Published online in http://ijam.co.in ISSN No: 0976-5921

*International Journal of Ayurvedic Medicine, Vol 15 (2), 2024; 611-620*

# Management of Brachial Plexitis through *Marma* Therapy: A Case Report

**Case Report**

**Gaurav Phull[1*], Rekha Phull[2], Abhilasha Bhardwaj[3]**

1. Deputy Medical Superintendent, Ch. Brahm Prakash Ayurveda Charak Sansthan, Khera Dabar, New Delhi. India.
2. Professor, Department of Kayachikitsa, SGT University, Gurugram, Haryana. India.
3. PG. Scholar, Department of Rachna Sharir, Ch. Brahm Prakash Ayurveda Charak Sansthan, Khera Dabar, New Delhi. India.

## Abstract

Brachial Plexus disorders are encountered by neurologists as a big challenge despite ever advancing medical system. A variety of disorders affect the brachial plexus. Plexopathies related to inflammation, trauma, tumors, and radiation therapy form bulk of clinical case. This paper focuses on a Brachial Plexitis, an inflammation of the brachial plexus, which was treated solely with *Ayurveda* without using allopathic drugs. There is no proven treatment in western medicine and is typically managed conservatively. This study aims to explore the potential benefits of *Marma* Therapy as a treatment modality, contribute to the existing body of knowledge regarding alternative treatment option and provide evidence-based recommendations for healthcare professionals. In this interventional study, a 39-year-old male patient with complaints of pain, stiffness and restricted movements in the left upper extremity for two months was effectively managed using *Marma* Therapy in accordance with the principles of *Vatavyadhi*. The *Shakagata Marma* (located on left upper limb) and *Pristha Marma* points, including *Kshipra, Talahridya, Indrabasti, Kurpara, Aani, Ansa* & *Ansaphalaka Marmas* were subjected to controlled stimulation for a continuous period of 15 days. Following this, the stimulation was carried out intermittently once a week for two months. The patient also received *Matra Basti* for seven days and massage cupping for four days. Observations showed substantive improvement in pain, stiffness, and range of motion. *Marma* Therapy proved to be a safe, time-efficient, and cost-effective treatment resulting in complete remission of almost all signs and symptoms. There were no fresh complaints on follow up. The assessment was based on objective and subjective criteria.

**Keywords:** Brachial Plexitis, *Marma Chikitsa, Vatavyadhi, Ayurveda,* Neurology, Pain management.

## Introduction

Brachial Plexitis is an inflammatory condition that affects the brachial plexus, a complex network of nerves responsible for controlling both the sensory and motor functions of the upper limb. Brachial plexus is composed of three trunks (upper, middle, and lower) with anterior and posterior divisions per trunk. The trunk is divided into three cords (medial, lateral, and posterior). Multiple terminal nerves arise from these chords innervating the arm (1). Brachial Plexitis is marked by the sudden onset of motor and/or sensory deficits in one or more nerves connected to the brachial plexus. Brachial Plexitis is characterised by acute shoulder pain, which is followed by weakness and/or sensory loss in the arm, shoulder and/or upper extremity. Idiopathic and inherited Brachial Plexitis are the two different types of the condition. The idiopathic type is associated with recent immunisations and virus infections, particularly upper respiratory tract infections. The inherited variant, autosomal dominant recurrent Brachial Plexitis, is attributed to a mutation resulting in a deficiency of septin family proteins. There is no proven treatment in western medicine and is typically managed conservatively. Mostly symptomatic medication and physiotherapeutic rehabilitation are used. Non-steroidal anti-inflammatory medications (NSAIDs) are typically used to treat pain. Although their therapeutic value has not yet been established, some research has indicated that using corticosteroids early in the condition may shorten the time it takes for pain and weakness to recover (2). This case is of idiopathic origin as there is no family history or history of any trauma. The aim and objective of the study is to explore potential benefits of *Marma* Therapy as a treatment modality for Brachial Plexitis; to contribute to the existing body of knowledge regarding alternative treatment option/non-pharmacological management for Brachial Plexitis and provide evidence-based recommendations for healthcare professionals.

In *Ayurveda*, brachial plexus being the network of nerves can be related to *Snayu. Snayu tantra* is controlled by *Vata*. *Vata Dosha* is responsible for controlling all the neurological and neuromuscular activities in the body. It is responsible for all the movements of the body. When *Vata* is in its imbalanced state, it accumulates in the *Rikta Strotas* (empty channels) of the body and leads to the manifestation of different ailments known as *Vatavyadhis* (3). In this study, this condition is neuro-muscular with restricted

*** Corresponding Author:**
**Gaurav Phull**
Deputy Medical Superintendent,
Ch. Brahm Prakash Ayurveda Charak Sansthan,
Khera Dabar, Najafgarh,
New Delhi, India.
Email Id: drgauravphull18@gmail.com

movement of left upper extremity and this is managed under the principles of *Vata Vyadhi* in *Ayurveda. The clinical presentation was correlated to Avabahuka and Vishvachi, more closely to avabahuka, as there was pain, restriction in movements of the shoulder and some muscle wasting* (4)(5). According to *Acharya Dalhana, kapha avarana* results in *Vata Vriddhi (*increase in *Vata Dosha*). *Marma* stimulation by applying gentle controlled pressure was chosen as a treatment in this study. *Mardana* i.e pressure application has been quoted as one of the principle techniques in managing *Vata* disorders (6). It has been documented in recent literature that *Marma Chikitsa* (Therapy) is successful in disorders of musculo-skeletal, neuro-muscular and restricted movements (7)(8)(9)(10). *Marma* therapy is richly endorsed by CCRAS & a volley of research work is being conducted at many institutes/ universities in the form of P.G. and Ph.D. thesis in recent times (11)(12)(13)(14).

