



Case Study

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MANAGEMENT OF CARPAL TUNNEL SYNDROME IN AYURVEDA: A CASE STUDY

Manjusri^{1*}, M. Gautham Shetty²

¹ PG Scholar, Department of Panchakarma, Karnataka Ayurveda Medical College, Hoige bail, Mangalore, Karnataka, India

² Professor and HOD, Department of Panchakarma, Karnataka Ayurveda Medical College, Hoige bail, Mangalore, Karnataka, India

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*Corresponding author

E-mail: manjusridgaonkar@gmail.com

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ABSTRACT

Carpal tunnel syndrome is the most common compression neuropathy of the median nerve at the level of the wrist. It is an occupational disease commonly seen in dentists, soldiers, and laboratory workers who make repetitive upper limb movements. The incidence of Carpal tunnel syndrome is 1-3 cases per 1000 subjects per year; the prevalence is approximately 50 cases per 1000 subjects in the general population. There is no direct reference in Ayurveda; the symptoms can be compared to Vishwachi. In contemporary medicine, analgesic tablet liniments are prescribed, temporarily providing temporary symptomatic relief. Surgery is advised as a relief measure. In this single case study, a 60-year-old male patient with complaints of pain, tingling sensation in the wrist, fingers of the right hand and inability to perform daily activities for eight months is considered. He was diagnosed with Carpal tunnel syndrome. He is treated by snehana nasya, one of the Panchakarma indicated in urdhwajatrugata vyadhi, along with sthanika abhyanga and Kukkutanda pinda sweda which proved very beneficial and effective in relieving the symptoms of the patient. Treatment by Ayurveda is the current need as there is no effective treatment for complete management of the condition in conventional medicine.

Keywords: Carpal tunnel syndrome, Abhyanga, Kukkutanda sweda, Nasya.

INTRODUCTION

Carpal tunnel syndrome is a canalicular nerve condition caused by pressure on the median nerve. The incidence of entrapment condition of the median nerve has increased due to the change in work trends of people. The Carpal tunnel is a narrow passageway on the palmar side of the wrist made of bones and connective tissue. The brachial plexus is a network of nerves originating in the spinal cord at the neck's root, passing through the axilla and running through the entire upper extremity. The median nerve originates from the brachial plexus at the cubital fossa. The median nerve controls movement and sensation of the forearm and fingers of the hand except the little finger. Due to its compression, there is paraesthesia, pain, numbness, and weakness in the fingers of the hand (thumb, index finger, middle finger and half of ring finger). The pain may radiate from forearm to arm.

As compression increases, symptoms appear frequently. Patients cannot do delicate movements and often drop small articles. There is a loss of mild discriminatory sensation without power loss of muscles¹. In some cases, the cause remains unknown. It is common in conditions of hypothyroidism, DM, RA and in pregnancy. Occasionally occurs in myxedema, osteoarthritis, and Colle's fracture, which is malunited. It is common in middle-aged women at menopause. It is about eight times more common in women. Acharya Sushruta has said, "talapratyangulina tu kandarabahuprushtatah Bahyokarmakshayakari viswachitii hi smrutah."² Carpal tunnel syndrome can be correlated to Vishwachi in Ayurveda.

In this case study, a 60-year-old male patient diagnosed with Carpal tunnel syndrome was treated by nasya with Mahamasha taila for nine days along with sthanika abhyanga with

Balaashwagandhadi taila followed by Kukkutanda pinda sweda. The present study was carried out in accordance with ethical principles by following the International Conference of Harmonization – Good Clinical Practices Guidelines (ICH – GCP).

CASE REPORT

A 60-year-old male patient visited Panchakarma OPD of Karnataka Ayurveda Medical College, Mangalore, on 26/5/2023 (OPD number 23004178) with complaints of difficulty in performing his routine activities using his right hand. He had pricking pain (toda) in the wrist region radiating to the thumb and index fingers associated with suptata, chimachimayana, and dourbalya for eight months.

