

CASE STUDY

# Agnikarma with Kshoudra in the Management of De Quervain's Disease - A Case Study

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## ABSTRACT

De-Quervain's disease is a condition in which the common synovial sheath of tendons of abductor pollicis longus and extensor pollicis brevis become inflamed, thickened and stenosed due to degenerative changes or over use. This occurs more common in females aged between 30 -50 years .The clinical symptoms are pain, tenderness, swelling at radial styloid process and difficulty in thumb movements. The present management includes splintage, NSAIDs (Non-steroidal anti-inflammatory drugs), Corticosteroid injection, and surgical decompression. But these have many complications and the recurrence rate is high.

According to Ayurveda, De-Quervain's disease can be taken as *angushta moola parswa snayugatha Vatha vyadhi*. Agnikarma is enumerated as an anusastra by Susrutha and indicated in painful condition. Kshoudra is one among the *dahana upakarana* in the treatment of diseases situated in *sira, snayu, sandhi, asthi* . Agnikarma (*bindhu* type) is done on the tender points over radial styloid process with *tapta ksoudra*. After that, *lepana* of Honey and Ghee was done.

The present work is a case study from the OPD of the Department of Salyatantra in Govt Ayurveda Collage, Trivandrum on De Quervain's disease. The patient was subjected to *agnikama* with *kshoudra* over the tender points of radial styloid process. The outcome measure like pain, tenderness, swelling and Finkelstein test were assessed before procedure, immediately after procedure, 7<sup>th</sup>, 14<sup>th</sup> and 21<sup>st</sup> day. The result showed that *agnikarma* with *kshoudra* is effective for immediate pain relief in De-Quervain's disease.

**Key Words** De-Quervain's disease, Agnikarma, Kshoudra

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## INTRODUCTION

De-Quervain's disease is an inflammation and stenosis of common tendon sheath of abductor pollicis longus and extensor pollicis brevis tendons in the first extensor (dorsal) wrist compartment<sup>1</sup>. Statistics show that the prevalence rate of De-Quervain's disease in normal population is 0.5 % in males and 1.3% in females<sup>2</sup>. The prevalence rate in women is 5

times more than men<sup>3</sup>. This condition commonly seen in middle aged women<sup>4</sup>.

The patient complains as difficulty in moving thumb & wrist on activities like wringing cloths<sup>5</sup>.

Other signs and symptoms are pain, tenderness & swelling at the radial styloid process<sup>6</sup>. If the condition goes too long without treatment, the pain may spread further into thumb, back into forearm or both. The management principles of

## CASE STUDY

De- Quervain's disease includes the pain management, improvement of functions & retardation in progression of the disease. In modern medicine, it includes NSAIDs, splintage, Corticosteroid injection & surgical release of the extensor retinaculum of the first dorsal compartment<sup>6</sup>.

On the basis of structure involved in the pathology, its signs and symptoms, De-Quervain's disease can be correlated with the condition of *snayugatha vata* in Ayurveda. *Snayugatha vata* develops when the *vata dosha* aggravates due to *vata prakopa nidana* ie *atichesta, ativyayama* etc & gets localised in *parswa snayu of angushta moola*. Treatment of *snayugatha vata vyadhi* includes *Snehana, Upanaha & Agnikarma*.<sup>7</sup> *Agnikarma* is an *anusastra* which is superior to *bheshaja, sastra and kshara*. Diseases which cannot be cured by these methods are curable by *Agnikarma* & there is no recurrence<sup>8</sup>. Based on the structure involved, Susrutha acharya prescribed different *dravyas* for *Agnikarma* and *Kshoudra* is indicated in *snayu vikaras*<sup>8</sup>. So present study is to evaluate the effect of *thaptha Kshoudra* in De- Quervain's disease.

## CASE REPORT

A 38 year old female patient presented with pain and swelling in the left wrist joint during the movement of thumb. She consulted nearby hospital and took some medicines, but did not get any relief.

