'website : www.ijacare.in e-ISSN No.: 2457-0443
INTERNATIONAL JOURNAL OF AYUSH CASE REPORTS (IJA-CARE)

Ayurvedic Approach in the Management of Brachial Plexopathy: A Clinical Case Report

Vanidevi M, [1*] Shehanas Meeran, [1] Deepa M S [2]

[1]PG Scholar, [2]Professor, Department of Shalyatantra, Government Ayurveda College Thiruvananthapuram, Kerala, India

ABSTRACT:

Brachial plexopathy is a peripheral nerve injury that leads to significant functional impairment of the upper limb. Common causes include trauma, inflammation, compression or ischemia affecting brachial plexus. In Ayurvedic terms, this can be correlated with *Amsa Marma Abhighatha*, primarily a *Vata* predominant condition. This case presents the role of Ayurvedic therapies in improving upper limb function in post-traumatic brachial plexopathy. A 34 years old male presented with weakness and pain in the right arm for one year following a road traffic accident. He had a history of unconsciousness and multiple head injuries with diagnosis of post-ganglionic brachial plexus injury. On examination, there was muscle wasting in the right upper limb, severe motor and sensory deficits, and impaired range of motion. MRI revealed discontinuity in nerve fibers from the level of C5 to C8 with neuroma formation. The patient was treated with *panchakarma* procedures like *Udwarthanam*(therapeutic powder massage), *Upanaham*(sudation by application of medicated herbal paste or powders), *Snehapanam*(therapeutic oleation), *Abhyanga ushma sweda*(therapeutic massage and sudation), *Virechana*(therapeutic purgation), *Sandhana kizhi*(sudation by application of poultice*)*, *Pizhinju thadaval*(local oil application),*Nasya(*medication through nasal route) and *ksheera dhooma(*therapeutic smoking), *Kayasekam(*therapeutic streaming over body*)*, *Shashtika pinda swedam(*sudation by application of poultice*),Rajayapana vasthi* (enema which prolongs life span*)*,internal medications and physiotherapy for a period of 3 months. After the treatment and during the follow up period significant improvement was noted in motor functions such as shoulder abduction, thumb extension, and grip strength. Sensory responses also improved in affected dermatomes. The patient experienced relief in pain and enhancement in range of motion and limb strength, prominent venous return, and the regained ability to hold objects with the right hand. This case demonstrates that Ayurvedic management can offer promising results in chronic brachial plexus injury.

KEYWORDS: *Amsamarma abhighatha,* Ayurvedic management, Brachial plexopathy, *Panchakarma* procedure.

Received: 24.10.2025 Revised: 02.12.2025 Accepted: 11.12.2025 Published: 15.12.2025

This work is licensed under a Creative Commons Attribution 4.0 International License
© 2025 International Journal of AYUSH Case Reports | Published by Tanaya Publication, Jamnagar.

QR Code
DOI 10.70805/ija-care.v9i4.843

***Corresponding Author:**
Dr. Vanidevi M
PG Scholar, Department of Shalyatantra,
Government Ayurveda College Thiruvananthapuram,
Kerala, India
Email: vanidevivisakh@gmail.com

INTRODUCTION:

Brachial plexopathy is a neurological disorder resulting from injury to the brachial plexus-a complex network of nerves that innervates the shoulder, arm and hand with pain, motor weakness, muscle wasting and sensory impairment in the affected limb. [1] The condition may result from trauma, infections, metabolic disturbances, autoimmune mechanisms, or compressive lesions. Among these post-traumatic brachial plexopathy is frequently observed following high – impact injuries such as road traffic accidents.

Modern treatment options for brachial plexopathy includes physiotherapy, pharmacological pain management, and in selected cases surgical nerve repair or grafting. However, long standing cases often show limited functional recovery and long -term rehabilitation.[2]

In Ayurveda, such nerve injuries can be correlated with *Amsa Marma Abhighatha,* a condition involving trauma to the shoulder region (*Amsa Marma*) leading to *vata dosha* (regulatory functional factors of body) derangement. Injury to *Amsa marma* results in Bahukriyahara (loss of function of upper limb).[3]Amsa marma is included under snayu marma, and its vidha resulting in *sarira avayava Sadam* (debility of body parts), *ruja* (pain). [4] Ayurvedic treatment strategies focus on *Vatahara chikitsa* through internal medications and Panchakarma therapies.

