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Marma management in carpal tunnel syndrome - a case study

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ABSTRACT

Marmas are the vital points in the body and any damage to them will result in pain and agony. The most prevalent peripheral nerve entrapment syndrome, carpal tunnel syndrome, is brought on by compression of the median nerve at the wrist. It is frequently brought on by excessive wrist strain from repetitive tasks like typing. It can be correlated to vatha-dominated disease since it is a pain-predominant condition that affects the joint components. Manibandha marma is one among the 107 marmas explained in ayurvedic classics. According to the Tamil text book on marma, individual marma stimulation is the most efficient, non-invasive, and economical method of treating many ailments. In this study a female patient aged 48yrs came to the shalyatantra OPD at PNPS Ayurveda College and Hospital with complaints of discomfort in the thumb, second and third fingers of her right hand, and wrist area which was getting worse at night for the last year. She had consulted allopathic doctor and was prescribed analgesics. During the course of medication symptoms got reduced but her symptoms returned after stoppage of medications and so she came for ayurvedic treatment.The patient was trained and instructed to continue self marma therapy for 15 days, five times a day for three to five minutes. As an oral medication one tablet of Dhanwamtharam three times a day was also advised. Significant improvement was reported in pain and numbness Therefore it can be concluded that Manibandha marma therapy is a beneficial treatment option in Carpal tunnel syndrome.

INTRODUCTION

Carpal tunnel syndrome (CTS) is charactrised by compression of median nerve in carpal tunnel.[1]The carpal bones at its lower end and the transverse carpal ligament at its higher end form the carpal tunnel.The increased pressure in the carpal tunnel result in the compression of median nerve.[2]Pain, numbness, and paresthesias affecting the first three fingers and the lateral half of the fourth finger are the early symptoms in CTS. According to Ayurveda,[3] CTS is a condition caused by vitiation of Vatha and Kapha.Studies have consistently shown a correlation between CTS and hand and wrist tendinitis and intense manual exertions, repetitive hand motions, and hand and arm vibration.[2] Marma is the point where ligaments, bones, muscles, blood vessels, and joints are united, and any damage to these structures at the marma site should be regarded as a damage to the corresponding marma.Therefore, damage to the tissues located proximally to the wrist joint, such as the compression of the median nerve, results in symptoms like pain, stiffness, numbness, and loss of function could be considered as injury manibandha marma.

Case report

A moderately built female patient aged 48yrs came to the OPD of shalya tantra at PNPS Ayurveda medical college and hospital Kanhangad,Patient complained of pain in the thumb ,second & third digits of right hand and wrist region which tend to worsen at night since 1 year. Some times the pain radiated to forearm and was also associated with numbness while lying down with her right hand support since 6 months.

History of present illness

Patient was apparently normal 1 yr back ,gradually she developed pain in her right wrist region, thumb, second and third digit with associated numbness in these regions. Pain aggravated during night hours and she use computer for her work. Since 3 months pain got aggravated was disturbing her sleep and routine activities. There was no history of mechanical injury or trauma to the region. She consulted nearby clinic and took allopathic medication for 2 months,but on stoppage of the medication symptoms reccurred and so she approached for Ayurvedic treatment.

Her family history, menstrual history and medical history was non contributory.

Table- 1 Dashavidha Pariksha

PRAKRITI	VATHA KAPHA
SARA	MADHYAMA
SAMHANANA	MADHYAMA

SATWA	AVARA
SATHMYA	MADHYAMA
AHARASAKTHI	MADHYAMA
VYAYAMASAKTI	MADHYAMA
DESHA	SADHARANA
VAYA	MADHYAMA
KALA	VARSHA

Vital signs

Blood pressure 130/88 mmhg
Heart rate 80 b/minute
Respiratory rate 20 breath/minute
Temperature Afebrile
Hight 165 CM
Weight 68 kg

Systemic examination

Respiratory, Cardiovascular, Gastro intestinal system was within normal limits

Clinical Diagnostic tests

Tinels test - Positive
Phalens maneuver test [4] - Positive
Nerve conduction study - Revealed Carpal tunnel syndrome of Right Wrist