History of present illness

The patient was normal. Eight months back, the patient developed pain in the wrist region, numbness, weakness and tingling sensation in the thumb, index finger, middle finger, and ring finger, which gradually increased in intensity. The pain sometimes radiated to the forearm. The patient consulted allopathic doctors, where he was prescribed analgesic tablets and liniments. A nerve conduction study was done, and was diagnosed with moderate Carpal tunnel syndrome of the right hand. He was advised of surgery, but the patient was not willing. He continued with tablets and liniments but noticed that he could not do daily activities like buttoning a shirt and holding a pen using the fingers of his right hand. He consulted our hospital for relief of the same.

Past History: Nothing significant.

Shareerika Pariksha

Prakriti- Vatapitta,
Bala- Madhyama,
Koshta- Madhyama,
Satva- Madhyama,
Satmya- Madhyama,
Aharashakti- Madhyama,
Vyayama shakti- Avara.

Clinical Examination

General Examination: No pallor, icterus, cyanosis, clubbing, lymphadenopathy, oedema.

Systemic Examination: No abnormality detected.

Local Examination of right hand: Tinel’s sign-positive, Phalen’s test-positive, Durkan’s test-positive

Treatment

Sthanika abhyanga (oil massage) of the right hand from shoulder joint to tip of fingers with lukewarm Balaashwagandhadi taila followed by Kukkutanda pinda sweda for 40 minutes duration for nine days.

Kukkutanda pinda preparation and swedana (fomentation): An empty frying pan with 10 ml Ksheera bala taila is taken. Small cut pieces of lemon are added and fried in low flame. 4 eggs are emptied into it (egg yolk and white), 5 grams of saindhava lavana is added, and the entire mixture is stirred well till it reaches semisolid consistency and cooked correctly. The soft lumps are tied in cotton cloth to make pottali. The prepared pottali should be heated with Ksheerabala taila in a hot iron pan up to 42 °C. The temperature of pottali is checked over the dorsal aspect of the palm before application. Care should be taken to maintain the temperature throughout the procedure.

Nasya (nasal therapy) for nine days.

Poorva karma: Sthanika abhyanga of uttamanga with Ksheera bala taila followed by sthanika sweda.

Pradhana karma: The patient is made to lie in a room devoid of breeze in a supine position with pralambita shiras (extension of head to 45°). Six drops of lukewarm Mahamasha taila are instilled into both nostrils in avichinadhara (continuous stream) for nine days.

Paschat karma: The patient is made to lie supine for a hundred matra kala and is advised to spit the medicine that comes to the mouth. Kavala (gargling) with sukhoshna jala (lukewarm water) followed by dhoomapana (inhalation of medicated fumes) from Haridra (turmeric) and ghrita (ghee) varti.

Abhyantara chikitsa

Yogaraja guggulu: 2-2-2

Vishamusti vati: 1-1-1 with ksheera as anupana.

The medicines were continued for 20 days, and the patient was assessed afterwards.

Symptom Severity Scale

The following questions refer to the patient’s symptoms in 24 hours during the last two weeks. The patient is assessed by this questionnaire before and after treatment.³

Grade- 1: No or Never

Grade- 2: Mild

Grade- 3: Moderate

Grade- 4: Severe

Grade- 5: Very Severe

RESULTS

The patient responded to the intervention and got relief from symptoms. Tinel’s sign, Phalen’s test, and Durkan’s test was negative. The Functional Status Scale (FSS) and Symptom Severity Scale (SSS) were Grade 1 at the end of treatment. The patient was able to do all his routine activities without any problem.

Questions	BT	AT
1. How severe is your hand or wrist pain at night?	4	1
2. How often did you wake up due to hand/wrist pain during a typical night in the past two weeks?	4	1
3. Do you typically have pain in your hand /wrist during the daytime?	4	1
4. How long, on average, does an episode of pain last during the daytime?	4	1
5. How often do you have hand or wrist pain during the daytime?	4	1
6. Do you have numbness in your hand?	5	1
7. Do you have weakness in your hand or wrist?	5	1
8. Do you have a tingling sensation in your hand?	5	1
9. How severe is numbness or tingling sensation at night?	4	1
10. How often did hand numbness or tingling sensation wake you up during a typical night in the last 15 days?	4	1
11. Do you have difficulty grasping and using small objects such as keys or pens?	5	1
Overall symptom severity of CTS	4.36	1

BT- Before Treatment. AT- After Treatment

Functional Status Scale: The patient is enquired if he has difficulty performing the below activities before and after treatment.