*Marmas* or vital points are unique structural sites that are present on the specific anatomical sites of the body. *Marma* is the conglomeration of *Mamsa* (muscles), *Sira* (blood vessels), *Snayu* (nerve or tendon or ligament), *Asthi* (bones) and *Sandhi* (joints). There are 107 *Marmas* in the body. They must be protected from injury as it may lead to severe pain, disability, loss of function and sensation or death depending upon the degree of trauma (15). *Acharya Sushrut* quoted that *Marma* is the natural seat of *Prana* (16) and is therefore, considered an area enriched with vital energy. Hence, by manual stimulation in the form of gentle pressure or massage and *lepa* (paste) application, the healing capacity of the body is enhanced many folds. *Dalhana Acharya* explained during his commentary on *Sushrut Samhita* that the residual *ghrita lepa* prepared for the purpose of healing of wound should also be applied on seat of *Prana* in body i.e *Marma* points, which highlights the healing potency of these sites (17).

In the present era, the applied aspect of this concept is getting popular and expanding exponentially, as it is result oriented.

*Acharya Sushrut* stated *'Hastmevapradhantamam yantranam'* (18) which means *Hasta* (hands) are considered as *Pradhana Yantra* (primary tool). This emphasizes the significance of hands as the primary tool in *Ayurveda*. Hence, *Ayurvedic* physicians directly utilize these vitals sites by employing controlled physical stimuli, exclusively using their hands for therapeutic purposes. It gives promising results in painful conditions, traumatic, degenerative, and musculoskeletal disorders like frozen shoulder, cervical spondylosis, ankylosing spondylitis, PIVD, insomnia, etc. Stimulation of *Marma* points for their therapeutic gains is improvisation of the existing knowledge as *Yukti Pramana* (19) which has been quoted as the most supreme tool for any clinician. In this study, out of the 11 *Marma* points in each upper limb and 14 *marmas* in back, the therapy focussed on utilising the following *Marma* points: *Kshipra*, *Talahridya, Indrabasti*, *Kurpara*, *Aani*, *Ansa* and *Ansaphalaka*. In the present era, due to expensiveness and unavoidable side effects of some of the drugs of western medicine like steroids, NSAIDS and analgesics, *Marma Chikitsa* comes out to be a boon to the patients suffering from this ailment as safe, painless, efficient, cost-effective, and time-saving treatment option.

**Identification of *Marma* points of Arm**

**1. *Kshipra Marma***

It is located in the web of the thumb and index finger (21).

**Method of Identification-** To identify *Kshipra Marma*, place the distal inter-phalangeal joint of your other thumb over the web space and gently tilt your thumb proximally without flexing the joint. *Kshipra Marma* is identified as a point, where the tip of the thumb touches (20).

*Figure 1 Location of Kshipra Marma of Left Hand*

*Figure 2 Stimulation of Kshipra Marma*

**2. *Talahridya Marma***

It is located at center of palm, just below the 3 metacarpo-phalangeal joints in the line of middle finger (21).

**Method of Identification** (20) - There are two methods for identification of *Talahridya Marma*

- 3 *angula* from the base of the middle finger of the palm, a transverse line is drawn. A perpendicular line is now drawn from the middle finger upto the wrist. The point where these two lines intersect is considered as *Talahridya Marma*.
- The alternate method of identification is when the middle finger is flexed and the point where the tip of the middle finger touches is considered as *Talahridya Marma.*

*Figure 3 Location of Talahridya Marma of Left hand*

*Figure 4 Stimulation of Talahridya Marma*

**3. *Indrabasti Marma***

It is located over front of forearm (ventral aspect), four finger breadth, below the elbow crease, in the midline (21).

*Figure 5 Location of Indrabasti Marma in midline of Left forearm*

*Figure 6 Locating Indrabasti Marma 4 fingers below elbow joint*

*Figure 7 Stimulation of Indrabasti Marma*

**4. *Kurpara Marma***

It is located in the both sides of the elbow joint. (21).

**Method of Identification-** It is located in the entire elbow joint (20). Whole of the elbow joint is considered as *Kurpara Marma* for therapeutic stimulation.

*Figure 8 Location of Kurpara Marma on Medial side of Left Arm*

*Figure 9 Location of Kurpara Marma on Lateral side of Left arm*

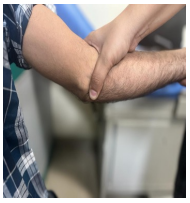

*Figure 10 Stimulation of Kurpara Marma on Medial side of Left Arm*

**Method of Stimulation-** To stimulate *Kurpara Marma*, the thumb and middle finger is placed over the medial and lateral points of this *Marma*. Pressure is applied and released for stimulation of this *Marma* (20).

**5. *Ani Marma***

*Ani Marma* is situated three fingers above the elbow joint just medial to the midline (21).

**Method of Identification-** For stimulation, *Ani Marma* is located four fingers breadth above the elbow joint. Applying pressure three finger breadths above the elbow joint might cause injury to the muscle and perhaps result in a herniation (20).

