

Carpal Tunnel Syndrome in a *Vataj Prameha* (Type II Diabetes Mellitus): A Case Report

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Abstract:

A diagnosed 56 year old woman with type II diabetes mellitus (T2DM) well glycaemic control presenting with clinical and electro physiologically confirmed carpal tunnel syndrome (CTS) consulted to Ayurveda OPD. Magnetic resonance imaging (MRI) revealed compression of the median nerve so orthopedic surgeon advised for decompression surgery. In this case Ayurveda treatment with *Chandanbalalakshyadi Tailamnasya* along with local *snehana* provided good clinical improvement. Patient improves the function of her hand and wrist, reduce the associated pain and avoid the need for surgery. A literature surrounding the important aspects of Carpal tunnel syndrome is presented concomitantly. In a patient with Type II Diabetes mellitus to avoid the decompression surgery and anesthesia hazards an alternative non interventional Ayurveda treatment can improve symptomatically without adverse effect.

Keywords: Ayurveda, Carpal tunnel syndrome, diabetes mellitus, *Nasya*, *Vataj Prameha*, *Vishwachi*.

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Introduction:

Carpal tunnel syndrome (CTS) is a medical condition due to compression of the median nerve as it travels through the wrist at the carpal tunnel. The main symptoms are pain, numbness, and tingling in the thumb, index finger, middle finger, and the thumb side of the ring fingers. ^[1]Symptoms typically start gradually and during the night. Pain may extend up the arm. Weak grip strength may occur and after a long period of time the muscles at the base of the thumb may waste away. In more than half of cases both sides are affected.

Risk factors include obesity, repetitive wrist work, pregnancy, and rheumatoid arthritis. There is tentative evidence that hypothyroidism increases the risk. Diabetes mellitus is weakly associated with CTS. Types of work that are associated include day to day household work, work with vibrating tools, and work that require a strong grip like More computer work with mouse or writing work are the more prone to develop CTS . Diagnosis is suspected based on signs, symptoms, and specific physical tests and may be confirmed with electro diagnostic tests. If muscle wasting at the base of the thumb is present, the diagnosis is likely. Being physically active can decrease the risk of developing this syndrome. Symptoms can be improved by wearing a wrist splint or with corticosteroid injections. Taking NSAIDs or gabapentin does not appear to be so useful. Surgery to cut the transverse carpal ligament is effective. In Ayurveda study trial with internal medicines *varanadi kashaya*, *sahacharadi* and *supti*

taila, *yogaraja guggulu*, studies so far done. ^[2] Prevalence of the disease is 1-3 cases per 1000 subjects per year.

Case Report**Presenting symptoms:**

A 56 year old woman patient (O.P.D. 2475/2018) has experienced Carpel Tunnel Syndrome for a period of 18 months. Her symptoms include parasthesia over the right index finger, worse overnight and causing sleep disturbance. In addition she had noted a recent reduction in grip strength, pain and reduced mobility in her left wrist and hands for that she advised for surgery. She is a known case of type II diabetes mellitus since 8 months on tablet Metformin 500 mg daily after lunch from civil hospital, She also presented with a range of problems that were diagnosed as physiological for her age like menopause, fatigue, dizziness, hot flushes, puffy face and other like body ache ,leg cramps ,constipation, sleep deprivation.

Previous treatments:

She previously visited an orthopedic doctor from civil hospital who advised her that she would require surgery for Carpel Tunnel Syndrome. She is a known case of type II diabetes mellitus on treatment Metformin 500 mg daily after food. She would want this to get rid of her problem. She started seeking alternative therapies and undertook regular massage for her Carpel Tunnel Syndrome, however any relief experienced was very short term, lasting usually only one day. She is seeking treatment that can improve the function of her hand and wrist,

reduce the associated pain and avoid the need for surgery.

Examinations:

Patient's lab investigations like urine routine and complete blood count was normal with Haemoglobin 11 gm, Glycosylated Hb 5.6. Examination revealed tingling sensation, decreased sensation over the thumb, index finger and middle finger. Occasionally pain in the arm and shoulder more at night. She was referred by neurophysician for electrophysiological nerve examination, which revealed conduction abnormalities of the median nerve. Her abnormal nerve conduction tests and anatomy a magnetic resonance imaging (MRI) scan was requested to rule out the carpal tunnel and median nerve anatomy.

The MRI scan revealed a very radial lying median nerve within the carpal tunnel and scaphoid hypoplasia detailing radially located median nerve.

The patient was advised carpal tunnel decompression surgery under general anesthesia with a more radial incision for this chronic compression. As an alternative not interventional treatment, she was treated by *Ayurveda panchakarma* treatment.

At review, 6 months post treatment the patient's symptoms had improved with a resultant high satisfactory outcome of treatment.