This case report discusses the Ayurvedic management of a 34-year-old male patient with chronic post traumatic brachial plexopathy, who showed significant clinical improvement through various Ayurvedic treatment modalities.

CASE REPORT:

A 34-year-old male patient presented with complaints of weakness in the right arm and pain over the right forearm for the past one year. The symptoms began following a road traffic accident (RTA) in which the patient, while riding a bike, was struck by an unknown vehicle. He sustained a severe head injury and remained unconscious for approximately one month. He was initially treated at medical college, Thiruvananthapuram and later shifted to another allopathic hospital, where he was admitted for three months. Following discharge, he experienced multiple episodes of falls and recurrent head injuries. He was on allopathic medications and underwent physiotherapy, which resulted in minimal improvement in hand movements. On examination, there was evident muscle wasting of the right deltoid, biceps, supraspinatus, and trapezius muscles. All movements of the right upper limb were severely restricted, with only flexion and extension of the phalanges preserved.

Sensory examination revealed diminished or absent crude and soft touch over C5 to C7 dermatomes, and motor examination showed complete or near-complete loss of power in several muscle groups, including shoulder abduction, elbow flexion/extension, and thumb and finger movements. Reflexes such as the biceps and triceps tendon reflexes were absent on the affected side. The patient was subsequently admitted for Ayurvedic management. Following the treatments, the patient reported improved muscle strength, enhanced flexibility, relief from pain (without the need for analgesics), prominent venous return, and the regained ability to hold objects with the right hand.

Clinical Findings are mentioned in table-1

Diagnostic Assessment

The diagnostic assessment was primarily based on a thorough physical examinations and detailed neurological evaluation. The patient presented with severe illness,

moderate built and nutrition, and muscle wasting of the right upper limb involving the deltoid, biceps, supraspinatus, trapezius, and infraspinatus muscles, along with a prominent humeral head. Neurological findings showed diminished myotomes from C5 to T1, altered crude and soft touch sensation over C5 to C7 dermatomes, absent biceps and triceps tendon reflexes, and significant limitation of joint movements in the right upper limb, except for phalangeal flexion and extension. Mid-arm and mid-forearm circumferences were reduced on the affected side.

Special investigations included an MRI of the right brachial plexus (C4–T2), which showed no evidence of root avulsion. However, there was extensive soft tissue contusion on the right side of the neck, involving scalene muscles with disruption of muscle fibers. Discontinuity was noted in the post-ganglionic nerve fibers from C5 to C8, suggesting post-ganglionic root injury.

The cord fibers appeared retracted laterally with thickening and neuroma formation. Based on the clinical and imaging findings, the clinical diagnosis was established as

Brachial Plexus Injury.

Prognostic characteristics appeared promising as Ayurvedic treatments, including *Nasya*(medication through nasal route), *Abhyangam*(therapeutic massage*),* *Snehanam(*therapeutic oleation), and *Sandhanakizhi*(sudation by application of poultice), resulted in increased muscle power, improved flexibility, pain relief, prominent veins, and ability to hold hands. The humeral head prominence also decreased, suggesting partial muscle bulk restoration. Continued follow-up and therapy adherence remain crucial for further functional recovery

THERAPEUTIC INTERVENTIONS:

The external and internal medication details are mentioned in table 6 and table- respectively

Follow - up and outcome

On follow-up, a marked improvement was observed in the patient's functional status. Muscle bulk was restored in the deltoid and biceps, and the previously noted humeral head prominence had reduced considerably. Crude and soft touch sensations were intact in the C5-C7 dermatomes, while joint position sense showed improvement in all joints except P1.

