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**Case Report**

# Integrative ayurvedic approach in post-ischemic stroke rehabilitation with special reference to Pakshaghata: a case report

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## ABSTRACT

Ischemic stroke, comprising approximately 85% of all strokes globally, is a major cerebrovascular disorder. In Ayurveda, a similar condition is identified as Pakshaghata, categorized under Vatavyadhi. It results from aggravated Vata dosha, which governs motor and sensory functions, invading the shareera dhamani and leading to hemiplegia, speech loss and pain. A 67-year-old male patient, known case of hypertension for 2 years with poor medication adherence, presented with weakness and pain over the right upper and lower limbs, difficulty in walking without support and restricted right upper limb movement since 1½ months. A cerebrovascular accident occurred on 21/04/24 during nocturnal hours, with subsequent right-sided hemiparesis, facial deviation and slurred speech. CT revealed a chronic lacunar infarct in the right corona radiata, while MRI indicated an acute infarct in the left posterior capsulo-ganglionic region. The patient was admitted to the Kayachikitsa IPD on 14/06/24 with spasticity, hemiplegic gait, muscle weakness, exaggerated reflexes and an extensor plantar response. Following 14 days of integrative Ayurvedic treatment, the patient regained the ability to walk without support and raise the right upper limb, reflecting enhanced motor function and quality of life. VAS score reduced from 9 to 0, Ama assessment score dropped from 6 to 0 and NIHSS score improved from 8 to 6 indicating reduced stroke severity. This case demonstrates the potential role of conservative Ayurvedic interventions in post-stroke rehabilitation.

**Keywords**: Ischemic stroke, Pakshaghata, Vatavyadhi chikitsa, Rehabilitation, Case report

## INTRODUCTION

Cerebrovascular disease stands as a significant global health concern, ranking as the third leading cause of death in high-income countries, after cancer and ischemic heart disease. Its most prevalent clinical manifestation is a stroke or cerebrovascular accident, characterized by the abrupt onset of a neurological deficit attributable to a focal vascular cause. These events result in brain dysfunction stemming from either localized ischemia or haemorrhage. Beyond mortality, stroke is widely recognized as the primary cause of severe physical disability. The majority of strokes, approximately 85% are cerebral infarctions (ischemic strokes), occurring when blood flow to a part of the brain is interrupted. These strokes typically result from a blood clot, which either originates within a brain artery (thrombotic) or travels to the brain from another part of the body (embolic). The remaining 15% of strokes are haemorrhagic strokes, involving bleeding into the brain tissue. If blood flow to the brain is quickly restored, preventing significant cell death, the patient may only experience temporary symptoms, a condition known as a transient ischemic attack (TIA). Most thrombotic strokes are caused by a blood clot forming due to atherosclerosis. While large cerebral vessel blockages typically lead to major strokes and the occlusion of smaller penetrating arteries results in a lacunar stroke, which involves a smaller area of brain damage.[1] In the Ayurvedic system of

medicine, stroke aligns with the concept of Pakshaghata (or Pakshavadha), a condition where greatly aggravated vata dosha, responsible for motor and sensory activities, invades the shareera dhamani (body channels). Vatavyadhi can arise from two primary causes: dhatukshaya (tissue depletion) or avarana (obstruction). For Pakshaghata, the therapeutic principle involves snehana (oleation) and snehayuktha virechana (purgation with oleation).[2] Acharya Charaka advocates swedana (sudation) also.[3] When vata manifests in one half of the body, it can lead to the sosha (drying/atrophy) of muscles (snayu) and blood vessels (sira), subsequently causing joint instability (sandhi shaithilya). This culminates in a significant weakening of the affected side, rendering it unable to perform its normal functions. This localized affliction is referred to as Ekangaroga. Conversely, if these vata-induced effects extend throughout the entire body, the condition is then classified as Sarvangaroga. Specifically, an ischemic stroke is often understood as a vata-kapha predominant condition, with the initial phase of thrombotic stroke possibly being Kapha dominant due to sama medo dushti, while embolic strokes are primarily vata-predominant, particularly involving Vyana Vayu. Ayurveda holds a significant role in the post-stroke rehabilitation and recovery phases. This case report details the Ayurvedic management of an acute ischemic stroke (Pakshaghata) in a 67-year-old male patient with CT imaging showed a chronic lacunar infarct in the right corona radiata, and MRI revealed an acute infarct (25×20 mm) in the left posterior capsulo-ganglionic region, highlighting the potential for significant improvement within a relatively short period of conservative treatment.