Activity	BT	AT
1. Writing	5	1
2. Buttoning of clothes	5	1
3. Holding a book while reading	4	1
4. Opening jars	4	1
5. Gripping of a telephone handle	3	1
6. Household chores	3	1
7. Carrying grocery bags	3	1
8. Bathing and dressing	4	1
Overall functional status of CTS	3.87	1

DISCUSSION

Carpal tunnel syndrome can be correlated to Vishwachi and is a Vata pradhana vyadhi. Among the vatasypakrama, abhyanga and swedana are the first line of treatment of Vata dosha⁴. The median nerve is a branch of the brachial plexus that originates in the spinal cord at the neck. Hence, nasya, which is mainly indicated in urdhwajatrugata vyadhi (head and neck diseases), is very effective in this condition.

Abhyanga with Balaashwagandhaadi taila: Abhyanga is Vatahara, gives pusti and dharyata to body⁵. It increases blood circulation, enhances soft tissue mobility, soothes nerves, and increases the exchange of nutritional elements.

Balaashwagandhaadi taila: It has been mentioned in sahasrayoga taila prakarana. It is mainly indicated in Vata roga. The main ingredient is Bala (*Sida cordifolia*), which improves the strength of nerves and blood vessels. Ashwagandha (*Withania somnifera*) strengthens muscles, relieves inflammation, and improves blood circulation. Laksha strengthens bones and ligaments. Mastu is Vatanashaka and gives strength. Devadaru, Kushta and Raasna ease pain and swelling.

Kukkutanda pinda sweda: It is mentioned by Bhavaprakasha⁶. It is snigdha sankara sweda. It is stambhaghna (reduces stiffness), gouravaghna (reduces heaviness), ushna (hot in potency), vedanashamaka (alleviates pain), brahmana, balya and tridoshaghna⁷ swedana done by Kukkutanda has triple action of snehana, swedana, brahmana. Massage with Kukkutanda increases temperature locally, and there is vasodilation, which helps relieve pain. It soothes the nerves and has anti-inflammatory action. Cytokines, such as egg white pleiotrophin, are pivotal in resolving inflammatory responses⁸.

Mahamasha taila (niramisha): It is mentioned in Bhaishajya Ratnavali Vata vyadhi prakarana as nasya in Vishwachi condition. The main ingredient is Masha (*Vigna mungo*), which is snigdha, tarpana, balya, brahmana, and mamsa balaprada. It is an excellent nervine tonic and relieves pain. Dashamoola are Vatahara, shothahara (reduces inflammation), shoolahara (alleviates pain). It is beneficial in conditions of reduced neuromuscular function, locomotor system diseases and neuralgia.⁹

Vishamushti vati: It is mentioned in Siddha Bhaishajya Manimala. It contains Kupilu (*Strychnos nux vomica*) (1 part), Maricha (*Piper nigrum*) (1 part), Indrayana phalarasa (*Citrullus colocynthis*) (2 part). It is mainly Vata Kaphahara and shoolahara. It is indicated in the condition of Gridhrasi. According to Dalhana, Vishwachi is an ailment which is similar to Gridhrasi. It is an excellent analgesic and anti-inflammatory. Anupana is Ksheera.

Yoga raja guggulu: It is mentioned in Bhaishajya ratnavali. It is a combination of drugs having ushna, deepana, shothaghna, Vatahara, and shoolahna properties and is indicated in Vataroga of sandhi. It contains mainly Guggulu (*Commiphora wightii*) which is ushna, tikshna, Vatahara and rasayana (rejuvenates).

CONCLUSION

From the case study, it is observed that treatment with Mahamasha taila for snehana nasya, abhyanga with Balashwagandhadi taila and swedana with Kukkutanda pinda is

highly beneficial along with shamanoushadhi in the treatment of Carpal tunnel syndrome. There was a significant improvement in symptoms, and the patient could do his daily activities.

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