*Figure 11 Location of Aani Marma of Left arm*

*Figure 12 Locating Aani Marma three fingers above elbow joint*

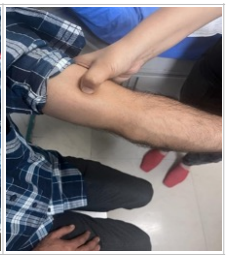

*Figure 13 Stimulation of Aani Marma*

**6. *Amsa Marma***

*Amsa Marma* is located between neck and arms on the top of back, vertically parallel to both sacro-illiac joints (21).

**Method of Identification-** The opposite arm is kept perpendicular and the elbow is flexed at a 45-degree angle so that the fingers touch the opposite side of the neck to detect *Amsa Marma* on that side. *Amsa Marma* is the point where the middle finger touches the neck (the index finger remains in contact with the neck). *Amsa Marma* can be located in straight of the mid-clavicular region. *Amsa Marma* on the other side can be located in a similar manner (20).

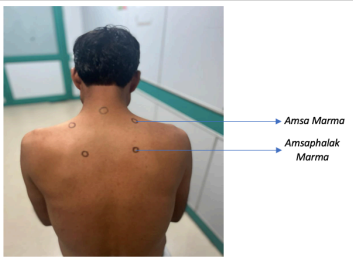


*Figure 14 Location of Amsa and Amsaphalak Marma of Back*

*Figure 15 Stimulation of Amsa Marma*

**7. *Amsaphalaka Marma***

They are located over the upper back on both sides of vertebral column, just medially to root of spine of scapula (supero-medial angle). (21)

**Method of Identification**

It is located over the spine of scapula and four fingers away from 3rd thoracic vertebra on both sides and eight fingers below of *Amsa Marma*. On flexion of shoulder and elbow joint, the point where the middle finger touches is identified as *Amsaphalaka Marma* (20).

*Figure 16 Stimulation of Amshaphalak Marma*

# Case Report

**Place of Study**

Chaudhary Brahm Prakash Ayurved Charak Sansthan, Khera Dabur, Najafgarh, Delhi.

Study was done according to the protocols decided by the Ministry of AYUSH. The consent of the patient was taken beforehand.

**Case Presentation**

This is a case of a 39-year-old male of height 162 cm and weight 55kg working as street vendor (clothes) with no known family history, who visited the hospital with the complaints of acute onset of left extremity pain, weakness, stiffness and restricted movement.

**Chief Complaints**

- Pain and stiffness of left upper limb since 2 months
- Restricted & painful movement of shoulder joint present since 2 months.

**History of Present Illness**

A 39 years old male patient visited with above said complaints. There was no relevant family history. 2 months back, the patient was apparently fine but gradually he developed pain and stiffness in left upper limb; for which he took allopathic treatment from the nearby hospital but did not get any significant relief. These symptoms were associated with restricted movement of the upper left limb and therefore, he was unable to perform daily activities. With these complaints, he visited hospital for *Ayurvedic* management of the same.

**History of Past Illness**

The patient had no history of trauma, surgery, Hypertension, Diabetes, Hypothyroidism, alcohol intake or smoking.

**Family History**

There was no relevant family history.

**Drug History**

There is no drug history.

**Examinations**

**Upper limb and Shoulder joint**

**Inspection**

Agony on face was visible. No scar mark, no oedema present, but painful/restricted movement of the shoulders present. There was noticable muscle wasting around shoulder.

- **Palpation** Severe tenderness around the shoulder and left supra-scapular region is present.
- **Range of Motion of Shoulder Joint-** Restricted.
- **Flexion of shoulder** – 25-30°
- **Shoulder Abduction** – 25-30°
- **Shoulder abduction and external rotation with elbow flexion-** Patient was not able to touch the head or neck (in normal conditions, person can touch the occipital region and C7)
- **Internal rotation and adduction (Appley's scratch test)-** Patient's hand was not able to reach the lower back (in absence of pathology, person can reach the lower border of scapula)
- **Chest**: Respiratory rate-15 breaths/min. B/L chest rises equally, no scar marks, no oedema.
- **CVS:** Normal-shaped pericardium, apex beat at left 5th intercostal space medial to the mid-clavicular line, S1, S2 present, no murmurs found.
- **GIT**: No discoloration, no oedema, scaphoid shaped abdomen, soft non-tender without any palpable organ.
- **CNS**: Patient was well conscious and oriented with respect to time, place & person. All cranial nerves were intact.

**Therapeutic Intervention**

Selected *Marma* points including *Kshipra, Talahridya, Indrabasti, Kurpara, Aani, Ansa, Ansaphalaka* were chosen for *Marma* Therapy through manual stimulation by hands. They were pressed gently with the thumb, applying 16-18 gentle presses synchronous with breathing (pressure applied on exhalation and released on inhalation) twice a day for a period of 15 days. Immediately, after 1st sitting, the patient felt some relief in pain as well as tenderness. Range of Motion was also improved. The *marma* therapy was continued for twice a day for a period of 15 days. Then he was discharged. He was taught self *Marma* therapy and was told to do it once daily for two months at home and reviewed every week and weekly sitting was given in hospital. The effect of the treatment sustained during this period and he was followed up after fifteen days further with fresh NCV reports.

**Diet/Lifestyle**

Ghee, honey and *Vata* pacifying diet and life style.

**Course of Treatment**

After obtaining informed consent, the patient underwent controlled stimulation of *Shakagata Marma* (left upper limb) and *Pristha Marma* points, which included *Kshipra*, *Talahridya*, *Indrabasti*, *Kurpara*, *Aani*, *Ansa* and *Ansaphalaka Marmas*. Each point was located and then pressed gently with the thumb, applying 16-18 gentle presses twice a day for a period of 15 days.

