Management of Carpal Tunnel Syndrome by Agnikarma—A Case Study

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Abstract: Carpal Tunnel Syndrome is a common pathological condition that causes pain, numbness and tingling in the hand and arm. The condition occurs when one of the major nerves to the hand, the median nerve is squeezed or compressed as it travels through the carpal tunnel. In most patients, carpal tunnel syndrome gets worse over time, so early diagnosis and treatment are important. If pressure on the median nerve continues, however, it can lead to nerve damage and worsening symptoms. To prevent permanent damage, surgery to take pressure off the median nerve may be recommended for some patients. Ayurveda has an advocated various treatment modalities such as Snēha, Upanāha, Agnikarma and Bandhana. Amongst these, Agnikarma seems to be more effective in providing distinct and instant relief. A 40 year-old-female patient was presented with severe pain, numbness and tingling in the hand once she is doing day to day cooking work and she complained that exacerbation of pain at night for 8 months. On examination, she was diagnosed as she is having carpal tunnel syndrome. After careful examination, patient was treated with Agnikarma without any oral medication. Superficial multiple wounds at the area of carpal flexor tunnel produced by Agnikarma healed within 5-7 days. Patient was advised not to lift any heavy objects and perform any twisting movement for further 6 months. Patient visited for follow-up for 1 month after completion of treatment—Agnikarma. The patient noticed that pain, numbness and tingling in the hand were disappeared. It was concluded that Agnikarma can be recommended as an effectiveness treatment for Carpal Tunnel Syndrome.

Keywords: Agnikarma, Carpal Tunnel Syndrome, Ayurveda Medicine, Carpal flexor tunnel, Median Nerve.

Introduction
The carpal tunnel lies between the flexor retinaculum and the carpal bones. The flexor retinaculum forms the roof of a tunnel the floor and walls of which are made up of the concavity of the carpus. Packed within this tunnel are the long flexor tendons of the fingers and thumb together with the median nerve [1]. Carpal Tunnel Syndrome occurs when one of the major nerves to the hand, the median nerve is squeezed or compressed as it travels through the wrist. If pressure on the median nerve continues, however, it can lead to nerve damage and worsening symptoms [2]. Since the superficial palmar branch of the nerve is given off proximal to the retinaculum, there is usually no sensory impairment in the palm [3].

Any lesion diminishing the size of the compartment—for example, an old fracture or arthritic change—may result in compression of the median nerve, resulting in paraesthesiae, numbness and motor weakness in its distribution [4]. It is interesting that carpal tunnel syndrome also often occurs without any very obvious cause, although symptoms are relieved by dividing the retinaculum longitudinally [5].
This is a self-limiting problem and recovery is seen in about 90% of cases within 1-2 years of conservative management, whereas only in less than 10% of cases, surgery is indicated. In some cases, the problem may continue for longer period [5].

A wide range of symptomatic treatments are available such as use of anti-inflammatory analgesic drugs, steroid injection, physiotherapy, exercise, etc. which have their own limitation and adverse effects [6]. Long-term use of anti-inflammatory analgesic drugs and steroid injections are also not free from adverse effects [7]. Till date, no satisfactory treatment is an available for carpal tunnel syndrome. In Ayurveda, Acharya Susruta has advocated various treatment modalities such as Sneha, Upanaha, Agnikarma and Bandana for Vata [8]. Amongst these, Agnikarma reported to be more effective in providing distinct and instant relief for Vata [9]. Agnikarma is an ancient medical technique which has been well-described in Ayurveda [10]. Procedure of Agnikarma involves thermal micro-cauterization using a specialized metallic instrument called Agni Shalaka. (Figure A) [11].

This treatment modality is a highly effective treatment for musculoskeletal diseases providing quick relief without side effects or complications [11]. It is a minimally invasive cost effective procedure that can reduce the need for surgical interventions. Agnikarma is also known to be effective in other cases of musculoskeletal disorders such as osteoarthritis, cervical spondylosis, lumbar spondylosis, sciatica, frozen shoulder, calcaneal spur, plantar fasciitis, trigger thumb, tennis elbow, etc. [8].