Methodology of drug application:

Chandanbala Lakshadi Tailam (Oil) is an Ayurvedic formulation in the form of oil mentioned in by *Yogaratanakara*.^[3] It aids in relieving burning sensation etc. *Chandanbala Lakshadi Thailam* (Oil) is used both externally and internally. It balances *Pitta* and *Kapha doshas*. The ingredients of *Chandanbala Lakshadi Tailam* are mentioned in Table-1.

Table -1: Ingredients of Chandanbala Lakshadi Tailam:

Name	Botanical name	Part used	Quantity
<i>Chandana</i>	<i>Santalum album</i>	leaves	768 gm
<i>Bala</i>	<i>Sida cordifolia</i>	Root	768 gm
<i>Laksha</i>	<i>Laccifer lacca</i>	-	768 gm
<i>Lamajjaka</i>	<i>Andropogon jwarancusa</i>	Root	768 gm
<i>Water</i>	24.576 liters boiled and reduced with above herbs to 6.144 litres, filtered.		
<i>Sesame Oil</i>	<i>Sesamum indicum</i>	Seed oil	1.536 litre

Paste prepared with powders of following ingredients:			
<i>Chandana</i>	<i>Santalum album</i>	Bark	16 gm
<i>Usheera</i>	<i>Vetiveria zizanioides</i>	Root	16 gm
<i>Yashtimadhu</i>	<i>Glycyrrhiza glabra</i>	Stem	16 gm
<i>Shatahva</i>	<i>Anethum sowa</i>	Seed	16 gm
<i>Katurohini</i>	<i>Picrorhiza kurroa</i>	Stem	16 gm
<i>Devadaru</i>	<i>Cedrus deodara</i>	Stem	16 gm
<i>Haridra</i>	<i>Curcuma longa</i>	Root	16 gm
<i>Kushta</i>	<i>Saussurea lappa</i>	Stem	16 gm
<i>Manjishta</i>	<i>Rubia cordifolia</i>	Stem	16 gm
<i>Agaru</i>	<i>Aquilaria agallocha</i>	Stem	16 gm
<i>Ashwagandha</i>	<i>Withania somnifera</i>	Stem	16 gm
<i>Bala</i>	<i>Sida cordifolia</i>	Root	16 gm
<i>Darvi</i>	<i>Berberis aristata</i>	Stem	16 gm
<i>Murva</i>	<i>Marsdenia tenacissima</i>	Root	16 gm
<i>Musta</i>	<i>Cyperus rotundus</i>	Root	16 gm
<i>Radish</i>	<i>Raphanus sativus</i>	Root	16 gm
<i>Ela</i>	<i>Elettaria cardamomum</i>	Seed	16 gm
<i>Twaka</i>	<i>Cinnamomum zeylanicum</i>	Bark	16 gm
<i>Nagakeshara</i>	<i>Mesua ferrea</i>	Root	16 gm
<i>Rasna</i>	<i>Pluchea lanceolata</i>	Root	16 gm
<i>Laksha</i>	<i>Laccifer lacca</i>	-	16 gm
<i>Shati</i>	<i>Hedychium spicatum</i>	Root	16 gm
<i>Peetasara</i>	<i>Pterocarpus marsupium</i>	Bark	16 gm
<i>Sariva</i>	<i>Hemidesmus indicus</i>	Root	16 gm
<i>Sauvarchala lavana</i>			16 gm
<i>Rock salt</i>			16 gm
<i>Cow milk</i>			3.072 Litres

Method of Preparation: Decoction of the mentioned herbs made and the paste of the herbs mentioned under it. Then the paste in the decoction was added with sesame oil, Mixture was boiled till it becomes a homogenous mixture. The filtrate was

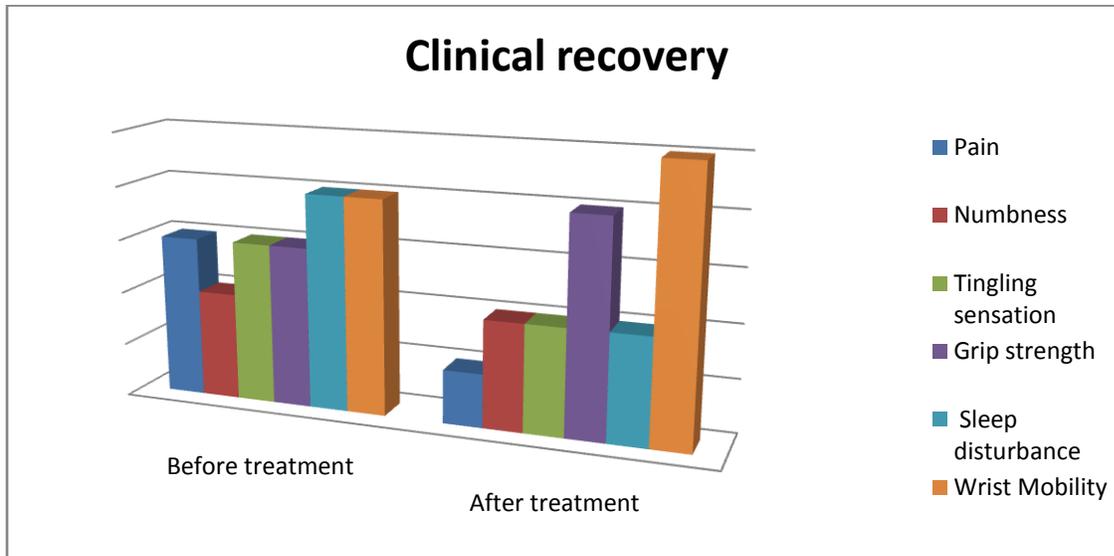
filtered and stored in a bottle away from heat and light.