*Matra Basti* for 7 days with *Mahanarayan tail* was prescribed. It was given to pacify the *Vata dosha.*

Massage cupping with *Mahanarayan tail* was performed over the supra-scapular and mid-scapular area for a duration of 4 days continuously starting from first day of treatment. Cupping therapy was given to improve the flow of blood to the local tissues including the muscles.

**Table 1: Investigations Pre and Post Treatment**

| **NCV-Brachial Plexus Protocol (3rd Feb 2022)** | **NCV-Brachial Plexus Protocol (4th May 2022)** |
|---|---|
| **Motor**<br>1. Left Axillary and musculocutaneous nerve showed decreased CMAP amplitude (as compared to right). | **Motor**<br>1. Left Axillary and musculocutaneous nerve showed decreased CMAP amplitude (as compared to right) |
| **Sensory**<br>1. Bilateral Median Nerves showed normal SNAP amplitudes with *prolonged peak latencies and reduced conduction velocities.* | **Sensory**<br>1. Bilateral Median, Ulnar and Radial nerves showed normal SNAP amplitude *with normal peak latencies and conduction velocities.* |
| **Impression-** Abnormal NCV study with left axillary and musculo-cutaneous axonal motor neuropathies. | **Impression-** Abnormal NCV study, with left axillary and musculo-cutaneous axonal motor neuropathies. |

## Materials and methods

The patient was kept in comfortable sitting position with the feet rested on floor. *Marma* therapy was done 3 hours after light breakfast and in evening again. The assessment was based on objective and subjective criteria.

**Objective Criteria**

**CMAP**

**Table 2: The difference in Motor Nerve Conduction (CMAP amplitudes) pre and post treatment**

| Before Treatment (3rdfeb, 2022) | | | | After treatment (4th May 2022) | | |
|---|---|---|---|---|---|---|
| Nerve/sites | Latency Ms | Amplitude mV | Duration Ms | Latency Ms | Amplitude mV | Duration Ms |
| **Left Axillary-Deltoid** | | | | | | |
| Supraclav fossa | 2.97 | 1.6 | 11.82 | 3.23 | 2.8 | 11.20 |
| **Left Musculocutaneous- Biceps** | | | | | | |
| Supraclav fossa | 5.36 | 0.9 | 15.05 | 3.80 | 5.2 | 12.71 |

**Range of Motion**

**Table 3: Range of Motion**

| Pre-treatment | Post-treatment | | | |
|---|---|---|---|---|
| Baseline (3rd Feb 2022) | 1st Day- After 1st Sitting (3rd Feb, 2022) | 7th Day (9th Feb, 2022) | 10th Day (12th Feb 2022) | 15th Day (17th Feb 2022) |
| Range of Motion Restricted | Range of Motion-Slightly improved | Range of Motion-Moderately Improved | Range of Motion-Moderately improved | Range of Motion-Significantly improved |
| 1. Flexion-25-30° | 1. Flexion-35-40° | 1. Flexion-40-45° | 1. Flexion-80-90° | 1. Flexion-180° |
| 2. Shoulder Abduction – 25-30° | 2. Shoulder Abduction – 35-40 | 2. Shoulder Abduction- 40-45° | 2. Shoulder Abduction-80-90° | 2. Shoulder Abduction- 180° |
| 3. Abduction and external rotation with elbow flexion- was not able to touch the head or neck | 3. Abduction and external rotation with elbow flexion- was able to touch the posterior part of head | 3. Shoulder Abduction and external rotation with elbow flexion-was able to touch upper occipital region of head. | 3. Shoulder Abduction and external rotation with elbow flexion-was able to touch the nape of neck and C1-C3. | 3. Shoulder Abduction and external rotation with elbow flexion- was able to touch upto C7. |
| 4. Internal rotation and adduction- hand was not able to reach the lower back | 4. Internal rotation and adduction- hand was not able to reach the lower back | 4. Internal rotation and adduction- hand was able to reach L4, L5. | 4. Internal rotation and adduction- hand was able to reach T12, L 1. | 4. Internal rotation and adduction- hand was able to reach upto T7. |

**Subjective criteria**

**VAS (Score for pain)** (23)

**Table 4: VAS Score**

| Pre-Treatment | Post Treatment | | | |
|---|---|---|---|---|
| Baseline | 1st Day (After 1st Sitting) | 7th Day | 10th Day | 15th Day |
| 8 | 6 | 6 | 2 | 0 |

**Patient's Feedback/Perception**

In comparison to presenting complaints and earlier treatment received by patient, there was a significant relief in complaints of patient and ease in doing day to day activities.

## Observations and Results

Prior to the treatment (3/2/2022), an NCV study indicated abnormal left axillary and musculo-cutaneous axonal motor neuropathies. However, after receiving treatment, there was marked improvement in the patient's left axillary-deltoid and left musculo-cutaneous biceps amplitude measurements. The CMAP amplitude (mV) increased significantly from 1.6 to 2.8 in the left axillary nerve and 0.9 to 5.2 in the musculo-cutaneous nerve. The muscle wasting of the affected side was also reduced and muscle mass was gradually improved with treatment.

Immediately after the first sitting of *Marma* therapy on the first day, there was a slight improvement in patient's pain, stiffness and range of motion. By day 7, there was a moderate improvement in the pain, stiffness and range of motion. By day 15, there was a significant decrease in pain, stiffness and movement restriction. Gradually, patient improved which is evident from the observations mentioned in timeline given in Table No. 1. The patient was followed up for 3 months in total. It has been observed healing speed enhanced by regular stimulation of *marma* points, which is also clinically seen in other shoulder area pathologies like frozen shoulder (13).