Grip strength was sustained, enabling the patient to hold objects effectively. The shoulder sling was discontinued as stability improved. Pain relief was maintained without the need of analgesics. Overall, the patient demonstrated significant functional recovery with an enhanced quality of life.

Table 1: General clinical findings

Domain	Findings
General survey	Severe illness, Conscious & oriented, Moderate built and nutrition, Muscle wasting present in right upper limb
Gait	Normal
Facies	Normal conjunctiva present, Vision loss in right eye
Decubitus	Unable to lie on right lateral position

Skin color	Normal
Skin Eruption	Absent
Pulse rate	78/min
Respiratory rate	20/min
Temperature	98.6° F
Heart rate	78/min

Table 2: Neurological and Limb-specific Findings

Domain	Findings
INSPECTION	Muscle wasting in right shoulder and upper arm involving deltoid, biceps, supraspinatus, trapezius, infraspinatus; prominent humeral head
ROM	All movements of right upper limb are unable to perform except flexion and extension of phalanx. (MCP flexion-5^0, MCP extension- 2-5^0, PIP Flexion-5^0, PIP Extension- 2^0, DIP flexion-5^0, DIP extension-2^0)

Table 3: Motor System

Domain	Right	Left
Mid Arm Circumference	24 cm	32 cm
Mid forearm circumference	18 cm	22.5 cm

Table 4: Reflexes

Myotomes Affected	C5, C6, C7, C8, T1
Muscle power	Cervical flexion, C1: 5/5 Cervical extension, C2: 5/5 Cervical lateral flexion, C3: 5/5 Shoulder elevation, C4: 5/5 shoulder abduction, C5 :0/5 Elbow flexion, C6: 0/5 Elbow extension, C7: 0/5 Thumb extension, C8: 2/5 Finger adduction T1:2/5

Table -5: Sensory system

Domain	Findings
Dermatomes – Crude Touch	C4 & C8: normal C5 & C6: diminished C7:absent
Dermatomes – Soft Touch	C4 & C8: normal C5:diminished C6 & C7: absent
Reflexes	Biceps tendon reflex: absent Triceps tendon reflex: absent
Joint Position Sense	Affected in P1, P2, P3
Card Test	P3–P4 affected P4–P5: affected

Table -6: External therapies

Date	Treatment	Details	Changes After Intervention
7-3-25 to 10-3-25	*Udwarthanam* ,5 days	*Kolakulathadi churna*	Same clinical findings
11-3 -25 To 17-3-25	*Upanaham*, 7 days	*Nagaradi lepa churna* *Danyamla* *Saindhava* *Karpasathyadhi thaila*	Considerable relief in pain Involuntary movements of index finger noted
20-3-25 To 27 -3 -25	*Snehapanam* ,7 days	*Karpasasthyadi taila chikkanapakam* Total dose 550 ml	Involuntary movements of all fingers noted Tightness felt over shoulder and arm Crude touch sensation over C7 got improved
28-3-25 To 30-3-25	*Abhyangam+ushma sweda* ,3 days	*Murivenna*	No noticible changes
31-3-25	*Virechanam*	*Gandharva eranda taila* - 20 ml	No changes
1-4-25 to 6-4-25	*Abyangam+ooshma sweda* ,6 days	*Murivenna*	No changes
7-4-25 to 13-4-25	*Sandhana kizhi(muttakizhi)*, 7days	For *abyanga karpasasthyadi taila* taken	Patient felt strength Deltoid muscle bulk improved Affected limb started sweating Crude touch sensation over C5, C6 become intact Soft touch over C5 become intact and altered sensation over c6 and C7 joint position test over p2, p3 -intact p1 - altered Card test p3 - p4 and p4-p5 - power improved
14-4-25	*Virechana*	*Gandharva eranda taila* - 20 ml	