## CASE REPORT

A 67-year-old male patient (OP No.: 56915, IP No.: 240511), with the following presenting complaints was admitted to our hospital on 14/06/24 for 14 days and discharged on 28/06/24. The patient's primary concerns include weakness and pain in the right upper and lower limbs for the past 1½ months, difficulty walking (able to walk only with support) for the same duration and difficulty raising the right upper limb for the past 1½ months.

### *Case history*

A 67-year-old male patient, k/c/o HTN for 2 years with poor medication adherence was apparently well before 1 and ½ months. On 18/4/24, 4 days before his incident of stroke he had symptoms like sweating over whole body, a feeling of discomfort and slight weakness over left side and heaviness overhead. These symptoms lasted for about half an hour and he was normal after rest. On 21/04/24 after a sleep at 11:30 pm, as he usually gets up to pass urine, he felt weakness over right side of his body in particular over upper limb and slight deviation of face towards left side was also noted. He was able to get up from bed but was not able to walk towards toilet. He was taken to nearby government medical college, but he appeared to be normal while reaching there and the duty doctor send him home and asked him to come if he had any difficulties again. He slept on reaching home. After 2 and half hours, at 2:00 am on 22/04/24 he again felt weakness over right side of body along with slurring of speech and deviation of angle of mouth towards left side. He was again taken to the same government medical college and was only able to consult the doctor at 6:00 am. ECG impressions were premature ventricular contraction trigeminy, right atrial enlargement, high voltage (left ventricle), T wave abnormality (v4, v5, v6) and prolonged QT interval. The same day he took CT scan; it has an impression of Chronic lacunar infarct in right corona radiata. On 27 April, in MRI, it has an impression of 25×20 mm area of acute infarct seen in the left posterior capsulo-ganglionic region and no hemorrhagic transformations. He was admitted to the hospital for 4 days. He was advised of internal medications along with physiotherapy and was discharged. At time of discharge, the slurred speech and deviation of his face found to be normal. But the pain and weakness over right side of body along with difficulty in walking and difficulty while raising right arm still persists. He was admitted in our Kayachikitsa IPD for better management.

*Past history*

H/o hypertension for 2 years with poor medication adherence. H/o CVA one and half months back.

*Medical history*

Tab. Clopilet 75 mg (0-1-0) A/F, Tab. botrostat 10 mg (0-0-1) A/F, Tab. telmisartan 40 mg (1-0-0) A/F, Cap. ultrasure (0-0-1) A/F, Tab. pantop 40 mg (1-0-1) B/F

*Family history*

Father had a history of cerebrovascular accident.

*Psychosocial history*

He had cooperative behaviour.

*Occupational history*

Occupation was truss worker

*Socioeconomic status*

Socioeconomic status was lower middle class (Modified Kuppuswamy SES scale 2021).

*Personal history*

Patient follows a mixed diet with a history of skipping breakfast and intake of lunch in a delayed time. Appetite was reduced; bowel was constipated (once in 2 days) and having incomplete evacuation; micturition was normal; Sleep was interrupted since one and half months; had no positive history of allergy; had addictions to Alcohol (daily

intake of 90ml) and chronic smoking (2 packets daily and only stopped after having stroke).

*General examination*

He exhibited a lean build and maintained a neat, tidy and cooperative behaviour. His gait was characterized by Hemiplegic gait with support. Notably there were no signs of pallor, icterus, cyanosis, clubbing or lymphadenopathy. As for vitals, the pulse rate was 72beats/min, the respiratory rate was 16 breaths/min, and the blood pressure was 140/90 mm Hg. He had a height of 154 cm, weight of 45kg and a BMI of 19kg/$m^2$.

*Systemic examination*

Respiratory system examination, gastro-intestinal system examination, cardiovascular system examination showed no abnormalities. But the central nervous system and locomotor system were affected.

***Examination of central nervous system***

*Higher mental function*

Patient was right-handed but can't elicit due to weakness over right side. Patient was cooperative; orientation, memory, intelligence and speech were found to be intact. Delusion and hallucinations are absent.