Clinically, the flexion movement of the patient in his left upper limb was restricted to only 25-30°, shoulder abduction was up to 25-30°, in abduction and external rotation with elbow flexion, he was not able to touch the head or neck, and in internal rotation and

adduction, his hand was not able to reach the lower back.

Restricted movement was significantly improved from 25-30° of flexion of left arm and 25-30° of left shoulder abduction to 180°. Patient's hand was able to reach C7. While rotating internally and adducting the hand towards the lower back, he was not able to reach the same but after treatment his hand could reach up to T7.

**Patient before *Marma* Therapy (Baseline, 3rd Feb, 2022)**

*Figure 17 Patient was not able to abduct the arm properly, shoulder abduction- 25-30°*

*Figure 18 Abduction and External Rotation with elbow flexion-Patient was not able to touch the head (movement was severely restricted and painful)*

*Figure 19 Patient's hand was not able to touch lower back even in Internal Rotation & Abduction movement*

**Patient after *Marma* Therapy (10th Day, 12th feb 2022)**

*Figure 20 Patient was able to flex upto 80-90°*

*Figure 21 Patient was able to abduct upto 90°*

*Figure 22 Shoulder Abduction and external rotation with elbow flexion-was able to touch the nape of neck and C1-C3*

*Figure 23 Internal rotation and adduction- hand was able to reach T12, L 1.*

**Patient after *Marma* Therapy (15th Day, 17th Feb 2022)**

*Figure 24 Patient was able to flex and Abduct fully (180°)*

*Figure 25 Patient was able to touch the top of the head*

*Figure 26 He was able to reach till C7*

*Figure 27 Patient was able to touch lower border of scapula and upto T7*

## Discussion

Among the extensive ocean of *Ayurvedic* knowledge, the concept of *Marma* stands out as a crucial subject with *Marma* points considered as undisputed "seats of life" *Prana*- the essential life force. Vital points known as *Marmas* are key centers for *Prana* that can aid in both diagnosing and treating various ailments as well as promoting overall health and longevity. *Acharya Charak* and *Sushrut* described '*Prana'* as the vital life force that permeates all levels of existence from the physical body to the subtle energy channels and the mind (16) (24) (25). The balance and smooth flow of *Prana* throughout the body are considered crucial for maintaining health and preventing diseases which can be optimised or regulated through various means; one of which is *Marma* therapy; utilized for targeted treatment or as a means of fostering wellness and long life. *Marmas*- the crucial points that serve as *Prana* centers are indispensable. The controlled stimulation of the *marma* points can revitalize the energy and thus have a positive impact on healing.

According to *Acharya Sushrut*, *Ghrita* mixed with *choorna* (powder) of *Guggulu*, *Agaru*, *Rala*, *Vacha*, *Shweta sarson*, *Neem* leaves and *lavana* (salt) can be applied to patient's *Hridya* and other *Marma* points. (26) This highlights the significance of *Marma* points, when *lepa* is applied on them; it aids the therapeutic purposes.

While describing the mode of action of *Nasya*, *Acharya Sushrut* and *Vagbhata* have highlighted the role of *Sringatak Marma* in nourishing the channels/ vessels communicating with nose, ear, eye, and tongue. (27) (28). Consequently, this indicates the healing effect of stimulation of the *Marma* points.

The role of this knowledge and practice is crucial in surgical procedures which is why *Acharya Sushrut* referred it to as *Shalya Vishayardha* (29), which signifies that it accounts for the half of the entire surgical science literature.

The occurrence of pain in all its forms can be attributed to *Vata dosha*, as stated by *Acharya Sushrut*: "*Vataadritenaastiruja*" (30). The root cause of all types of pain is *Vata Dosha* and any obstruction in its flow results in pain. *The clinical presentation of this case was correlated to Avabahuka and Vishvachi, more closely to avabahuka, as it presented with pain, restricted shoulder movements and some muscle wasting(4)(5).* In the case of Brachial Plexitis, inflammation within the nerves of the Brachial Plexus disrupts nerve conduction, similar to "*Sanga Strotoavrodha* (blockage of channels) (31). Therefore, it is plausible to assume that by applying gentle pressure to *Marma* points, the flow of *Prana* can be enhanced, alleviating the condition of *strotoavrodha (kaphavrita vata).* *Acharya Charak* quoted '*sparshaneanilo'* (32) which indicates that skin is the seat of *Vata*. *Marma chikitsa* has also been suggested as treatment in *Vaatvyadhi* like *Vishwachi*. (33)

*Acharya Vagbhata*, in reference to the *Sthana* (seat or location) of *Vata dosha* cited '*Pakvashyakatisakthisrotasthi Sparshanendriyam'* (34) This signifies that the *twacha*' or the skin is considered as *sthana*, (seat or location) of *Vata dosha*. This implies that *Vata,* one of the three *doshas* in *Ayurveda*, predominantly resides within the skin. According to *Ayurvedic* principles, imbalances in *Vata dosha* can lead to various health issues, including pain. By applying gentle pressure on *marma* points, we can stimulate and regulate the flow of *Vata* dosha and influence the flow of *prana* (life force) within the body. This technique aims to alleviate any obstruction or hindrance in the flow of *Vata*, promoting its smooth circulation and reducing the likelihood of pain and discomfort associated with *Vata* imbalances. Overall, the practice of applying gentle pressure on *marma* points through the skin offers a potential means of regulating *Vata dosha* and promoting overall well-being according to *Ayurvedic* principles.

