



Case Report

Management of De Quervain's Tenosynovitis with *Agnikarma* – A Case Report

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ABSTRACT:

De Quervain's tenosynovitis is a painful condition in which the common tendon sheath of abductor pollicis longus and extensor pollicis brevis is inflamed or thickened, about 3.25 cm proximal to the tip of radial styloid process on the lateral aspect of wrist. It leads to narrowing of the intrathecal lumen. It can result due to repetitive stress, hormonal influence, rheumatoid disease, trauma or degenerative changes. Splinting of the thumb, injection of corticosteroids into the tendon sheath and surgical release of the first dorsal compartment are adopted in the contemporary medical science to manage it. Excessively painful conditions of bones, joints, muscles, tendons and ligaments constitute the indications for *Agnikarma*. In this case study, a 52 years old female who was a housewife, visited the outdoor patient department of *Shalya Tantra* (surgery) at the Hospital of National Institute of Ayurveda, Jaipur, Rajasthan, India. She presented with the chief complaint of having severe pain at the right radial styloid process with difficulty in performing household work for the last six months. There was tenderness at the site on palpation with a feebly palpable swelling. This case was managed with the conductive method of *Agnikarma* (thermal cauterization) using a *Swarna Shalaka* (rod made up of 14 K gold) for three consecutive days. Pain and tenderness were assessed with respective scales which showed significant improvement. This case study

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is presented here to emphasize the applicability of a traditional pain management therapy viz. *Agnikarma* in modern clinical practice.

Keywords: *Agnikarma*, *Dahanakarma*, DeQuervain's tenosynovitis, *Swarna shalaka*, Therapeutic heating

1. Introduction

Female gender, age between 35 and 55, pregnancy, and repetitive manual work are risk factors for developing de Quervain's tenosynovitis.^[1] It is characterized by pain, tenderness, and swelling around the lateral aspect of the wrist resulting from inflammation of the common sheath of abductor pollicis longus and extensor pollicis brevis tendons.^[2] The abductor pollicis longus does the abduction and extension of the thumb whereas the extensor pollicis brevis extends the proximal phalanx and the metacarpal bone of the thumb and both of them are innervated by the deep branch of radial nerve originating from C₇ and C₈ nerve roots.^[3] The first dorsal compartment of the wrist contains the abductor pollicis longus and extensor pollicis brevis tendons lined by a synovial sheath which separates it from the five other dorsal compartments. These tendons pass through an approximately 2 cm long fibrous tunnel lying over the radial styloid. Under the transverse fibers of extensor retinaculum, they are at risk for entrapment, particularly in acute trauma or in repetitive motion.^[4] de Quervain's is believed to result from repetitive, forcefully and ergonomically stressful work, from anatomic variation, hormonal influence or pregnancy, rheumatoid disease, trauma, or drugs such as fluoroquinolones.^[5] The presenting symptoms are pain and tenderness at the radial styloid.^[6] The condition is usually pro-

gressive and may result in significant disability. Women are affected 6 to 10 times more frequently than men.^[6] Splinting of the thumb, injection of corticosteroids into the tendon sheath, and surgical release of the first dorsal compartment are adopted in contemporary medical science to manage it. In Ayurveda, *Ruja* (pain) and *Karma Kshaya* (loss of functions) has been attributed to the vitiation of *Vata Dosha*. *Agnikarma* has been indicated to manage excessively painful conditions of bones, joints, muscles, tendons and ligaments. For *Agnikarma*, a wide variety of *Dahan Upkarana* (material used for thermal cauterization) has been mentioned depending upon their physical appearance, tissue penetration and heat-holding capacity. *Shalaka* (rods) of different metals is quite convenient for use and are preferred in the practice of *Agnikarma* these days. In the present case study, *Swarna Shalaka* was used to transfer heat to the affected tissues that resulted in complete relief from signs and symptoms of De Quervain's tenosynovitis. This method of conductive *Agnikarma* is effective and patient friendly as this produces less discomfort during procedure and requires less sittings for the completion.