Patient was given with both hands *snehana* (external oilation) by *Chandanbalalakshyadi Tailam* for 10 minutes and avoiding burning of the skin for diabetes patient *mrudu*

nadiswedana with *nirgudi patra swarasa* for 10 minutes was given *Chandanbala lakshyadi Tailamvidhivat nasya* 4 drops in each nostrils of the same oil daily once in

the morning hours for 15 days. Adult diabetic diet and exercise to be followed with this treatment. Patient was monitored weekly for 8 weeks.

Clinical Observations:



Result and Discussion:

In this case involvement of median nerve due to compression causing weakness and neuralgic pain,parasthesia occurs. Day to day activities like holding objects was difficult to do. The prognosis of the disease was explained to the patient and consent has been taken before starting treatment. Treatments plan included treatment like *Vishwachi* and taking consideration of *Vataja Prameha*. Treatment described in texts. [4-5] For *Vishwachi* to be treated like *Grudhrasi* Management, Deranged *Doshas* can be treated with the *Vatashaman and Vatavyadhi Samanyaja Chikitsa* as described in texts. [6-7]

Therefore number of drugs of different properties is described as *Vatashaman and Pittashamka Chikitsa* in the management of *Vishwachi*. [8] In *Vatavyadhi like Vishwachilocal snehna as well as Nasya* is indicated which is treatment to achieve the main goal of *Vatashaman*, it is necessary to remove the maximum *Dushti* by the virtue of *Snehana, Shoola prashamana*. The *chandanlakshabaladi taila* contains main ingredients *Laksha, Chandana, Lamajjaka* and *Bala* these are having *sheeta guna and Sheeta veerya* properties and having *Amapachaka, Tridosahara, Shoolaprashamana* properties. [9-10]

Alleviating these inhibitory factors is the goal of *Sthanik Chikitsa* and *Nasya*. Along with this dietary control for Diabetes, Adult diabetic diet and exercise to be followed with this. Mostly drugs have *vatakaphagna* properties. *Vata* is considered as the controller of the nerves. All the drugs are having the *Vata hara* property with *Sheeta Dahashamak* and *Snigdha guna*. So the pacification of the *Vata* also is playing an important role in the action of the drug.

Properties of *Chandanbala Lakshadi* : This oil which is prepared from various herbs. This oil has ability to pacify the *pitta* and *kaphadoshas* in the body. This formulation has different properties like analgesic and it is coolant in nature. Local blood circulation increased, wrist mobility and strength increased as well as due to its coolant properties it is useful to pacify the burning sensation. It helps to reduce the inflammation. The oil also helped to reduce the burning sensation all over the body due to its coolant property. There is relief in symptoms in this case i.e. pain, numbness, and tingling sensation, grip strength, sleep disturbance. *Nasya* as a *shirovirechana* or *shaman nasya* is helpful in *Vishwachi* increasing blood flow to that area, anti-inflammatory action by increasing local temperature, reducing inflammation by eliminating *tikshna guna* of *pitta* and relieving pain, by keeping the skin soft by reducing *rukshata* of *vayu* applied locally.^[11] Probable action of *Chandanbala Lakshadi* oil locally and *Nasya* is that all drugs of *Chandanbala Lakshadi* are found to have anti-inflammatory, analgesic, properties.

Anti-inflammatory effect may be achieved by *Chandanbala Lakshadi Nasya*.

Conclusion:

This single case concluded *Chandanbalalakshyadi Tailam vidhivat nasya* and local *snehan, swedan* is an effective treatment in Type II Diabetic patients with Carpal Tunnel Syndrome. By avoiding the decompression surgery and anesthesia hazards and delayed or non-healing in diabetes, aesthetic aspect scar can be avoided. Relief of symptoms which affect day today activities like strength of grip, reduction in the pain, numbness, tingling sensation, improved mobility can be achieved. This treatment is cheap, safe, easy to apply and tolerable to the patient without any side effect. The treatment need to be tried in more number of cases.

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