It is documented that applying pressure or rubbing the skin helps in relieving pain as per the Gate Control Theory of pain management. Stimulation of *Marma* Points by applying pressure can be presumed to be effective according to this explanation and this probably reduces pain by stimulating central analgesia system(35). The analgesic effect of controlled pressure application on *marma* points can also be attributed to analogy of location of some of the *marma* points to the acupoints and the therapeutic effects of pressure application on the acupoints are already well established (36)(37). Similarly, the therapeutic effects of *marma* points can be understood.

It is compulsory to regulate *Vata dosha* to manage pain. *Marma Chikitsa* gives a drug-less, harm-less option to treat pain. *Marma Chikitsa* pacifies *Vata dosha*. It probably brings down the stress level by working on HPA axis (Hypothalamus pituitary-adrenal axis) and helps in enhancing the pain threshold of the patient (38).

The formulation *'marmagutika'* (39) can be found in ancient *Ayurvedic* text *Sahasrayoga*. These formulations can be applied topically as a *Lepa* (paste) on the *Marma* sites to alleviate pain. When consumed, it aids in the healing of various ailments associated with the *Marma* points. (40) This overall improves the lifestyle of the patient. These textual references highlight the importance of pivotal role of *marma* points in healing and maintaining the health.

To summarize the effects of *marma* stimulation, it can be submitted that the therapeutic gains in terms of improvement in symptoms of patient like pain, stiffness, restricted movements were achieved in a fortnight.But to have a sustained relief and to ensure non- recurrence of symptoms, daily self *marma* stimulation was advised to the patient and weekly follow-ups were done along with intermittent marma therapy for 2 months further. The sign of ease of movement and muscle girth were also improved. NCV was advised after 3 months to ensure sustainability of effects of treatment and to give some more time for improvement at level of nerve conduction.

*Matra Basti* for seven days was done for the purpose of *Vata shamana. It helped in reducing the intensity of alleviation of Vata and thus aided in*

*reducing the response time to the healing impact of Marma points stimulation.*

Massage Cupping over suprascapular and mid-scapular area for an initial period of four days was performed to increase the blood circulation by virtue of vasodilation due to pulling effect of negative pressure induced by vacuum and decrease muscle spasms ultimately aiding in the performance of *Marma therapy* efficiently. Due to vasodilation, blood flow increases which results in *ushanata* (generating heat). This *ushana guna* is against the *sheeta guna* of *vaat* and *kapha.* This it helps in reducing *kapha avarana*. Influx of fresh blood revitalise the tissues, removes stagnation of metabolites and gradually helps in *srotoavarodh*. When muscle spasm is reduced it is easier to manually stimulate the *marma* points and healing process quickens.Thus matra basti and cupping therapy were used as helping aids and to reduce the recovery time and these also had some role in reducing pain and decreasing stiffness additionally. *Marma* therapy was the Mainstay of the treatment although and Matra basti as well as cupping therapy were adjuvants to it.

## Conclusion

The manual stimulation of *Marma* points with firm and gentle pressure by hands twice a day for 15 days resulted in remarkable amelioration in the patient's pain, stiffness and movement. Total duration of study was three months. Thus, a further large-scale study needs to be conducted to establish the effect of *Marma* Therapy on Brachial Plexitis. The specific technique used in *Marma* Therapy involves gentle pressure, massage or stimulation of specific *marma* points. This targeted approach aims to facilitate the flow of vital energy, release blockages and stimulate the body's innate healing mechanisms. While more research is needed to fully understand the mechanisms behind *Marma* Therapy and its effects on Brachial Plexitis; the existing evidence suggests that it can be a valuable adjunct therapy. It is important to note that *Marma* Therapy should be administered by trained and skilled practitioners, who have a thorough understanding of both the therapy itself and specific condition being treated. This study will pave the way for further research on analgesic and anti-inflammatory effects of stimulation of *marma* points and their effect on neurochemical changes. Being the single case study is the limitation of this study along with un-exploration of neurochemical changes and other high-end investigation.

**ACKNOWLEDGEMENT**

Dr. Tanya Gusain, P.G Scholar, PG Department of Rachna Sharir, CBPACS for assisting in *Marma* Therapy.

**Table 1: Timeline - Description of ROM**

| Day | Treatment | Observation |
|---|---|---|
| **Baseline (3rd Feb 2022)** | Selected *Marma* Points including *Kshipra, Talahridya, Indrabasti, Kurpara, Aani, Ansa, Ansaphalaka* were located and were pressed gently with the thumb, applying 16-18 gentle presses synchronous with breathing twice a day. | **Pain-** Severe pain and stiffness around the shoulder and left supra-scapular region is present.<br>**Clinical Examination**<br>**Rom-** Range of Motion-Restricted<br>1. Flexion-25-30°<br>2. Shoulder Abduction – 25-30°<br>3. Abduction and external rotation with elbow flexion- was not able to touch the head or neck<br>4. Internal rotation and adduction- hand was not able to reach the lower back |
| **1st Day- After first sitting (3rd Feb 2022)** | Selected *Marma* points including *Kshipra, Talahridya, Indrabasti, Kurpara, Aani, Ansa, Ansaphalaka* were located and were pressed gently with the thumb, applying 16-18 gentle presses synchronous with breathing twice a day.<br><br>*Matra Basti* for 7 days with *Mahanarayan Tail* was started.<br>Massage cupping with *Mahanarayan Tail* for 4 days. | **Pain-**Immediately after the first sitting, patient felt relief in pain as well as stiffness.<br>**Clinical Examination**<br>**Rom-**<br>Range of Motion-Slightly improved<br>1. Flexion-35-40°<br>2. Shoulder Abduction – 35-40<br>3. Abduction and external rotation with elbow flexion- was able to touch the posterior part of head<br>4. Internal rotation and adduction- hand was not able to reach the lower back |
| **7th Day (9thfeb, 2022)** | Selected *Marma* points including *Kshipra, Talahridya, Indrabasti, Kurpara, Aani, Ansa, Ansaphalaka* were located and were pressed gently with the thumb, applying 16-18 gentle presses synchronous with breathing twice a day.<br><br>*Matra Basti till 7th day* with *Mahanarayan tail* was given and then stopped.<br>Massage cupping was stopped after 4 days from 1st Day. | **Pain-**Improvement in the pain and stiffness, leading to mild relief.<br>**Clinical Examination**<br>**Rom** Range of motion.<br>Moderately Improved<br>1. Flexion-40-45°<br>2. Shoulder Abduction- 40-45°<br>3. Shoulder Abduction and external rotation with elbow flexion-was able to touch upper occipital region of head.<br>4. Internal rotation and adduction- hand was able to reach L4, L5. |