Table -2 Relevant blood investigation reports

INVESTIGATION	RESULTS
Haemoglobin	10.2gm%
E S R	18/hr
VIT D	20ng/Ml
Hba1c	5.4%
Total cholesterol	250mg/dl
Calcium	1.8 mmol/L

Nerve conduction study report (before treatment)

Stim Site	Lat1 (mS)	Lat2 (mS)	Dur (mS)	Amp	Area
RT Wrist	02.50	13.75	11.25	16.8 mV	53.4 mVmS
Elbow	06.25	19.06	12.81	16.4 mV	55.1 mVmS
Axilla					
LT Wrist	02.60	13.75	11.15	15.6 mV	52.1 mVmS
Elbow	06.56	19.17	12.60	13.7 mV	45.8 mVmS

Segment	Diff (mS)	Dist (mm)	NCV (m/S)
RT Wrist - Elbow	03.75	220	58.67
LT Wrist - Elbow	03.96	220	55.56

Stim Site	Lat1 (mS)	Lat2 (mS)	Dur (mS)	Amp	Area
RT Wrist	02.50	13.75	11.25	16.8 mV	53.4 mVmS
Elbow	06.25	19.06	12.81	16.4 mV	55.1 mVmS
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Segment	Diff (mS)	Dist (mm)	NCV (m/S)
RT Wrist - Elbow	03.75	220	58.67
LT Wrist - Elbow	03.96	220	55.56

Figure - 1 Manibandha marma

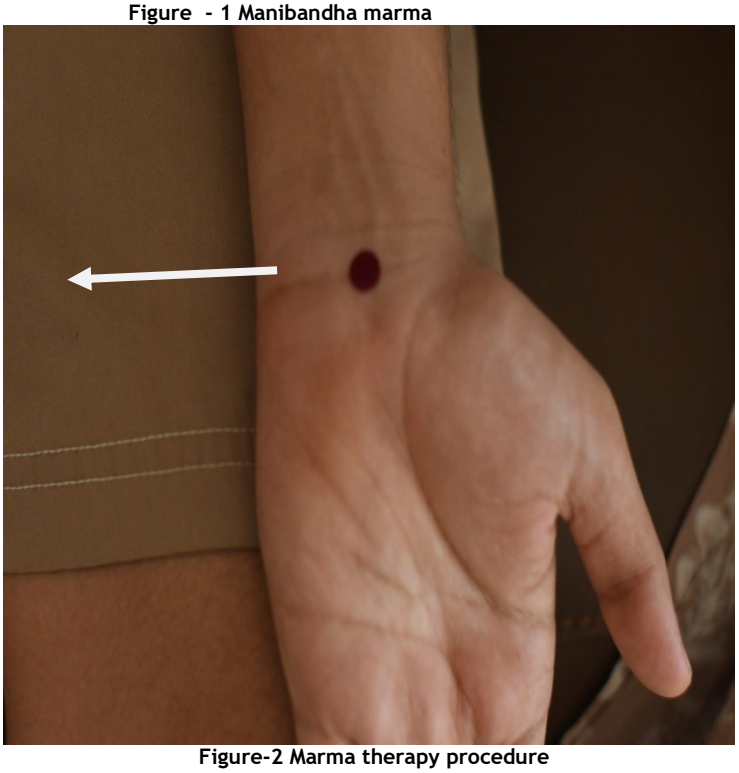
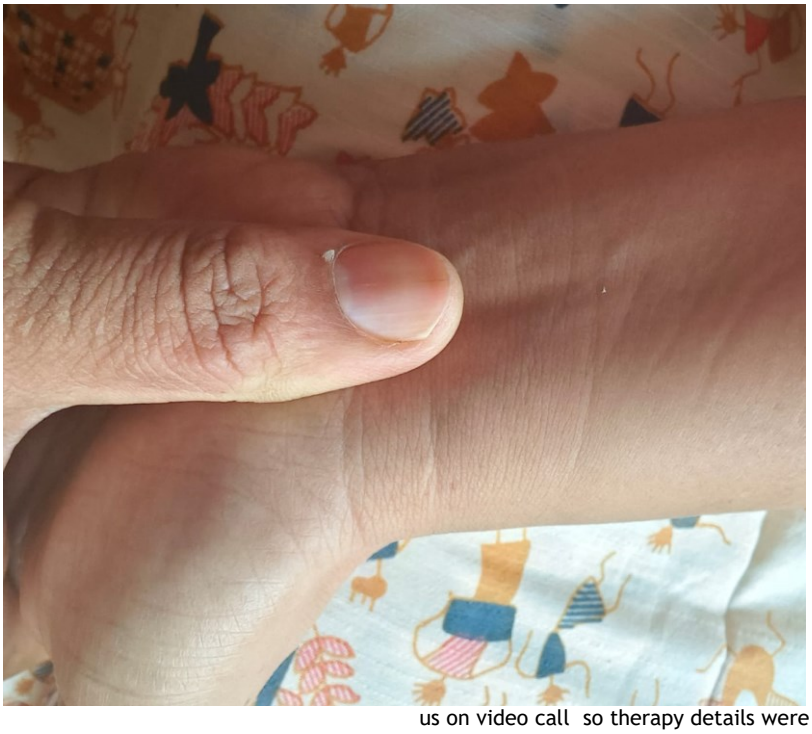