2. Patient Information

52 years old lady from Jaipur, Rajasthan visited out-patient-department of Shalya Tantra at hospital of NIA, Jaipur, Rajasthan, India. She was a housewife and her chief complaints were pain and tenderness at the lateral aspect of the right wrist for the last 6 months. The pain was gradually becoming severe enough to hamper her routine household work. There was no numbness or tingling sensation reported in that area. The patient had tried over-the-counter anti-inflammatory medicines several times but was not relieved of

the problem. She was a known diabetic and under medication of Metformin 500 mg once daily for the same from the last 2 years. There was no previous history of any trauma. Clinical examination was carried out. On inspection, no discoloration or scar was visible. On palpation, tenderness of grade 3 was observed. The Finkelstein's test^[2] was positive. No crepitus was observed; however, slight swelling was palpable.

3. Clinical Findings

Detailed medical history was taken and a local examination of the patient was carried out. The pain was of grade 7 as per 'Wong-Baker Faces Pain Rating Scale'.^[7] Inspection revealed no signs of scarring or discoloration. On palpation, meagre swelling was present. Tenderness of Grade 3 was present as per 'Dr. Frank Painter's Grading for Soft-tissue Tenderness'.^[8] Finkelstein test was performed and found positive.

4. Diagnostic assessment

Similar features can be seen in different diseased conditions such as carpal tunnel syndrome, chronic inflammatory joint diseases, osteoarthritis, or infections.

Finkelstein test was the provocative test employed in this case. The positive test served as confirmation of the diagnosis of De Quervain's tenosynovitis.

5. Past history of surgical intervention

No prior surgical history for the problem of a comparable nature or any other ailment was available.

6. Management

A conductive method of *Agnikarma* was

used and the most tender points at the radial side of the wrist region were treated by using *Swarna Shalaka* as *Dahanupkarana*. *Swarna Shalaka* was made up of 14 carats of gold, 6.2 cm in length and 2.82g in weight. No oral medicine or thumb splint was advised to the patient.

Procedure of Agnikarma: Most tender points were marked with a pen [Figure 1]. The globular end of the *Shalaka* was placed at the marked site by holding it in the middle with straight artery forceps while the other end was exposed to the candle flame [Figure 2]. The heat was conducted slowly through the *Shalaka* to an intensity the patient could tolerate, after which the *Shalaka* was removed. This was repeated same at the next tender point. There were four tender points that were exposed to heat. Slight redness, but no scald was observed at the treated site that disappeared after 3-4 hours [Figure 3]. This procedure was repeated once daily for 3 consecutive days. The time duration of a single sitting was 5-7 minutes.



Figure 1



Figure 2

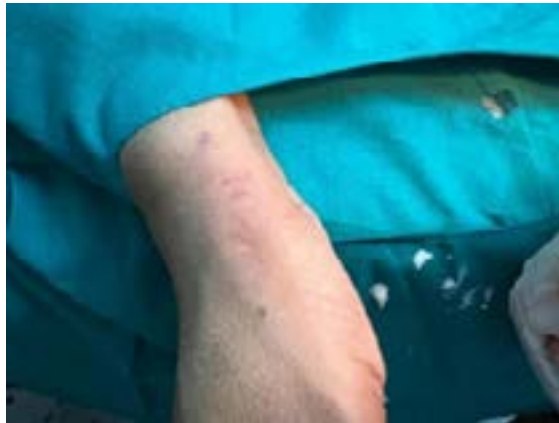


Figure 3

7. Results

Pain and tenderness were reduced to 50 percent on the second day. In the subsequent two sittings of *Agnikarma*, progressive relief was obtained. After the third sitting, the pain was reduced to grade 1 and tenderness was completely absent. There was no pain or tenderness in the first follow-up visit which was scheduled on the 7th day after the third sitting. The Finkelstein test was carried out on the day of 1st follow-up visit and was found to be negative.



Chart 1

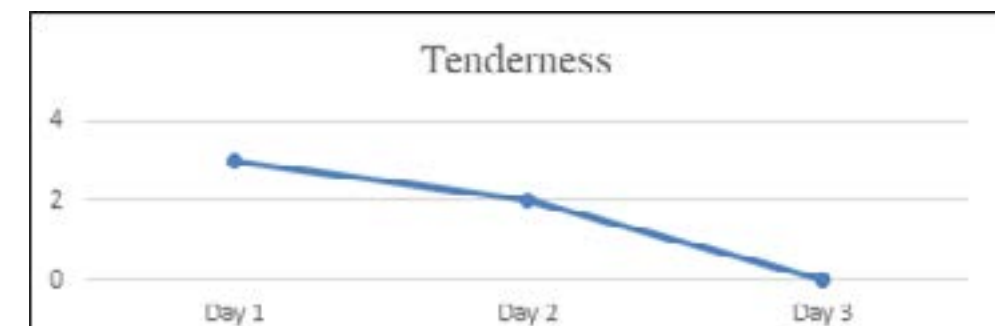


Chart 2

8. Follow-up and outcomes

After four months of follow up, the patient reported no recurrence of signs and symptoms and was comfortably performing her daily activities.