| | | |
|---|---|---|
| **10th Day (12th feb,2022)** | Selected *Marma* Points including *Kshipra, Talahridya, Indrabasti, Kurpara, Aani, Ansa, Ansaphalaka* were located and were pressed gently with the thumb, applying 16-18 gentle presses synchronous with breathing twice a day. | **Pain-** A moderate decrease in pain and stiffness.<br>**Clinical Examination**<br>**ROM-**Range of Motion was moderately improved.<br>1. Flexion-80-90°<br>2. Shoulder Abduction-80-90°<br>3. Shoulder Abduction and external rotation with elbow flexion-was able to touch the nape of neck and C1-C3.<br>4. Internal rotation and adduction- hand was able to reach T12, L 1. |
| **15th Day (17th Feb 2022)** | Selected *Marma* Points including *Kshipra, Talahridya, Indrabasti, Kurpara, Aani, Ansa, Ansaphalaka* were located and were pressed gently with the thumb, applying 16-18 gentle presses synchronous with breathing twice a day. | **Pain-**<br>Significant decrease in pain and stiffness.<br>**Clinical Examination**<br>**ROM-** Range of Motion was significantly improved.<br>1. Flexion-180°<br>2. Shoulder Abduction- 180°<br>3. Shoulder Abduction and external rotation with elbow flexion- was able to touch upto C7.<br>4. Internal rotation and adduction- hand was able to reach upto T7. |

## References


1. Amato Anthony A., Russell James A. Neuromuscular Disorders. 2nd Edition; China;The McGraw Hill Companies Inc; 2016, 491-492p
2. Ortiz Torres M, Gudlavalleti A, Mesfin FB: Brachial Plexitis. StatPearls, Treasure Island (FL); 2021. https://www.ncbi.nlm.nih.gov/books/NBK448114/ dated 30.10.2023
3. Ayurvedadipika by Cakrapanidatta. edited by Trikamji Acharya yadavji. Charak Samhita of Agnivesha. Varanasi; Chaukhamba Surbharakrati Prakashan; 2013; [Chikitsa Sthana; 28/18-19] 617p.
4. Ayurveda-tattva-sandipika by Ambikadutta sashtri kaviraj. Sushrut Samhita of Sushrut. 2021. Varanasi; Chaukhambha Sanskrit Sansthan [ Nidan Sthana 1/75,82] 303-304p
5. Brahmanand Tripathi. Nirmala hindi commentary. Ashtang Hridya of Shrimadvagbhatta ; Delhi; Chaukhamba Sanskrit Prathisthan; [ Nidana Sthan 15/43-44] 542-543p
6. Ayurveda-tattva-sandipika by Ambikadutta sashtri kaviraj. Sushrut Samhita of Sushrut. 2021. Varanasi; Chaukhambha Sanskrit Sansthan [Chikitsa Sthana 4/7] 34p
7. Frawley David, Ranade Subash, Lele Avinash. Ayurveda and Marma Therapy.1ed. Delhi; Chaukhamba Sanskrit Pratisththa; 2005
8. Phull Gaurav Phull Rekha. Clinical Approach to Marma Chikitsa. 1st edition July 2019. Innovative Publication; 2018
9. Joshi Sunil. Marma Science and Principles of Marma Therapy. Varanasi; Chaukhamba Orientalia
10. Dhiman K.S. Marmachikitsa - Basic tenets in ayurveda and therapeautic approaches. Central Council for Research in Ayurvedic Sciences (CCRAS); 2020
11. Prasad Shishir, Ranjan Raman, Kr. Vishwakarma, Rao Renu, Rani Ruby, Clinical Evaluation of Marma Therapy in Avabahuka W.S.R. to Frozen Shoulder; Journal of Medical Science and Clinical Research; 05 May 2017; 5 (5)
12. Deshpande Amol; Desai Priti; Deshpande Mayuri; Choudhary Sonali; Narkhede A. R.; The study protocol of Comparative study on Efficacy of Marma Chikitsa, Agnikarma and PhysioTherapy in Avabahuka (Frozen Shoulder); International Journal of current Reseach and Review; 30 November 2020; 12(22); S-43-S-47.
13. Raikwar U, Gupta Pankaj, Marwaha Rita, Panda Shiba Datta, Das Babita; Management of Avbahuka (Frozen shoulder) by MarmaChikitsa- A case study; World Journal of Pharmaceutical Research; Accessed on 26 May 2023; 1:42:01 pm,
14. Ambuchithira, To Evaluate the Effect of Marma Chikitsa in the management of Apabhuka, Journal of Emerging Technologies and Innovative Research; October 2021; 8(10); accessed on 26th May 2023, 1:56pm.
15. Nibandsangraha by Dalhanacharya. Sushrut Samhita of Sushrut. Varanasi; Chaukhamba Surbharti Prakashan. 2012. [Sharir sthana; 6/15] 371p.
16. Nibandsangraha by Dalhanacharya. Sushrut Samhita of Sushrut. Varanasi; Chaukhamba Surbharti Prakashan. 2012. [Sharir Sthana 6/15] 371p
17. Nibandsangraha by Dalhanacharya. Sushrut Samhita of Sushrut. Varanasi; Chaukhamba Surbharti Prakashan. 2012. [sutra sthana 5/ 18] 21p
18. Nibandsangraha by Dalhanacharya. Sushrut Samhita of Sushrut. Varanasi; Chaukhamba Surbharti Prakashan. 2012. [Sutra sthana 7/ 3] 30p
19. Ayurvedadipika by Cakrapanidatta. edited by Trikamji Acharya Yadavji. Charak Samhita of Agnivesha. Varanasi; Chaukhamba Surbharati Prakashan; 2013 [Sutra sthana 11/25] 72p
20. Dhiman K.S. Marma chikitsa - Basic tenets in ayurveda and therapeautic approaches Central Council for Research in Ayurvedic Sciences (CCRAS); 2020
21. Nibandsangraha by Dalhanacharya. Sushrut Samhita of Sushrut. Varanasi; Chaukhamba Surbharti Prakashan. 2012. [Sharir Sthana 6/24] 372