Figure-2 Marma therapy procedure



Procedure of Marma therapy [5]

Place the first interphalangeal joint of the thumb on the marma point,using medium pressure; press and release three times (as shown in Fig-2)

We trained the self marma therapy tecnique [6] on Manibandha marma ,advised to practice for 5 times a day for 5 minutes for 2 weeks. Every time when she does marma therapy, she consulted us on video call so therapy details were documented. There was significant change in subjective parameters post treatment. In the follw up we asked her to stop dhanwamtharam tablet[6] and Marma therapy to be continued for next 14 days 3 times daily for 3 minutes.

Table - 3 Duration of Marma stimulation performed and assesement of 7days with medication

DAY	ORAL MEDICATION	Marma therapy on manibandha marma	Time duration
DAY 1	Dhanwamtharam tab 1-1-1	7am,11am,2pm,5 pm,9pm	5 minutes
Day 2	Dhanwamtharam tab 1-1-1	7am,11am,2pm,5 pm,9pm	5 minutes
Day 3	Dhanwamtharam tab 1-1-1	7am,11am,2pm,5 pm,9pm	5 minutes
Day 4	Dhanwamtharam tab 1-1-1	7am,11am,2pm,5 pm,9pm	5 minutes
Day 5	Dhanwamtharam tab 1-1-1	7am,11am,2pm,5 pm,9pm	5 minutes
Day 6	Dhanwamtharam tab 1-1-1	7am,11am,2pm,5 pm,9pm	5 minutes
Day 7	Dhanwamtharam tab 1-1-1	7am,11am,2pm,5 pm,9pm	5 minutes

Same procedure was repeated for next 21 days, every 14 t^{th} dayfollow up subjective parameter is documented. Patient was assessed on the basis of symptoms like pain (VAS score),numbness and ability to perform her routine activity and improvement in her sleep patern.

Table-4 Assessment of treatment outcome

SYMPTOMS	BASELINE	AFTER 14 DAY	AFTER 28 TH DAY
PAIN	VAS SCORE 8	VAS SCORE 3	VAS SCORE 2
NUMBNESS	PRESENT	REDUCED	NO NUMBNESS
SLEEP DISTURBENCE	DISTURBED	SLEEP IMPROVED	ABSENT
QALITY TO PERFORM DAILY ROUTINE	POOR	IMPROVED	NO DISCOMFERT
TINELS SIGN	POSITIVE	NEGATIVE	NEGATIVE
PHALENS SIGN	POSITIVE	NEGATIVE	NEGATIVE
NCT	CTS OF RT WRIST		NORMAL

NERVE CONDUCTION STUDY REPORT (Post treatment)

Stim Site	Lat1 (mS)	Lat2 (mS)	Dur (mS)	Amp	Area
Rt.Median Wrist	04.46	06.96	02.50	15.2 µV	17.6 µVmS
Lt.Median Wrist	02.79	05.04	02.25	34.7 µV	34.7 µVmS
Rt. Ulnar Wrist	01.96	02.96	01.00	51.8 µV	24.9 µVmS
Lt. Ulnar Wrist	01.96	03.13	01.17	43.3 µV	22.8 µVmS