9. Discussion

Probable Mode of Action of *Agnikarma*

By the way of *Agnikarma*, the body tissues are exposed to heat by using *Dahanupkarana* (material used to transfer the heat) made up of various conductive materials like gold, silver, iron etc.; designed into suitable shapes and sizes. *Agni* (fire) has the properties like *Ushna* (hotness), *Tikshna* (sharpness), *Shukshma* (minuteness/penetrating) and *Ashukari* (immediate effective).^[9] Pain is the resultant effect of vitiated *Vata Dosha* (*Dosha* responsible for movement and cognition). *Dosha* are the regulatory functional factors of the body. Also, *Vata Dosha* is said to be responsible for the degenerative processes in the body.

Agni by its *Ushna Guna* exerts a direct pacifying effect on *Vata Dosha* that has *Sheeta Guna*. This is supported by quotation of *Yajurveda* "***Agni himasya Bhaishja***". By virtue of its *Karma*, *Agni* has an *Aama Pachana* effect in *Dosha*, *Dhatu* and *Mala*. '***Yasya Shodhaney Shakti Seh Teekshana***'- *Agni* leads to *Srotoshodhana*.^[10] In *Agnikarma* heat is transferred to *Tvak* (skin) and the underlying *Dhatus* (major structural components of the body) for therapeutic purposes, where by virtue of its *Teekshana*, *Ushna*, *Sukshama*, *Ashukari Guna*, therapeutic heat alleviates *Sroto-Avrodha* (blocking of *Srotas* / obstruction to *Srotas*) and increases *Rasa-Raktadi Dhatu Samvahana* (circulation of nutrients). *Vataja Vikara* (diseases due to *Vata*) are produced by direct vitiation of *Vata* or *Marga-avrodha* (obstruction to passage) of *Vata Dosha* and therapeutic heat acts on both. The latter patho-physiological changes are meant to be observed in this case. *Swarna* (gold) has the property of *Balya* (strength, stamina and immunity promoter), *Tridosahara* (alleviates vitiation of *Vata*, *Pitta* and *Kapha*), *Rasayana* (rejuvenation), *Shoshajit* (overcome the degenerations) etc.^[11] Gold has better conductive capacity of heat among other metals. The local effect of heat and systemic effect of *Swarna* (gold) act together in treating the diseased condition. The patient got relief from the symptoms within a minimum time period because of quick acting properties of *Swarna* and *Agni*. Gold components also have the ability to decrease concentrations of rheumatic factors and influence the immunological responses.^[12] How and up to which extent these effects are generated on the body tissues are exactly unknown but the relief obtained is highly suggestive of the positive role of *Agnikarma* by *Swarna Shalaka* in the management of De Quervain's tenosynovitis where no

other oral or topical medications were used.

10. Conclusion

The *Swarna Shalaka Agnikarma* is useful in the treatment of De Quervain's tenosynovitis. For the patients, this OPD procedure is risk-free, practical, and economical. Additionally, by using such interventions, the need for oral analgesics and anti-inflammatory medications in clinical practice may be reduced or eliminated. In order to standardize *Agnikarma* and validate it scientifically, a lot more research and publications must be conducted.

Patient Perspective

The patient expressed her satisfaction while discussing her experience both before and after the procedure. She visited to the NIA hospital for treatment since she was having difficulty carrying out simple domestic tasks. The most rewarding component of this treatment, as stated by the patient, was the rapid relief from pain and disability that she got after the procedure of *Agnikarma*.

Patient Informed Consent

Patient's informed consent was taken.

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None

Conflict of Interest

None

Authors contributions

Conceptualisation: Aditya Sharma; Saroj Mani Pokhrel; Manorma Singh. Methodology/Study design: Aditya Sharma; Saroj Mani Pokhrel. Validation: Manorma Singh. Formal analysis: Aditya

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