

Agnikarma with Tapta Kshoudra in the Management of De Quervain's Tenosynovitis: A Case Study

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Abstract

De Quervain's tenosynovitis is a painful musculoskeletal disorder involving the abductor pollicis longus (APL) and extensor pollicis brevis (EPB) tendons within the first dorsal compartment of the wrist. It is commonly associated with repetitive thumb and wrist movements, particularly among individuals engaged in household activities and occupations requiring repetitive manual work. Conventional treatment includes immobilization, non-steroidal anti-inflammatory drugs (NSAIDs), corticosteroid injections, and surgical intervention. However, limitations such as recurrence, adverse effects, and treatment costs have encouraged interest in alternative therapeutic approaches. In Ayurveda, De Quervain's tenosynovitis may be clinically correlated with Snayugata Vata, for which Agnikarma is traditionally indicated. To evaluate the therapeutic effectiveness of Agnikarma using Tapta Kshoudra (therapeutically heated honey) in the management of De Quervain's tenosynovitis. Case Presentation: A 42-year-old female presented with persistent pain and mild swelling over the dorsoradial aspect of the left wrist for approximately 3–4 months following excessive household activities. Clinical examination revealed localized tenderness, painful wrist movements, and a positive Finkelstein test. The patient had previously received NSAIDs and physiotherapy without satisfactory symptomatic relief and was subsequently advised to undergo corticosteroid injection. Therapeutic Intervention: The patient underwent six sittings of Agnikarma with Tapta Kshoudra, performed at four-day intervals. The procedure involved local application of Ghrit Kumari (Aloe vera) pulp, followed by the controlled application of heated honey at points of maximum tenderness and subsequent application of Go-Ghrita (cow ghee). Immobilization using a thumb splint was advised throughout the treatment period. Results: Progressive symptomatic improvement was observed during treatment. The pain score decreased from 7 at baseline to 1 by the fifth sitting, with complete pain relief reported during follow-up. Local swelling subsided after the third sitting, while the Finkelstein test became negative following the fifth sitting. Improvement in wrist mobility and functional activities was also observed. No local or systemic adverse effects were reported during the treatment and follow-up period. Conclusion: This case demonstrated favorable clinical improvement in pain, tenderness, swelling, and functional mobility following Agnikarma with Tapta Kshoudra in a patient with De Quervain's tenosynovitis. The findings suggest that this Ayurvedic intervention may be a potentially useful conservative therapeutic approach for symptoms associated with Snayugata Vata. However, the concurrent use of thumb splinting and the single-case nature of the observation limit conclusions regarding the independent effectiveness and safety of the intervention. Further controlled clinical studies involving larger patient populations are warranted to establish its therapeutic efficacy, safety, and long-term outcomes.

Keywords: De Quervain's tenosynovitis; Agnikarma; Tapta Kshoudra; Snayugata Vata; Ayurveda; Wrist pain; Case report.

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Introduction

De Quervain's tenosynovitis is a painful disorder affecting the tendons located within the first extensor compartment of the wrist, specifically the abductor pollicis longus (APL) and extensor pollicis

brevis (EPB). Originally described by Swiss surgeon Fritz de Quervain in the late nineteenth century, the condition is characterized by pathological changes in the tendon sheath, including thickening and

narrowing, which hinder normal tendon movement. As a result, patients commonly experience pain around the radial aspect of the wrist, tenderness over the radial styloid, localized swelling, and difficulty performing tasks that require gripping, lifting, thumb extension, or abduction. Owing to these symptoms, the disorder can substantially impair hand function and interfere with routine daily activities. (1,2)

Epidemiological studies indicate that De Quervain's tenosynovitis occurs more frequently in females, particularly during the third to fifth decades of life. Repetitive occupational and domestic activities involving sustained thumb and wrist movements are considered major predisposing factors. Individuals engaged in housekeeping, tailoring, gardening, childcare, computer work, hairdressing, and similar repetitive manual tasks are at increased risk. Continuous mechanical stress may result in microtrauma and subsequent thickening of the tendon sheath, thereby restricting smooth tendon gliding within the fibro-osseous tunnel. The condition is also commonly encountered during pregnancy and the postpartum period, where hormonal influences and altered biomechanics may contribute to its development. Furthermore, widespread use of smartphones, tablets, and computers has been associated with a growing incidence of this disorder in recent years. (3,4)