On physical examination of wrist joint, inspection revealed Grade 3 (VAS 7) pain and mild swelling (Grade 1). On palpation severe tenderness with grade 2 was noted and range of movements was found to be painful on examination. The Finkelstein's test was found to be positive (Grade 3) to confirm the diagnosis as De- Quervain's disease.

### Study Duration

*Agnikarma* with *taptakshoudra* was planned for the patient in single sitting.

Follow up was done on 7<sup>th</sup>, 14<sup>th</sup> and 21<sup>st</sup> days.

### Treatment

#### Poorvakarma

- All the prerequisites of *agnikarma* was collected as shown in figure no: 1.
- The procedure was explained in detail and written consent was taken.
- TT immunisation was done.
- Patient was advised to take *snigdha* and slimy food before the procedure (*pichillaanna*).
- Patient was allowed to lie in supine position.
- The area over the tender points of styloid process was cleaned and made aseptic using betadine solution. Tender points were marked with surgical skin marker pen.

#### Materials required

- Betadine solution
- Sterile cotton
- Surgical gloves
- Kidney tray
- Sterile bowl

## CASE STUDY

- Honey
- Gas stove
- Borosil dropper
- Cow's ghee
- Probe thermometer
- TT injection
- Swab holding forceps

### **Pradhanakarma**

Sufficient amount of honey was taken in a sterile steel dish. Honey was heated over the stove upto 110<sup>0</sup>C and its temperature was measured with a probe thermometer as shown in figure no: 2. Around 5- 10 drops of honey (one drop honey at each tender points) was dropped in the predetermined sites by a Borosil dropper as shown in figure no: 3 and 4. The honey was wiped off from the site with sterile dry cotton after cooling.

### **Paschatkarma**

1. Honey and Ghee were applied after treatment as shown in figure no: 5
2. Patient was monitored for 30 minutes
3. The patient was evaluated on next day for any blister formation.
4. Also was advised to apply honey and ghee for 1 week.
5. Follow-up assessments were done on 7<sup>th</sup>, 14<sup>th</sup>, and 21<sup>st</sup> day by evaluating pain, tenderness, swelling, and Finkelstein's test.

### **OUTCOME MEASURES- ASSESSMENT CRITERIA**

- 1) Pain over the radial styloid process:- The pain will be graded by using visual analogue scale.

Grade 0 – no pain

Grade 1 (VAS 1-3) – mild pain

Grade 2 (VAS 4-6) – moderate pain

Grade 3 (VAS 7-9) – severe pain

2) Tenderness over the radial styloid process

Grade 0 – no tenderness

Grade 1 – the patient says the part is tender

Grade 2 – the patient winces due to pain

Grade 3 – the patient winces and withdraws the affected part.

Grade 4 – the patient does not allow the part to touch

3) Swelling over the radial styloid process :

The swelling reading is grade as follows

Grade 0 – nil

Grade 1 – mild swelling

Grade 2 – moderate swelling

Grade 3 – severe swelling

4) Finkelstein test

Grade 0 – no pain

Grade 1 – mild pain

Grade 2 - moderate pain

Grade 3 – severe pain

## **OBSERVATION AND RESULTS**

The outcome measures were assessed on on-0<sup>th</sup> day of before and after *Agnikarma*, 7<sup>th</sup> day, 14<sup>th</sup> day & 21<sup>st</sup> day.

After the sitting of *Agnikarma* using *ksoudra*, it was seen that there was satisfactory improvement in the complaints of pain and range of movement in the patient. This result was assessed by using VAS for pain and range of movements and

**CASE STUDY**

Finkelstain test. The therapeutic effect of *Agnikarma* with *Kshoudra* showed significant results during follow up period and no recurrence.

**Table 1** Below describes the change in clinical symptoms of De quervain’s disease before, after and follow up periods.