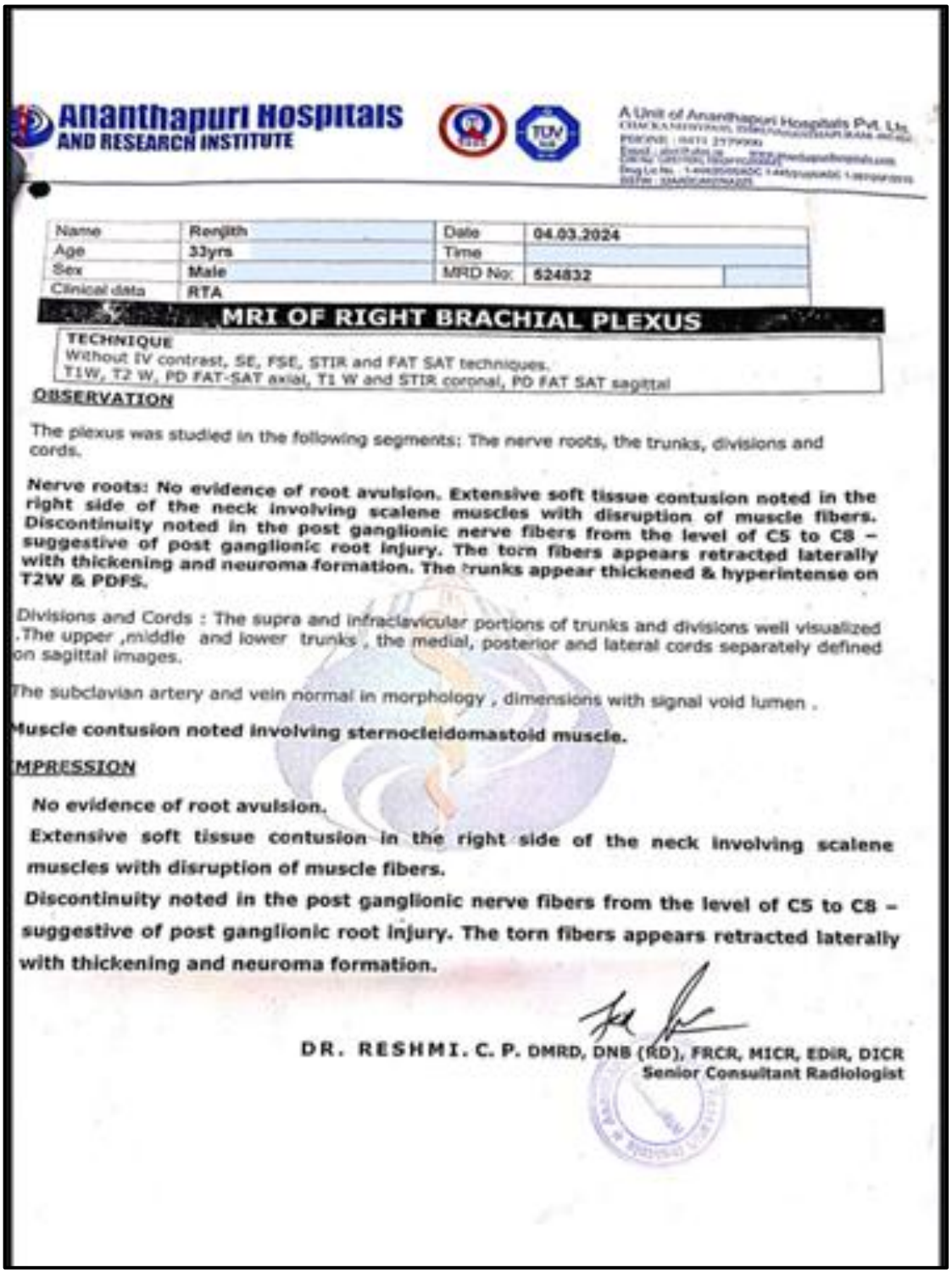
15-4-25 to 21-4-25	*Pizhinj thadaval- urdhakayam*, 7days	*Balaguluchyadi tailam* and *shashtika tailam*	Strength improved More flexibility to fingers
22-4-25 To 28-4-25	Nasyam + ksheeradooma - 7 days	Danwantharm 21 avarthi -12 drops Mukabhyangam with ksheerabala taila Thalam -ksheerabala+ rasnadi churna	Pain relieved (pain killers stopped) Patient can hold hands Crude along all dermatomes become intact
1-5-25 to 7-5-25	Kayasekam,7 days	Bala tailam+ maha masha tailam	Fine touch altered in C6, all other intact Joint position p1 altered, remainig intact
9-5-25 to 15-5-25	Shashtika pinda swedham with mamsa ,5 days	Abyangam with mahamasha tailam	
21-5-25 to 27-5-25	Rajayapana vasti ,7 days	Tailam: danwantharam mezhupakam Ghrutham: guggulu tiktakam ghritham	Finger flexion improved Can hold objects Pain was absent
From 15-4 -25 to 10-6-25	Physiotherapy (Trans cutaneous electrical nerve stimulation)		Improvements sustained