The diagnosis of De Quervain's tenosynovitis is largely established through clinical evaluation. Patients typically complain of pain over the radial side of the wrist that worsens during thumb movements and gripping activities. Among the various clinical tests available, the Finkelstein test remains the most widely accepted diagnostic maneuver. Reproduction of pain upon passive ulnar deviation of the wrist with the thumb flexed within the palm is considered suggestive of involvement of the first dorsal compartment tendons. In selected cases, imaging techniques such as ultrasonography or magnetic resonance imaging may be employed to visualize tendon sheath abnormalities and to rule out other causes of wrist pain, including carpometacarpal osteoarthritis, intersection syndrome, and scaphoid-related pathology. (5)

Management of this condition generally begins with conservative measures such as activity modification, immobilization using splints, administration of non-steroidal anti-inflammatory drugs, and physiotherapy. Corticosteroid injections are frequently used when symptoms persist, while surgical decompression is reserved for resistant or recurrent cases. Although these approaches may provide symptomatic relief, they are not without limitations. Corticosteroid injections have been associated with recurrence as well as complications

such as tendon weakening, skin depigmentation, and local tissue atrophy. Likewise, surgery may involve additional expenses, postoperative discomfort, rehabilitation, and procedure-related risks. Consequently, there is increasing interest in treatment modalities that are effective, economical, minimally invasive, and associated with fewer adverse effects. (6,7)

Within the Ayurvedic framework, disorders affecting the musculoskeletal system are broadly described under the category of *Vata Vyadhi*. The clinical manifestations of De Quervain's tenosynovitis—namely pain, stiffness, tenderness, and restricted movement involving tendinous structures—show considerable resemblance to *Snayugata Vata*. Classical Ayurvedic literature explains that aggravated *Vata Dosha*, when localized in structures such as *Snayu*, *Sandhi*, and *Asthi*, produces functional impairment and pain. Factors such as repetitive strain, excessive physical exertion, trauma, inappropriate dietary habits, and faulty lifestyle practices are recognized as contributors to Vata aggravation. Therapeutic measures advocated for *Snayugata Vata* include *Snehana*, *Upanaha*, *Bandhana*, *Unmardana*, and *Agnikarma*, highlighting the importance of targeted local treatment. (8)

Agnikarma is a distinctive para-surgical procedure described in Ayurveda and is regarded as one of the most effective therapeutic interventions for conditions involving pain and dysfunction of deeper tissues. Classical texts suggest that diseases treated with properly performed *Agnikarma* have a lower tendency to recur. For disorders affecting structures such as *Sira*, *Snayu*, *Sandhi*, and *Asthi*, various *Dahanopakarana* including *Kshoudra*, *Guda*, and *Sneha* have been recommended. The therapeutic action of *Agnikarma* is attributed to the *Ushna*, *Tikshna*, and *Sukshma* qualities of controlled heat, which help pacify localized *Vata-Kapha* vitiation, improve circulation, relieve pain, and facilitate tissue repair. Contemporary evidence also supports the role of heat therapy in enhancing local blood flow, stimulating collagen synthesis, and promoting tissue remodeling, all of which contribute to the recovery of tendon-related disorders. (9,10)

Among the substances employed for *Agnikarma*, *Kshoudra* (honey) possesses unique therapeutic attributes described in Ayurveda, including *Yogavahi*, *Sukshma*, *Lekhana*, *Ropana*, and *Sandhana* properties. When administered in a heated form as *Tapta Kshoudra*, it may assist in the deeper transmission of therapeutic heat while simultaneously supporting tissue regeneration and healing. Although *Agnikarma* is traditionally indicated for conditions comparable to *Snayugata Vata*, published scientific evidence evaluating the

role of *Tapta Kshoudra* in De Quervain's tenosynovitis remains scarce. Therefore, the present case study was undertaken to assess the clinical effectiveness of *Agnikarma* with *Tapta Kshoudra* in a patient diagnosed with De Quervain's tenosynovitis and to examine its potential as a safe, affordable, and non-surgical treatment alternative.

Case Report

A 42-year-old female patient presented to the Outpatient Department (OPD) of Shalya Tantra, Bharati Ayurved Hospital, with complaints of pain over the dorsoradial aspect of the left wrist associated with mild localized swelling for the past 3–4 months. The patient gave a history of excessive household work involving repetitive twisting and forceful movements of the wrist approximately four months prior to the onset of symptoms. The pain gradually increased in intensity and interfered with routine daily activities requiring gripping, lifting, and thumb movements.