**Table 1** Assessment criteria

Criteria	before procedure on 0 <sup>th</sup> day	after procedure on 0 <sup>th</sup> day	7 <sup>th</sup> day	14 <sup>th</sup> day	21 <sup>st</sup> day
<b>Pain</b>	Grade 3 (VAS7)	Grade 1 (VAS 1)	Grade 1 (VAS 1)	Grade 0 (VAS 0)	Grade 0 (VAS 0)
<b>Tenderness</b>	Grade 2	Grade 1	Grade 0	Grade 0	Grade 0
<b>Swelling</b>	Grade 1	Grade 1	Grade 1	Grade 0	Grade 0
<b>Finkelstein test</b>	Grade 3	Grade 1	Grade 0	Grade 0	Grade 0



**Figure 3** Dropping of heated kshoudra over tender points



**Figure 4** Dropped heated kshoudra in tender points



**Figure 1** Materials required



**Figure 2** Heating of kshoudra



**Figure 5** Madhughrithaabhyanga after agnik arma

**DISCUSSION**

*Agnikarma*, a precise *anusastra* treatment is effective in manages painful conditions. This condition shares similarities with *AngusthaMoolaParswaSnayugathaVathaVyadhi* in terms of site, signs, and symptoms. Consequently, *Kshoudra* (a specific *Agnikarma*

## CASE STUDY

technique) is chosen for *dahanaupakarana* (cauterization) to alleviate symptoms."

The pain before the treatment was grade 3 (VAS 7) and immediately after the procedure become grade 1 (VAS1), and in the 7<sup>th</sup> day it was grade 1 (VAS1) and 14<sup>th</sup>, and 21<sup>st</sup> day it was grade 0 (VAS 0) respectively as shown in table no: 1

Tenderness before the treatment was grade 3 and immediately after the procedure is grade 1, and in the 7<sup>th</sup>, 14<sup>th</sup>, and 21<sup>st</sup> day was grade 0 respectively as shown in table no: 1.

Swelling before the treatment was grade 1 and immediately after the procedure and 7<sup>th</sup> day it is grade 1. In the 14<sup>th</sup> and 21<sup>st</sup> day it is grade 0 as shown in table no: 1

Before the treatment the Finkelstein test was positive with grade 3 score, it became grade 1 immediately after the procedure, and in the 7<sup>th</sup>, 14<sup>th</sup>, and 21<sup>st</sup> days it is grade 0 respectively as shown in table no: 1

### Discussion on probable action of *agnikarma* with *madhu*

In *agnikarma* the temperature at the applied site increases the *dhatwagni*<sup>9</sup>. This *dhatwagni* corrects the *amatwa* state of that *dhatu* (*asthi*)<sup>9</sup>. The *srothas* are cleared after *amapachana*<sup>9</sup>. *Agnikarma* which is *ushna* and *teekshnaguna*. Because of the *ushna* and *teekshnaguna* it can pacifies *vata* and *kapha*<sup>10</sup>. By pacifying *vata* and *kapha* it reduces the *shoola* (pain) and *sthambha* (painful muscle spasm)<sup>10</sup>

Along with the *tikshna*, *ushna*, *sukshma*, *asukarigunas* of *agni* and *vishada*, *ruksha*, *sukshma* properties of *madhu* helps for deeper

penetration of heat.<sup>9</sup> Thus it reduces *vatakopa* and inflammation which in turns reduces the pain<sup>9</sup>. The high specific heat capacity and gradual specific heat capacity of *kshoudra* helps in the deeper penetration<sup>9</sup>.

## CONCLUSION

De-Quervain's disease causes difficulties in performing daily activities that involve the movement of thumb & wrist. It occurs most commonly between the ages of 30-60 years & more frequently in women. *Agnikarma* using *kshoudra* acted by the penetration of heat through *sukshmasira*. Heat of *kshoudra* enter into *Dhatwagni* level which acted as *Amapachana* and pacified both *vata* and *kapha* and removes *srotoavarodha* which results in subsiding pain, tenderness, swelling and improving wrist movements as shown from changes in Finkelstein test. So from the present case study it can be concluded that *agnikarma* with *kshoudra* is effective in the management of De - Quervain's disease.

## CASE STUDY

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