Table- 7: Internal medications

Date	Medicine	Dose
7-3-25	Danwantaram kasayam	90ml BD B/F
7-3-25	Maharaja prasaranyadhi capsule	2-0-2 with kashayam
8-3-25 to20-3-25	Vaiswanara churnam (Before snehapana)	1 teaspoon bd with hot water

Table 8: Medicines during follow up period

Prasaranyadi kashayam	90 ml bd before food
Gandha taila	10 drops bd with milk
Maharaja prasaranyadi capsule	2-0-2 with kashayam



Ananthapuri Hospitals
AND RESEARCH INSTITUTE

A Unit of Ananthapuri Hospitals Pvt. Ltd.

Name	Renjith	Date	04.03.2024
Age	33yrs	Time	
Sex	Male	MRD No:	624832
Clinical data	RTA		

MRI OF RIGHT BRACHIAL PLEXUS

TECHNIQUE
Without IV contrast, SE, FSE, STIR and FAT SAT techniques.
T1W, T2 W, PD FAT-SAT axial, T1 W and STIR coronal, PD FAT SAT sagittal

OBSERVATION

The plexus was studied in the following segments: The nerve roots, the trunks, divisions and cords.

Nerve roots: No evidence of root avulsion. Extensive soft tissue contusion noted in the right side of the neck involving scalene muscles with disruption of muscle fibers. Discontinuity noted in the post ganglionic nerve fibers from the level of C5 to C8 – suggestive of post ganglionic root injury. The torn fibers appears retracted laterally with thickening and neuroma formation. The trunks appear thickened & hyperintense on T2W & PDFS.

Divisions and Cords : The supra and infraclavicular portions of trunks and divisions well visualized .The upper ,middle and lower trunks , the medial, posterior and lateral cords separately defined on sagittal images.

The subclavian artery and vein normal in morphology , dimensions with signal void lumen .

Muscle contusion noted involving sternocleidomastoid muscle.

IMPRESSION

No evidence of root avulsion.

Extensive soft tissue contusion in the right side of the neck involving scalene muscles with disruption of muscle fibers.

Discontinuity noted in the post ganglionic nerve fibers from the level of C5 to C8 – suggestive of post ganglionic root injury. The torn fibers appears retracted laterally with thickening and neuroma formation.

DR. RESHMI. C. P. DMRD, DNB (RD), FRCR, MICR, EDiR, DICR
Senior Consultant Radiologist