The patient had previously undergone conventional treatment consisting of oral non-steroidal anti-inflammatory drugs (NSAIDs) for one month and NSAIDs combined with physiotherapy for the preceding eight days. Despite treatment, symptomatic relief was unsatisfactory. Further management in the form of corticosteroid injection into the tendon sheath had been advised; however, the patient sought an alternative treatment approach.

On physical examination, tenderness was present over the radial styloid process of the left wrist with mild swelling over the first dorsal compartment. Pain was aggravated during ulnar deviation of the wrist and adduction of the thumb across the palm. Finkelstein's test was positive, confirming irritation of the abductor pollicis longus and extensor pollicis brevis tendons.

Radiological evaluation revealed mild soft tissue swelling along the first extensor compartment tendons without evidence of fracture, dislocation, or cortical thickening at the radial styloid process. Nerve conduction study findings were within normal limits. Based on clinical findings and investigations, a diagnosis of De Quervain's tenosynovitis was established.

From an Ayurvedic perspective, the clinical presentation was correlated with *Snayugata Vata* involving the structures around the *Manibandha Sandhi*. Considering the chronicity of symptoms, involvement of *Snayu*, and classical indications of *Agnikarma* in *Snayugata Vikara*, *Agnikarma* with *Tapta Kshoudra* was planned as the primary intervention.

Table 1. Baseline Clinical Profile of the Patient

Parameter	Findings
Age	42 years
Gender	Female
Occupation	Homemaker
Chief Complaint	Pain over dorsoradial aspect of left wrist
Duration of Illness	3–4 months
Associated Symptoms	Mild swelling, painful wrist movements
Aggravating Factors	Household work, wrist twisting movements
Previous Treatment	NSAIDs for 1 month, Physiotherapy for 8 days
Suggested Conventional Treatment	Corticosteroid Injection
Finkelstein Test	Positive
Wrist Ulnar Deviation	Painful
Thumb Adduction Across Palm	Painful
X-ray Findings	Mild soft tissue swelling along first extensor compartment
Nerve Conduction Study	Normal
Final Diagnosis	De Quervain's Tenosynovitis

Figure 1 shows Xray left hand

Table 2. Clinical Examination Before and After Treatment

Assessment Parameter	Before Treatment	After 5th Sitting	2nd Follow-up
Pain Score (VAS)	7/10	1/10	0/10
Local Swelling	Mild swelling present	Absent	Absent
Tenderness	Present	Minimal	Absent
Finkelstein Test	Positive	Negative	Negative
Wrist Ulnar Deviation	Severe pain	Mild pain	No pain
Thumb Adduction Across Palm	Painful	Mild discomfort	Normal

Range of Motion	Restricted	Improved	Full and painless
Functional Ability	Difficulty in daily activities	Markedly improved	Normal
Patient Satisfaction	Unsatisfied with previous treatment	Satisfied	Highly satisfied

Functional disability was assessed using the QuickDASH questionnaire. The baseline QuickDASH score was 68.2%, indicating substantial impairment in hand and wrist function. Following five sittings of *Agnikarma* with *Tapta Kshoudra*, the score decreased to 20.5%, with further reduction to 2.3% at the second follow-up, suggesting near-complete restoration of upper limb function.

Table 3. QuickDASH Functional Outcome Assessment.

Assessment Point	Time	QuickDASH Score (%)
Before Treatment		68.2
After 5th Sitting		20.5
1st Follow-up		9.1
2nd Follow-up		2.3

The patient underwent five sittings of *Agnikarma* with *Tapta Kshoudra* on every fourth day along with thumb splint support. Progressive reduction in pain, tenderness, and restriction of movement was observed throughout the treatment period. Swelling completely subsided after the second sitting. Finkelstein's test became negative after the fifth sitting and remained negative during follow-up. No local or systemic adverse effects such as blister formation, scaling, or symptoms suggestive of *Saama Pitta* were observed during the entire treatment period.

Table 4. Sequential Assessment of Clinical Parameters During and After *Agnikarma* with *Tapta Kshoudra*

Assessment Parameter	1st Sitting	2nd Sitting	3rd Sitting	4th Sitting	5th Sitting	1st Follow-up	2nd Follow-up
Pain Score	7	6	4	2	1	1	0

e (VAS)							
Range of Motion	Severe Pain	Moderate Pain	Moderate Pain	Moderate Pain	Mild Pain	Mild Pain	Absent
Finkelstein Test	Positive	Positive	Positive	Positive	Negative	Negative	Negative
Local Swelling	Present	Present	Absent	Absent	Absent	Absent	Absent

Figure 1. Timeline illustrating clinical history, intervention, and outcome in the present case.