Segment	Diff (mS)	Dist (mm)	NCV (m/S)
Digit 2 - Rt.Median Wrist	04.46	150	33.63
Digit 2 - Lt.Median Wrist	02.79	150	53.76
Digit 5 - Rt. Ulnar Wrist	01.96	130	66.33
Digit 5 - Lt. Ulnar Wrist	01.96	130	66.33

Stim Site	Lat1 (mS)	Lat2 (mS)	Dur (mS)	Amp	Area
Rt. WRIST	05.94	20.31	14.38	08.9 mV	44.2 mVmS
Rt. ELBOW	09.48	24.79	15.31	08.3 mV	43.2 mVmS
Lt. WRIST	03.44	19.27	15.83	09.0 mV	48.6 mVmS
Lt. ELBOW	06.67	23.44	16.77	09.0 mV	45.7 mVmS

Segment	Diff (mS)	Dist (mm)	NCV (m/S)
APB - Rt. WRIST	05.94		0.00
Rt. WRIST - Rt. ELBOW	03.54	200	56.50
APB - Lt. WRIST	03.44		0.00
Lt. WRIST - Lt. ELBOW	03.23	200	61.92

DISCUSSION

Compression of median nerve in the carapal tunnel results in CTS.[6] On the basis of structures involved and features of carpal tunnel syndrome, condition can be correlated with Vata dominated disease as it affects tendons, ligaments and nerve. CTS can be considered as snayugatha vatha. which is characterised by discomfort, tingling, numbness, and p erhaps weakness in the firstthree fingers as well as the part of th e ring finger closest to the thumb.Furthermore, people who work in jobs that require vibrating equipment or repetitive hand mov ements are more likely to acquire CTS.[7] This patient works as a computer operator in a textile store in the billing section, using her right hand more frequently and she developed CTS of Right wrist. Manibandha Marma is an important marma in the wrist region which is contributed by the structures like carpal bones, distal ends of the radius and ulna, as well as nume rous ligaments, tendons, and nerves.It is a Sandhi Marma of Ruja kara variety. According to Acharya Sushruta,injury to manibandha marma causes severe pain,and disability in functioning of the joint. As all the anatomical structures in the wrist joint contribute the manibandha marma, any injury to any of these joint components should be regarded as Manibandha Marma injury .[8]

Patients sathwabala was poor ; she was not ready for having agnikarma and was also complaining of incovienience for admission for ayurvedic therapies and we planned for self marma therapy with oral medication to releve pain. We trained the self marma therapy technique on Manibandha marma and was advised to practice for 5 times a day for 5 minuts for 2 weeks. There was significant change in subjective parameters and in the follw up we asked her to continue therapy for next 14 days 3 time daily for 3 minutes. After 1 month of follow up Tinels sign and Phanels test got negative. She could do her routine works with ease and could sleep at night hours. In the post treatment nerve conduction study report, there was no evidence of CTS. Dhanwamtharam tablet was given 1 tablet thrice daily for 2 week, it's the best known analgesic in Ayurveda.It is evident that manibandha marma stimulation could relieve the tension at the carpal tunnel and by increasing the local blood flow there by releving the compression in median nerve and reducing the symptoms.

Challenges and Scope

CTS is a prevalent illness that affects a lot of people these days.Ayurveda offers hope for the majority of illnesses whose prognosis is dismal when treated with allopathic methods.Using analgesics and corticosteroid injections in the ear ly stages of CTS can help reduce pain, but they also have a lot of adverse effects and only offer short-

term relief. For this reason, using various ayurvedic modalities, s uch as self-marma therapy, is safe, patient-friendly, and economical.

CONCLUSION

Combined therapy may offer more substantial benefits than any single treatment. Healthcare professionals must educate patients about the risks, benefits, and efficacy of various treatment modalities of CTS and help them establish realistic expectations regarding their treatment outcomes. Therefore it can be concluded that Manibandha marma therapy is beneficial in managing carpal tunnel syndrome and can avoid surgery and other complications.

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