Figure-1: MRI report

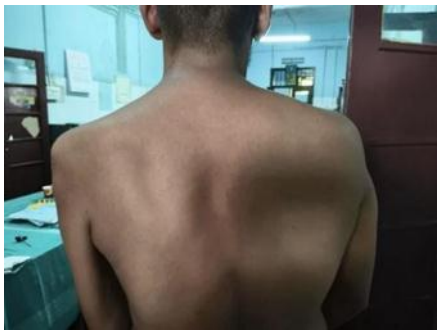


Figure 2: Before treatment

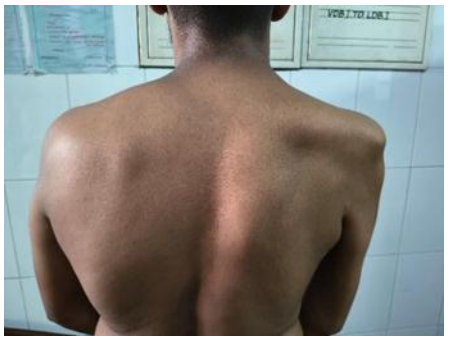


Figure 3: After treatment

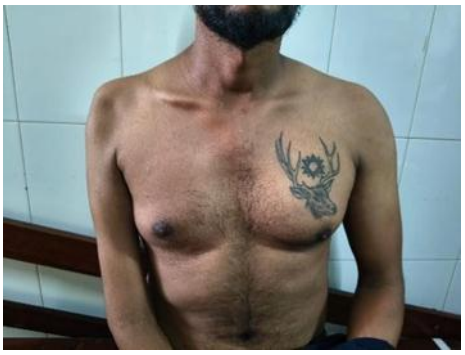


Figure 4: Before treatment

Figure 5: After treatment

DISCUSSION:

Brachial plexopathy represents a complex peripheral nerve injury that can cause severe functional impairment of the upper limb, affecting both motor and sensory domains. It is most commonly associated with high-impact trauma such as road traffic accidents, leading to traction, compression, or avulsion injuries of the brachial plexus [5]. In the present case, MRI revealed a post-ganglionic brachial plexus injury with discontinuity of nerve fibers from C5 to C8 and neuroma formation, indicating severe yet potentially recoverable neural damage. Post-ganglionic lesions generally have better prognosis than pre-ganglionic ones, as they preserve the proximal neuronal cell bodies, allowing for peripheral regeneration if conductive conditions are created [6]. However, conventional management often yields limited recovery, highlighting the need for supportive, holistic modalities to enhance neuro-muscular restoration.

In Ayurvedic understanding, this condition can be correlated with *Amsa Marma Abhighata*- trauma to the *Amsa marma* (shoulder region), one of the *Snayu marma*, resulting in *Vata vitiation*. *Vata dosha* governs nerve conduction, sensory perception, and locomotor activities; hence, its aggravation results in *Bahukriyahara* (loss of function of the upper limb), *Ruja* (pain), and *Sada* (weakness). The therapeutic objective, therefore, was *Vata shamana* (pacification) and *Snayu-Mamsa poshana* (nourishment of ligaments and muscles) through a judicious sequence of *Shodhana* (purificatory) and *Brimhana* (rejuvenative) measures, primarily *Panchakarma* and internal medications.

Udwarthanam using *Kolakulathadi choornam* was administered as the initial procedure to achieve *Srotoshodhana* and reduce obstruction to *Vata*. The friction and heat generated during this therapy helped to activate local circulation, decrease stiffness, and prepare the body for the subsequent *Snehana*

(oleation) stage.

Upanaham with *Nagaradi lepa churna* and *Karpasasthyadi taila* followed, imparting localized warmth and counteracting inflammation in the shoulder and arm. The patient reported pain reduction and spontaneous involuntary movements of the index finger, suggesting reactivation of motor end plates and partial neural conductivity restoration.

Snehapana with *Karpasasthyadi taila* further nourished *Vata*-affected tissues, improving *Snayu-Mamsa bala*. During this phase, crude touch sensation over the C7 dermatome began to recover, indicating internal neural regeneration facilitated by the lipid-soluble nature of *Sneha dravya*, which aids in nerve sheath repair and myelin restoration.

Abhyanga and ushma Swedana with *Murivenna p*romoted deep tissue relaxation, improved venous return, and alleviated stiffness [7]. These therapies enhance local metabolism (*Agni deepana*) and facilitate nutrient transport to affected neuromuscular junctions.

Virechana with *Gandharva eranda taila* acted as systemic *Vata-Kapha shodhana*, clearing metabolic wastes and improving tissue receptivity to subsequent *Brimhana* therapies. Sandhana Kizhi (Muttakizhi) with *Karpasasthyadi taila* was particularly effective in enhancing muscle tone and strength [8]. The patient showed visible improvement in deltoid bulk, decreased prominence of the humeral head, and return of sweating on the affected side — all indicative of restored *Vata-Pitta* balance and improved peripheral nerve activity.