*Cranial nerve examination*

Among the cranial nerve examinations, motor part of trigeminal nerve was affected. He was able to clench his teeth but slight weakness was felt over the right side. Motor part of facial nerve is also affected. The Nasolabial fold appeared to be flattened in right side and Inflation of cheeks are possible but slight weakness noted at right side. Accessory nerve was also affected. While doing the test for sternocleidomastoid, weakness on right side and while doing test for Trapezius muscle it was possible but difficulty in shrugging shoulders on right side was noted.

*Motor system examination*

On examination, Muscle bulk in the upper limbs, the circumference 10 cm above the olecranon process measured 23 cm bilaterally, and 10 cm below the olecranon process measured 22 cm bilaterally. In the lower limbs, the thigh circumference 18 cm proximal to the superior border of the patella measured 27.5 cm on both sides, while the calf circumference 10 cm distal to the tibial tuberosity measured 26.5 cm bilaterally which indicates symmetrical muscle bulk in both upper and lower extremities.

On examination, muscle tone in the left upper and lower limbs was found to be normotonic. In contrast, the right upper and lower limbs exhibited increased tone consistent with spasticity.

On examination the left side muscle power was grade 5, indicating normal strength. On the right side, muscle power was markedly reduced. Shoulder abductors, shoulder adductors, elbow flexors, elbow extensors, wrist flexors and wrist extensors demonstrated grade 2 strength, indicating active movement possible only with gravity eliminated. Knee flexors, knee extensors, foot dorsiflexors and foot plantar flexors exhibited grade 3 strength, allowing active movement against gravity but not against resistance.

On examination of reflexes, Superficial abdominal reflex was present bilaterally. Deep tendon reflexes on the left side were within normal limits, with biceps jerk, triceps jerk, knee jerk and supinator reflex all showing normal responses (+, +, ++, and + respectively). The plantar reflex on the left was flexor in nature (+), indicating no upper motor neuron involvement. On the right side, reflexes were exaggerated: biceps jerk and triceps jerk were graded as ++, knee jerk as +++, and supinator reflex as ++. The plantar reflex was extensor (++), consistent with positive Babinski sign, suggesting upper motor neuron lesion on the right side.

***Coordination***

Dysdiadokinesia, finger to nose test and buttoning was possible with left hand but he was not able to elicit with right hand. Heel shin test was possible with left leg but he was not able to elicit with right leg. Romberg's test was negative. Tandem walking was not possible. Nystagmus and intentional tremor were absent. Gait was hemiplegic gait.

Sensory system examination-superficial and deep sensations are intact.

Extra pyramidal system-intact.

***Nidana***

*Aharajam:* Alpasanam, madya nityam, chronic smoking, akalabhojanam (breakfast and lunch), rooksha aharam, skipped medications

*Viharam:* Vegadharana and nisa jagaranam

*Manasika:* Atichintha

*Association of other vyadhis:* Hypertension

*Poorvaroopa:* Avyaktam

*Roopa:* Cheshta vaishamyam of dakshina kaya and the rujam

*Upasayam:* Ushnam

*Anupasayam:* Seetha

*Samprapthi:* Due to the above nidanas, vata pradhana doshakopa, Stanasamsraya in siras (srothorodha), Sirasnayu sankocha, Akarmanya of dakshina parswa and ruk.

***Diagnostic assessment***

This case was a case of spastic hemiplegia of right upper and lower limbs. This was diagnosed as ischemic thrombotic stroke based on the clinical presentation, physical examinations and imaging techniques.

***Therapeutic interventions***

By considering his present clinical symptoms and Ama assessment score, first phase aimed at amapachanam, agnivardhanam, srotoshodhanam,and vatanulomanam.

***Advise on discharge-internal medications***

Last phase-maintain agni, snehanam and dhatuposhanam.

Maharasnadi kashayam (60 ml-0-60 ml) bd B/F.

Sahacharaadi mezhupakam ¼ teaspoon taila with kashayam bd B/F. Vaiswanara choornam 1 teaspoon choorna with hot water, 11 am B/F. Sahacharaadi tailam for external application and the head oil-Mahamasha tailam.

Continue physiotherapy and exercise by self.

The present case of Pakshaghata which was an acute onset was successfully rehabilitated and got improvement in the pain, weakness and restricted movements by conservative ayurvedic treatment protocol. The patient's national institutes of health stroke scale (NIHSS) improved from 8 to 6, indicating a reduction in the severity of stroke-related neurological impairment.[5] Visual analogue scale (VAS) for pain significantly decreased from 9 to 0.[6] Ayurvedic Ama assessment score decreased from 6 to 0, indicating the elimination of ama (toxins) as per Ayurvedic diagnostic principles.