Standard Operating Procedure (SOP) for *Agnikarma* with *Tapta Kshoudra*

After obtaining informed consent, the patient was assessed clinically and screened for signs of *Saama Pitta*, and the point of maximum tenderness over the radial styloid process was identified. *Ghrta*, *Ghrta Kumari* pulp, *Kshoudra* (honey), and other required materials were arranged, and the honey was heated using a double-boiling method until it attained a mildly frothy and less viscous consistency without charring. *Ghrta Kumari* pulp was applied locally over the affected area, followed by the application of *Tapta Kshoudra* on the tender points, which was retained for approximately one minute and then gently wiped off. Subsequently, *Go-Ghrta* was applied over the treated area and lightly massaged for two minutes as a post-procedural measure. The procedure was performed in five sittings on every fourth day, and the patient was advised to use a thumb splint throughout the treatment period with regular follow-up assessments.

Figure 2 & 3 shows the affected hand and *Tapta Kshoudra* poured on while doing the procedure

Discussion

De Quervain's tenosynovitis is a frequently encountered disorder of the wrist in which the tendons of the first dorsal compartment become painful and functionally compromised due to narrowing and inflammation of their surrounding sheath. Activities involving repetitive thumb and wrist movements are recognized contributors to its development, making the condition particularly

common among individuals engaged in regular manual work. In the present case, a 42-year-old homemaker reported persistent pain, localized swelling, difficulty in thumb movements, and a positive Finkelstein test following prolonged household activities. The persistence of symptoms despite treatment with non-steroidal anti-inflammatory drugs and physiotherapy indicated an ongoing pathological process affecting the tendon sheath and justified the exploration of an alternative therapeutic intervention. (11,12)

From the Ayurvedic standpoint, the symptom complex observed in this patient can be correlated with *Snayugata Vata*. In this condition, aggravated *Vata Dosh* affects the *Snayu*, leading to manifestations such as pain, stiffness, tenderness, and restriction of movement. Classical Ayurvedic texts emphasize *Agnikarma* as an important therapeutic procedure for disorders involving structures such as tendons, joints, and bones. The selection of *Agnikarma* in this case was based on these traditional principles, which propose that controlled thermal stimulation can alleviate pathological changes in deeper musculoskeletal tissues. The favorable clinical outcome observed in this patient reinforces the applicability of these classical concepts in present-day musculoskeletal practice. (13,14)

One of the most significant observations during treatment was the steady decline in pain intensity. The visual analogue scale score decreased from 7 at baseline to complete pain relief during follow-up assessment. Clinical improvement became evident early in the treatment course, indicating a prompt therapeutic response. The analgesic effect of *Agnikarma* may be attributed to localized heat-induced physiological changes. Thermal stimulation can enhance regional blood circulation, activate sensory receptors, and alter pain transmission pathways. Increased perfusion may further assist in the removal of inflammatory mediators while improving oxygen and nutrient delivery to affected tissues, thereby facilitating symptom relief. Similar mechanisms have been described in studies evaluating the therapeutic effects of heat in chronic musculoskeletal conditions. (15,16)

Functional recovery was another notable outcome. Improvement in wrist mobility was observed progressively during treatment, and the Finkelstein test became negative after the fifth sitting. In De Quervain's tenosynovitis, restricted movement often results from tendon sheath thickening and impaired tendon excursion within the confined compartment. Reduction of inflammation and associated tissue congestion may restore smooth tendon gliding and improve joint mechanics. Therefore, the enhanced range of motion seen in this patient suggests that the

intervention contributed not only to pain reduction but also to restoration of normal functional activity. Such improvements are clinically relevant because regaining hand function remains a primary objective in the management of this condition. (17)

Resolution of swelling was observed shortly after initiation of therapy, with complete disappearance by the second sitting. This finding may reflect the influence of localized heat on vascular and cellular processes involved in inflammation. Previous research has shown that thermal interventions can increase microcirculation, improve tissue metabolism, and accelerate repair mechanisms. Tendon healing is a dynamic process involving inflammatory, proliferative, and remodeling phases. Improved blood flow during these stages may facilitate tissue recovery and structural restoration. Consequently, the reduction in swelling observed in this case may be explained by both the direct thermal effects of *Agnikarma* and the enhanced biological healing responses that follow improved circulation. (18,19)