Pizhichil with *Bala taila* and *Shashtika taila* provided both *Snehana* and *Swedana* effects simultaneously. It acted as a rejuvenating measure (*Brimhana*), offering sustained nourishment to neuromuscular structures. The patient achieved better flexibility, relief from pain, and regained handgrip without the need for analgesics during this stage.

Nasya with *Dhanwantharam taila (21 avarthi)*, combined with *Ksheeradhuma* and *Mukhabhyanga*, targeted the *Urdhva jatrugata vata* (disorders above the clavicle). It supports the cervical nerves and improves neural conductivity in the upper limb by influencing cranial and cervical nerve centers.

Kayaseka and *Shashtika Pinda Sweda* contributed to overall *Mamsa vriddhi* (muscle nourishment) and *Sthirata* (stability). These therapies rejuvenated muscle fibers and improved coordination and fine motor control. The treatment concluded with *Rajayapana Vasti,* a classical *Vatahara Rasayana* enema, which exerts deep systemic action. It is described as *Balya, Rasayana, and Majja poshaka* in the classics — nourishing the nervous system, promoting myelination, and enhancing neuroplasticity [9]. This final stage consolidated the benefits of prior treatments and sustained functional gains.

The sequential administration of therapies reflects the principle of *Srotoshodhana , Snehana, Swedana , Brimhana*, progressively moving from detoxification to restoration. The clinical progression mirrored this logic: early relief in pain and stiffness, followed by improvement in sensory perception, and finally, the return of voluntary motor control and muscle bulk. The appearance of sweating, restoration of crude and fine touch in C5–C7 dermatomes, and the ability to perform hand grip denote recovery of both sensory and autonomic nerve functions.

The improvement observed in this post-ganglionic injury case aligns with the Ayurvedic concept of *Vata anubandha mamsa kshaya* (Vata-related muscular degeneration), where *Brimhana chikitsa* plays a pivotal role. *Rajayapana Vasti* and *Nasya* might have contributed to *Majja dhatu poshana*

(nourishment of nerve tissue), enhancing neural regeneration and synaptic recovery. Parallel with external therapies, specific internal formulations were administered to balance *Vata*, strengthen the neuromuscular system, and support tissue regeneration.

Dhanwantharam Kashayam was the main internal formulation throughout therapy. It is a classical *Vata-Kapha hara*, *Balya*, and *Snayugata vatahara* medicine, widely used in neuromuscular and post-traumatic conditions[10]It enhances blood circulation, supports nerve tissue repair, and mitigates *Ruk* (pain) and *Sankocha* (contracture).

Maharasnadi Kashayam is a potent *Vatahara* and *Vedanasthapana* formulation containing herbs like *Rasna(*Alpinia galanga), *Eranda(Ricinus communis)*, *Devadaru(Cedrus deodara)*, and *Guduchi(Tinospora cordifolia)*, known for their anti-inflammatory, analgesic, and neuromodulatory properties. It supports nerve function by reducing inflammation in nerve sheaths and improving conductivity.

Guggulutiktaka Ghrita, administered during the *Vasti* phase, acted as a *Rasayana* and *Srotoshodhaka*. *Guggulu* provides anti-inflammatory and antioxidant benefits, while *Tiktaka dravyas* assist in removing *Ama* (metabolic toxins) from deeper tissues. The *Ghrita* base ensures lipid nourishment to the nerve tissue, supporting myelin sheath regeneration.

Maharaja Prasaranyadi Capsules are used traditionally in *Vata vyadhi* (neurological disorders). *Prasarini* is described as *Bahukarmani*, improving flexibility and motor coordination, while its oil form enhances neuromuscular function.

Gandha taila introduced during *Brimhana* phase of treatment to strengthen neuromuscular tissues and internal nourishment[11] It is *balya* and *majja vardhaka* formulation indicated in post- traumatic conditions and *vatha vyadhi*. Its administration helps to sustain the neuromuscular recovery achieved through panchakarma therapies.