**Table 1: Ayurvedic diagnostic assessment.**

| Ayurvedic diagnostic assessment | |
|---|---|
| **Prakriti** | Vatha kapha (Using TNMC prakriti questionnaire) |
| **Doshas vitiated** | Prana vata, vyana vata, apana vata, sadhaka pitta, pachaka pitta, avalambaka kapha, tarpaka kapha |
| **Dhatu** | Rasa, rakta, mamsa |
| **Upadhatu** | Sira, snayu |
| **Sara** | Madyama |
| **Samhananam** | Madyama |
| **Satvam** | Avara |
| **Satmyam** | Katu, amla, lavana |
| **Srotas affected** | Rasa, raktha,mamsa, pureeshavaha |
| **Pramanam** | Madhyama |
| **Aharasakthi** | Madhyamam |
| **Vyayamasakthi** | Avaram |
| **Vaya** | Madhyama |
| **Kalam (kshanadi)** | Greeshmam |
| **Kalam (vyadhyavastha)** | Navam |
| **Desham (bhumi)** | Aanoopam |
| **Desham (athura)** | Dakshina parswa |
| **Rogamargam** | Madhyama |
| **Sadyasadyatha** | Krichra sadya |

**Table 2: Ama assessment score.**

| Symptoms | Score |
|---|---|
| **Constipation** | 1 |
| **Heaviness of the body** | 1 |
| **Loss of taste** | 0 |
| **Loss of appetite** | 1 |
| **Loss of thirst** | 0 |
| **Bad belching** | 0 |
| **Pain (joint pain)** | 1 |
| **Lack of enthusiasm (utsah)** | 1 |
| **Lethargy (tantra)** | 1 |
| **Total** | 6 |

**Table 3: Therapeutic intervention-internal medications.**

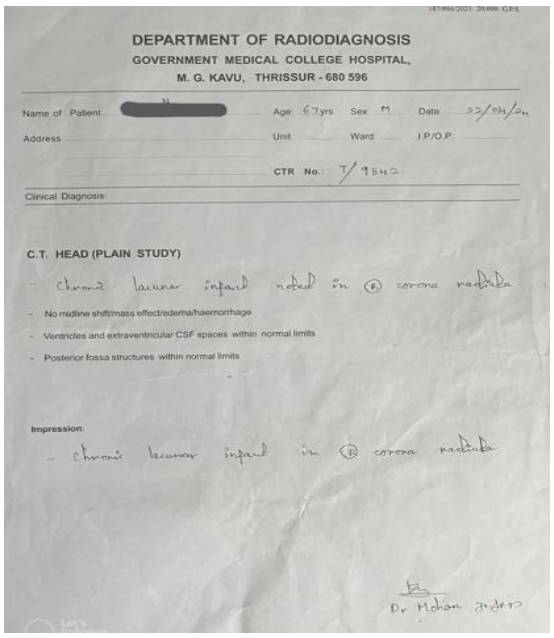
| Date | Medicine | Dose | Time of administration |
|---|---|---|---|
| **14/06 to 28/06** | Gandharvahast hadi kashayam | 15 ml kashayam+60 ml lww at 6 am | Before food |
| **14/06 to 28/06** | Ashtavargam kashayam | 15 ml kashayam+60 ml lww at 6 pm | Before food |
| **14/06 to 28/06** | Dhanwantaram tablet | 1-0-1 | With kashaya |
| **14/06 to 28/06** | Vaiswanara choornam | 0-1 teaspoon-0 with hot water | Before food |

**Table 4: Therapeutic intervention-external therapies.**

| Date | Procedure | Medicine | No. of days | Remarks |
|---|---|---|---|---|
| **15/06 to 17/06** | Choorna pinda sweda rooksham | Navadhanya choornam | 3 days | Adverse effects- c/o pain increased over right upper limb on 16/6/24 particularly on shoulder and wrist up to digits. |
| **18/06 to 21/06** | Choorna pinda sweda satailam | Navadhanya choornam in sahacharadi tailam | 4 days | Adverse effect- pain increased on first day and sleep was disturbed due to pain. The pain was reduced from the next day. |
| **19/06 onwards** | Physiotherapy | | 7 days | |
| **22/06 to 28/06** | Patrapotala swedam | Sahacharaadi tailam and dhanwantara tailam | 7 days | On 24$^{th}$ he was able to walk without support. On 26$^{th}$ June he was able to raise his right upper limb without support. |

