* is a very simple, safe, cost-effective, and immediate pain-relieving para-surgical procedure.

## MATERIALS AND METHODS

### Patient information

A 36-year-old female patient came to our OPD with complaints of severe neck pain radiating to the left upper limb associated with difficulty in neck movement. The pain was gradual in onset and later the pain started radiating to the left upper limb. It got aggravated day by day and started hampering her day-to-day activities.

As spurling's test was positive with severe pain, further investigations were done and confirmed with cervical radiculopathy. Internal medicines were given but didn't get much relief, so the *agnikarma* procedure was explained to the patient, and consent was taken.

### Treatment

#### *Poorvakarma*

- Detailed clinical examination, laboratory investigations like surgical investigations, and MRI were done.
- The data was recorded.
- Patients were informed in detail about the treatment procedure and informed consent was obtained.
- TT immunization done.
- The patient was made to sit straight
- The part was cleaned and made aseptic using a betadine solution.

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- Tender points from the nape of the neck towards the Left shoulder marked

#### Materials required

Betadine swab, artery forceps, sterile cotton, Borosil glass dropper, probe thermometer, kidney tray, sterile bowl, gas stove, *Madhu*, *Ghritha*, sterile gloves, surgical drape.

#### Pradhanakarma

The required amount of *kshoudra* was taken in a sterile dish and heated over the stove up to 110°C<sup>5</sup>, the temperature was noted with a probe thermometer. Then the *tapta kshoudra* was drawn using a glass dropper poured on the predetermined site in *bindu aakriti* and wiped off after 1 minute.



Figure 1 Agnikarma Spots

#### Paschatkarma

- *Madhu* and *Ghritha* mixture applied over the site<sup>6</sup>.
- Observed patient for 30 minutes. As she was stable, advised her to leave the minor OT.
- She was advised to continue the application of honey and ghee for 1 week.
- The outcome measures were assessed- 0<sup>th</sup> day and after agnikarma, 7<sup>th</sup> day, 14<sup>th</sup> day and on the 21<sup>st</sup> day.

#### Outcome measures

##### Subjective parameters:

1. Neck Pain - VAS Scale

0 : No pain

1 – 3 : Mild pain

4 – 6 : Moderate pain

7 or more : Severe pain

2. Radiating pain

No radiating pain 0

Radiating pain occasionally felt, subsides by itself 1

Radiating pain only on lifting heavy objects 2

Radiating pain felt on movements, subsides by rest 3

Continuous radiating pain, no relief on rest 4

##### Objective parameters:-

1. Tenderness

No tenderness Grade 0

Patient says the part is tender Grade 1

Patient winces with pain Grade 2

Patient winces and withdraws the affected part Grade 3

Patient does not allow the part to be touched Grade 4

2. Range of movements of neck

##### • Extension – flexion to extension

Normal, i.e., 130 degrees 0

Movement Up to 120 degrees 1

Movement Up to 110 degrees 2

Movement less than 110 degrees 3

Complete restriction 4

##### • Lateral flexion

Normal, i.e., 45 degrees 0

Movement up to 35 degrees 1

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|                           |   |
|---------------------------|---|
| Movement up to 25 degrees | 2 |
| Movement up to 15 degrees | 3 |
| Complete restriction      | 4 |
| 3. Spurling's test        |   |
| No pain                   | 0 |
| Mild pain                 | 1 |
| Moderate pain             | 2 |
| Severe pain               | 3 |

### OBSERVATION AND RESULT

The observation is stated in the below table

| Parameter                   | Before Procedure | Immediately After procedure | 7 <sup>th</sup> day | 14 <sup>th</sup> day | 21 <sup>st</sup> day |
|-----------------------------|------------------|-----------------------------|---------------------|----------------------|----------------------|
| <b>Pain</b>                 | 7                | 2                           | 1                   | 1                    | 2                    |
| <b>Radiating pain</b>       | 2                | 0                           | 0                   | 0                    | 0                    |
| <b>Tenderness</b>           | 3                | 0                           | 0                   | 0                    | 1                    |
| <b>Extension</b>            | 3                | 1                           | 0                   | 0                    | 1                    |
| <b>Left lateral flexion</b> | 2                | 0                           | 0                   | 0                    | 1                    |
| <b>Spurlings test</b>       | 2                | 0                           | 0                   | 0                    | 0                    |

### DISCUSSION

*Agnikarma* is a parasurgical measure, which is very effective in treating severe pain in emergency condition. *Viswachi* being a *snayugata vata vikara*, *kshoudra* is used for *agnikarma*.

Before the treatment, the pain score was 7, and immediately after the treatment the pain score reduced to 2, and on the 7<sup>th</sup>, 14<sup>th</sup>, and 21<sup>st</sup> day pain score was 1, 1, and 1 respectively. This shows the immediate effect of treatment in pain relief.

Radiating pain before the treatment was grade 2 and after the treatment become 0 and, on the 7<sup>th</sup>, 14<sup>th</sup>, 21<sup>st</sup> day it was grade 0, respectively.

Tenderness before the treatment was grade 3; immediately after the treatment, the 7<sup>th</sup>, 14<sup>th</sup> day, and 21<sup>st</sup> day was grade 0 and grade 1, respectively.

Range of motion of neck was affected before the treatment and it got improved after the treatment and during the follow up period.

Spurlings test was positive i.e., grade 2 before the procedure, and immediately after the procedure it became negative i.e. grade 0, and sustained throughout the follow-up period.

Blebs were formed on the 2<sup>nd</sup> day of *agnikarma*, but they subsided within 5 days and healed.

#### Probable mode of action

As *agni* has *ushna*, *Sukshma*, *thikshna* and *asukari guna*, which are opposites of *Vata* and *Kapha dosha gunas*, it helps to alleviate both. By the properties of *agni* it helps to rectify the *amavastha*, eliminate the *srothorodha*, and increase the affected site's *rasa rakta samvahana*. The *Sukshma guna* of *kshoudra* helps to penetrate the heat. The *kshoudra* has high specific heat and less heat dissipation, so it penetrates the deeper structures. The heat applied over the site increases the blood circulation to the affected site and flushes away the pain-producing substances i.e. *p* substances and results in relief from symptoms.

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### CONCLUSION

*Agnikarma* being a non-invasive parasurgical procedure, it can be conducted at OPD level with patient requiring no hospital stay. The analgesic Impact of *Agnikarma*, as we all know, may be regarded in Ayurvedic terms as influencing the *Vata* doshas. Anywhere in the body, pain is brought on by an imbalance in the *Vata dosha*. *Agnikarma* is done to remove *vitiating vata*. As an *Ushna Chikitsa*, it pacifies *Vata*, which instantly relieves the pain. So, *Agnikarma* with *kshoudra* in cervical radiculopathy can be considered an effective treatment that gives immediate relief from pain and its associated symptoms.

ETHICAL COMMITTEE APPROVAL

IEC 680-30/08/22

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