The therapeutic outcome may also be associated with the use of *Tapta Kshoudra* as the medium for *Agnikarma*. Ayurvedic literature attributes several beneficial properties to *Kshoudra*, including *Yogavahi*, *Sukshma*, *Lekhana*, *Sandhana*, and *Ropana* actions. Owing to its *Yogavahi* nature, honey is traditionally considered capable of carrying therapeutic effects deeper into tissues. When used in a heated form, it may provide a controlled and uniform transfer of thermal energy while minimizing tissue injury. Modern investigations have additionally demonstrated the antioxidant, anti-inflammatory, and tissue-repair-promoting properties of honey. These biological activities may complement the effects of *Agnikarma* and contribute to the overall improvement observed in the patient. (20,21)

An important feature of this case was the excellent safety profile of the procedure. Throughout the treatment and follow-up period, no adverse reactions such as blister formation, excessive burning, infection, skin changes, or systemic complications were noted. Appropriate patient selection, assessment for *Niraama* status, careful heating of honey using the double-boiling method, and post-procedural application of *Go-Ghrita* likely played a role in maintaining procedural safety. This is noteworthy because conventional treatment modalities, including prolonged medication use, corticosteroid injections, and surgery, may be associated with undesirable effects and complications. The present findings therefore support the practicality of *Agnikarma* with *Tapta Kshoudra* as a safe outpatient intervention. (22)

The case also demonstrates the potential economic and practical advantages of this Ayurvedic procedure. Many individuals with chronic tendon disorders hesitate to undergo invasive treatments because of financial concerns, fear of complications, or the need for extended recovery periods. *Agnikarma* can be performed with relatively simple resources in an outpatient setting and does not require sophisticated infrastructure. Furthermore, the patient expressed satisfaction with the outcome and experienced substantial improvement in daily activities. Such factors may positively influence treatment compliance and overall patient acceptance, particularly in healthcare settings where affordability and accessibility are major considerations. (23)

Despite the encouraging outcome, certain limitations should be recognized. Since the report describes a single patient, the observations cannot be extrapolated to the wider population without caution. Objective assessment tools such as ultrasonography or magnetic resonance imaging performed before and after intervention could have strengthened the evidence by documenting structural changes in the affected tendons. In addition, longer follow-up would be necessary to evaluate the durability of results and the possibility of recurrence. Future investigations involving larger patient populations, standardized assessment scales, imaging-based evaluations, and controlled study designs are required to establish stronger evidence regarding the effectiveness of *Agnikarma* with *Tapta Kshoudra* in De Quervain's tenosynovitis. (24)

Overall, the present case indicates that *Agnikarma* with *Tapta Kshoudra* may serve as a promising therapeutic option for patients with De Quervain's tenosynovitis. Marked reduction in pain, disappearance of swelling, restoration of functional movement, and high patient satisfaction were achieved without complications. These observations support the traditional Ayurvedic indication of *Agnikarma* in *Snayugata Vata* disorders and provide a rationale for further systematic research exploring its role in tendon-related musculoskeletal conditions. (25)

Conclusion

The findings of the present case indicate that *Agnikarma* with *Tapta Kshoudra* may be beneficial in the management of De Quervain's tenosynovitis. Following the intervention, the patient experienced substantial relief from pain, complete disappearance of local swelling, restoration of wrist mobility, and a negative Finkelstein test. These clinical improvements were accompanied by enhanced functional performance and a high level of patient

satisfaction, with no treatment-related complications observed during the study period.

From an Ayurvedic viewpoint, the favorable outcome supports the traditional application of *Agnikarma* in conditions comparable to *Snayugata Vata*, where tendons and periarticular structures are affected. The therapeutic benefits observed may be attributed to the synergistic effects of controlled heat application and the pharmacodynamic properties of *Kshoudra*, which together could aid in alleviating pain, reducing local inflammation, improving microcirculation, and facilitating tissue repair.

The present case suggests that *Agnikarma* with *Tapta Kshoudra* is a practical, cost-effective, minimally invasive, and well-tolerated outpatient procedure. It may offer a valuable therapeutic option for selected patients seeking alternatives to long-term pharmacological therapy, corticosteroid injections, or surgical management. Nevertheless, evidence from larger clinical studies with extended follow-up periods is required to confirm its efficacy, evaluate long-term outcomes, and develop standardized treatment guidelines for broader clinical application.

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