**Table 5: Assessment tools.**

| Assessment tools | Before treatment | After treatment |
|---|---|---|
| **National institutes of health score scale** | 8 (moderate) | 6 (moderate) |
| **VAS scale** | 9 | 0 |
| **Ama assessment score** | 6 | 0 |
| **Muscle power (right upper limb)** | Grade 2 | Grade 3 |
| **Muscle power (right lower limb)** | Grade 3 | Grade 4 |
| **Walking** | With support | Without support |
| **Right upper limb** | Not able to raise | Able to raise |
| **Spasticity** | Persists | Reduced |
| **Weakness over right side of body** | Persists | Reduced |


DEPARTMENT OF RADIODIAGNOSIS
GOVERNMENT MEDICAL COLLEGE HOSPITAL,
M. G. KAVU, THRISSUR - 680 596

Name of Patient: [redacted] Age: 67yrs Sex: M Date: 22/04/24

Address: Unit: Ward: I.P./O.P:

CTR No: T/1542

Clinical Diagnosis:

C.T. HEAD (PLAIN STUDY)

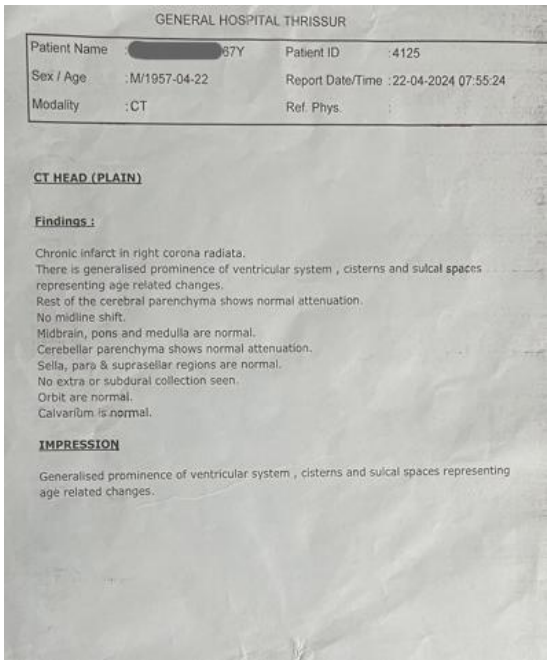
- Chronic lacunar infarct noted in (R) corona radiata
- No midline shift/mass effect/edema/haemorrhage
- Ventricles and extraventricular CSF spaces within normal limits
- Posterior fossa structures within normal limits

Impression:

- Chronic lacunar infarct in (R) corona radiata

Dr Mohan 22/4/24

**Figure 1: Right upper limb (before treatment).**


GENERAL HOSPITAL THRISSUR

| | | | |
|---|---|---|---|
| Patient Name | [redacted]67Y | Patient ID | :4125 |
| Sex / Age | :M/1957-04-22 | Report Date/Time | :22-04-2024 07:55:24 |
| Modality | :CT | Ref. Phys. | |

CT HEAD (PLAIN)

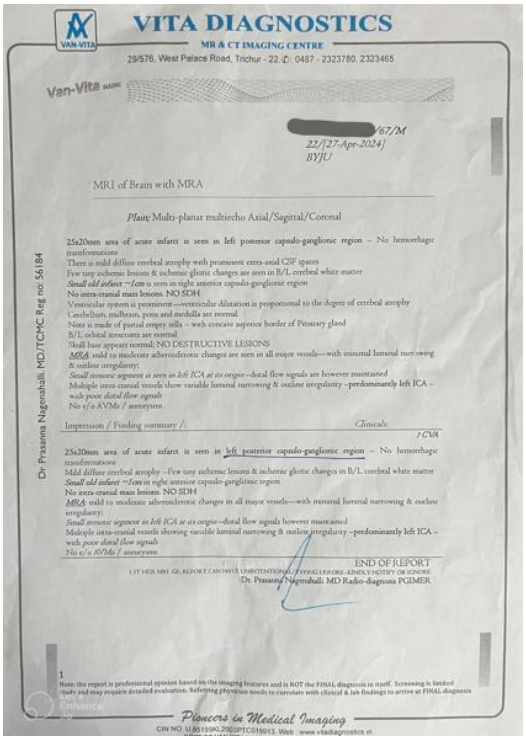
Findings :

Chronic infarct in right corona radiata.
There is generalised prominence of ventricular system , cisterns and sulcal spaces representing age related changes.
Rest of the cerebral parenchyma shows normal attenuation.
No midline shift.
Midbrain, pons and medulla are normal.
Cerebellar parenchyma shows normal attenuation.
Sella, para & suprasellar regions are normal.
No extra or subdural collection seen.
Orbit are normal.
Calvarium is normal.