Case Report

A 40-year-old female patient was presented with severe pain, numbness and tingling in the hand once she is doing day to day cocking work and she complained that exacerbation of pain at night for 8 months. There was a history of treatment for carpal tunnel syndrome under a private orthopedic surgeon for last 8 months with no significant relief. Routine blood investigations including RA (Rheumatoid arthritis) factor and X-ray examination of hand were done by the surgeon and all investigations were found within normal range.

Wrist-flexion test described in Chaurasia was elicited of this patient and the patient was diagnosed as a case of Carpal Tunnel Syndrome.

Material and Methods

The identified patient was subjected to Agnikarma treatment mode to manage the carpal tunnel syndrome.

Procedure of Agnikarma

After taking written consent, Agnikarma was done following the standard procedure mentioned in Ayurveda [8]. The affected part skin area over the carpal flexor tunnel was applied with Tripala decoction and wiped up with sterilized gauze piece. Agnikarma in the form of Samyak dagdha (therapeutic superficial skin burn) was done by making a velekha dahanavishesa (multiple dots in a three straight lines) (Figure B) with red hot pancha lauha dahanashalaka (Figure C) Carpal flexor area was covering about 2 cm length with dotted spot of burn by sparing gap of 0.5 cm between two dots.

Another two lines of the same velekha dahanavishesa were made, 0.5 cm apart from and parallel to the first line. During entire procedure, a swab soaked in Kumari Swarasa (fresh pulp of Aloe vera) was applied just after making each dot. Appropriate precaution was taken not to procedure asamyak dagdha vrana (neither superficial nor too deep burn). After completion of the procedure wound was covered with Haridra powder dusting. The entire procedure was repeated three times at the interval of 7 days. Patient was advised to apply the paste of Haridra powder mixed with coconut oil at bed.
time. Diet and other physical activities which aggravate *vata dosha* were also restricted during the treatment and follow-up period.

![Figure A. Agni Shalaka](image1.png)

![Figure B. Burn Agni Shalaka](image2.png)

![Figure C. A velekha dahan vishesa](image3.png)

![Figure D. Healed superficial multiple wounds](image4.png)

**Result and Discussion**

*Agnikarma* consider as pain management procedure elaborated in Ayurveda [8]. From ancient time this *Agnikarma* procedure performed to cure various diseases conditions specially warts and corns [11]. According to Ayurveda, *Agnikarma* is considered as superior treatment than all other procedure [8]. In the process of *Agnikarma*, transferring of therapeutic heat to skin and gradually to deep structure was done with the help of a red hot *pancha lauha dahan shalaka*. It would have acted eventually to pacify *amadosha* and *srotahovaigunya* and consequently rendered relief in symptoms of *shota* and *shoola*.

In this *Agnikarma*, heat shocks were given to the patient and this may stimulate the lateral spinothalamic tract which leads to stimulation of descending pain inhibitory fibres, which release endogenous Opioid peptide which binds with Opioid receptors at Substantia Gelatinosa and helps to inhibit the release the p-substance by pre synaptic inhibition and thus block the transmission of pain sensation [12]. Superficial multiple wounds produced by *Agnikarma* healed within 5-7 days. Patient visited for follow up for 1 month after completion of treatment. The scars of wound disappeared due course of time (3-4 weeks) (Figure D) and there was no untoward effect noted. The patient noticed that the pain and numbness of the hand was totally disappeared after 1 month and is doing well day to day cocking activities without any unpleasant experience. *Agnikarma* treatment is a minimally invasive cost effective procedure that can reduce the need for surgical interventions.

**Conclusion**

This treatment modality-*Agnikarma* is effective in the management of carpal tunnel syndrome and this can be prescribed as an office procedure considering its effectiveness and safe therapeutic regimen for Carpal Tunnel Syndrome.

**Conflicts of interest**

There are no conflicts of interest.

**References**


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