22. Nibandsangraha by Dalhanacharya. Sushrut Samhita of Sushrut. Varanasi; Chaukhamba Surbharti Prakashan. 2012. [Sharir Sthana 6/26] 374
23. www.health.vic.gov.au/qualitycouncil/.../app1_pain_rating_scales
24. Ayurvedadipika by Cakrapanidatta. edited by Trikamji Acharya Yadavji. Charak Samhita of Agnivesha. Varanasi; ChaukhambaSurbharatiPrakashan; 2013. [ Sutra Sthana 29/3]181 p
25. Nibandsangraha by Dalhanacharya. Sushrut Samhita of Sushrut. Varanasi; Chaukhamba Surbharti Prakashan. 2012. [Sharir Sthana 4/3] 55
26. Ayurveda-tattva-sandipika by Ambikadutta sashtri kaviraj. Sushrut Samhita of Sushrut. 2021. Varanasi; Chaukhambha Sanskrit SanskritSthan [Sutra sthana 5/18] 25p
27. Nibandsangraha by Dalhanacharya. Sushrut Samhita of Sushrut. Varanasi; Chaukhamba Surbharti Prakashan. 2012. [Chikitsasthana 40/30] 556p
28. Murthy K.R. Srikantha. Astanga Samgraha of Vagbhata. 9th ed. Varanasi; Chaukhamba Orientalia. 2018.[Sutra Sthana 29/2] 511p
29. Nibandsangraha by Dalhanacharya. Sushrut Samhita of Sushrut. Varanasi; Chaukhamba Surbharti Prakashan. 2012. [Sharirasthana 6/33] 375p
30. Nibandsangraha by Dalhanacharya. Sushrut Samhita of Sushrut. Varanasi; Chaukhamba Surbharti Prakashan. 2012. [sutra sthana 17/7] 83p
31. Ayurvedadipika by Cakrapanidatta. edited by Trikamji Acharya Yadavji. Charak Samhita of Agnivesha. Varanasi; ChaukhambaSurbharati Prakashan; 2013. [ VimanaSthan 5/ 24] 252p
32. Ayurvedadipika by Cakrapanidatta. edited by Trikamji Acharya Yadavji. Charak Samhita of Agnivesha. Varanasi; ChaukhambaSurbharatiPrakashan; 2013 [Sutra sthana 8/14] 57p
33. Ajay K. Pandeya. Kayachikitsa Vol 3. 1ed. New Delhi; Chaukhamba Publications; 2019; 356
34. Paradakara Pt. Bhisagacharya Harisastri. Sarvanga Sundara of Arunadutta & Ayurvedarasayana of Hemadri. Astangahridya. Vagbhata; 6th ed. Bombay; Pandurang jawaji,1939 [Sutra Sthana 12/1] 192p
35. Guyton and Hall. Textbook of Medical Physiology.13th ed. Gurgaon, India. Elsevier India Private Limited ;763p
36. Tong wu, xing-yi-wang. A comparative study on marma and acupoints. Journal of Ayurveda and Integrative Medicine. 25 July 2023;14(4) ; https://doi.org/10.1016/j.jaim.2023.100769.
37. Thatte DG. Acupunture Marma and other Asian Therapeutic Techinques. 3ed: 2006: 51-60p
38. Phull Gaurav, Phull Rekha. Clinical Approach to Marma Chikitsa. 1st edition July 2019. Innovative Publication; 2018;183-184p
39. Sharma Ramniwas. Sahastrayogam. Varanasi; Chaukhamba Sanskrit Pratisthan; 2009; 257p
40. Frawley David, Ranade Subash, Lele Avinash. Ayurveda and Marma Therapy.1ed. Delhi; Chaukhamba Sanskrit Pratisththan; 2005.

*****