Together, these internal medicines worked synergistically with Panchakarma to alleviate *Vata vitiation*, nourish *Majja dhatu*, and restore *Snayu-Mamsa bala*. The internal and external measures together followed the *Samyak Chikitsa Krama* (comprehensive treatment sequence) advocated for chronic *Vata*.

CONCLUSION:

This case demonstrates that a structured Ayurvedic approach combining Panchakarma and internal medications can bring substantial improvement even in chronic post-ganglionic brachial plexus injury with neuroma formation. Sequential *Vatahara* and *Brimhana* therapies promoted sensory and motor recovery. The case underscores the regenerative potential of Ayurveda in neuromuscular injuries.

Limitations:

This is a single case study; thus, results cannot be generalized. Objective electrophysiological evaluations such as nerve conduction studies were not performed post-intervention. But the consistent clinical improvement in muscle tone, sensory function, and pain relief provides valuable qualitative evidence supporting the integrative role of Ayurveda in neural rehabilitation.

Patient's Perspective:

The patient reported that following the injury on the right upper limb, there was severe pain, and restricted movements. Initially, daily activities were difficult to perform. After undergoing Ayurvedic management including external therapies and internal medications, the patient

experienced gradual reduction in pain, and stiffness. The movements of the affected limb improved significantly. The patient expressed satisfaction with the treatment outcome.

Conflict of interest: The author declares that there is no conflict of interest.

Guarantor*:* The corresponding author is the guarantor of this article and its contents.

Source of support: None

How to cite this article:
Vanidevi M, Shehanas Meeran, Deepa M S. Ayurvedic Approach in the Management of Brachial Plexopathy: A Clinical Case Report. Int. J. AYUSH CaRe. 2025;9(4):891-901.

REFERENCES:

1. Rubin DI. Brachial and lumbosacral plexopathies: A review. Clinical Neurophysiology Practice, 2020; 5: 173–193.
2. Čebron U, Mrčela M, Rot U. Treatment trends of adult brachial plexus injury. Journal of Clinical Medicine. 2021;10(18):4128.
3. Acharya JT. Sushruta Samhita, Sharira Sthana, Pratyeka Marma Nirdesha Sariram: Chapter 6, Sloka 26. Chaukhambha Sanskrit Sansthan, Varanasi; 2015, p. 374.
4. Srikantha Murthy K.R. Sushruta Samhita, Sharira Sthana, Chapter 6, Sloka 27–28. Chaukhamba Orientalia, Varanasi; 2018, p. 401-402.
5. Jain DKA, Kumar A, Sen RK. An epidemiological study of traumatic brachial plexus injuries. Indian Journal of Orthopaedics. 2004;38(3):218–222.
6. Costa NN, Almeida KN, de Souza DP, et al. Repair methods in peripheral nerves after traumatic injuries. Acta Cirúrgica Brasileira. 2025;40(2):e402.
7. Anonymous. The Ayurveda Formulary of India, Part III; Murivenna Taila (Chapter: Taila Kalpana/External Application Oils). Government of India, Ministry of Health & Family Welfare, Department of AYUSH, New Delhi; 1st edition, 2011
8. Nair RR, Sreekumar K. A clinical study to evaluate the effect of Karpasasthyadi Taila Nasya and Greevabasti in the management of Greevasthambha with special reference to cervical spondylosis. International Journal of Ayurveda Pharma Research. 2023;11(1):12–20.
9. Sharma P. V. Charaka Samhita, Siddhi Sthana, Chapter 12 (Vasti Siddhi). Chaukhamba Orientalia, Varanasi, 2012, p. 721–724.
10. . Upadhyaya YN . Ashtanga Hridaya, Shareera Sthanam, Garbhavyapad: Chapter 2, Verses 47–52. Chowkhambha Sanskrit Publishers, Varanasi; 2006, p. 180.
11. Sriramakrishna B, Pandey P, Chaurasiya JP. Clinical management of Arditha (Bell's Palsy) through Gandha Taila & Shudha Bala Taila Nasya. Journal of Science & Technology. 2022;7(4):1–20.