IMPRESSION

Generalised prominence of ventricular system , cisterns and sulcal spaces representing age related changes.

**Figure 2: Right upper limb (before treatment).**



VITA DIAGNOSTICS

MR & CT IMAGING CENTRE

29/576, West Palace Road, Trichur - 22. Ph: 0487 - 2323780, 2323465

Van-Vita

[redacted]/67/M

22/[27-Apr-2024]

BY/IU

MRI of Brain with MRA

Plain: Multi-planar multiecho Axial/Sagittal/Coronal

25x20mm area of acute infarct is seen in left posterior capsulo-ganglionic region – No hemorrhagic transformations

There is mild diffuse cerebral atrophy with prominent extra-axial CSF spaces

Few tiny ischemic lesions & ischemic gliotic changes are seen in B/L cerebral white matter

Small old infarct ~7.6m is seen in right anterior capsulo-ganglionic region

No intra-cranial mass lesions. NO SDH

Ventricular system is prominent—ventricular dilatation is proportional to the degree of cerebral atrophy

Cerebellum, midbrain, pons and medulla are normal

Nitet is made of partial empty sella – with concave superior border of Pituitary gland

B/L orbital structures are normal

Skull base appears normal; NO DESTRUCTIVE LESIONS

MRA: mild to moderate atherosclerotic changes are seen in all major vessels—with minimal luminal narrowing & outline irregularity;

Small stenotic segment is seen in left ICA at its origin—distal flow signals are however maintained

Multiple intra-cranial vessels show variable luminal narrowing & outline irregularity –predominantly left ICA – with poor distal flow signals

No e/o AVMs / aneurysms

Impression / Finding summary /: Clinicals:

/ CVA

25x20mm area of acute infarct is seen in left posterior capsulo-ganglionic region – No hemorrhagic transformations

Mild diffuse cerebral atrophy –Few tiny ischemic lesions & ischemic gliotic changes in B/L cerebral white matter

Small old infarct ~7.6m in right anterior capsulo-ganglionic region

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Multiple intra-cranial vessels showing variable luminal narrowing & outline irregularity –predominantly left ICA – with poor distal flow signals

No e/o AVMs / aneurysms

END OF REPORT

Dr. Prasanna Nagenahalli. MD Radio-diagnosis PGIMER

Note: the report is professional opinion based on the imaging features and is NOT the FINAL diagnosis in itself. Screening is limited study and may require detailed evaluation. Referring physician needs to correlate with clinical & lab findings to arrive at FINAL diagnosis

Pioneers in Medical Imaging

Dr. Prasanna Nagenahalli MD,TCMC Reg no: 56184

**Figure 3: MRI of brain with MRA.**

**Figure 4: Right upper limb (before treatment).**

**Figure 5: Right upper limb (after treatment).**

## DISCUSSION

In this case, 67-year-old male patient, the patient's clinical history revealed several pre-existing risk factors, both fixed and modifiable, which are crucial in the context of stroke aetiology. His age (>60 years) and male gender are recognized non-modifiable risk factors. Furthermore, a strong hereditary predisposition was noted, with his father having a history of stroke. Crucially, the patient's modifiable risk factors were prominent and directly contributed to his condition: long-standing but uncontrolled hypertension, chronic cigarette smoking, and excessive alcohol intake. Additionally, his occupational history revealed prolonged exposure to physically demanding labour and repetitive strain, as he worked for many years as a truss worker-an occupation characterized by heavy lifting and may have played a role in the pathophysiological development of his condition. The initial transient symptoms he experienced on April 18, 2024, could be interpreted as a TIA, a warning sign that, unfortunately, did not lead to immediate effective medical intervention.

The subsequent full-blown stroke on April 22, 2024, after initial dismissal, underscores the importance of timely recognition and management of neurological symptoms. In understanding the pathophysiology from an Ayurvedic perspective, the predominance of vata dosha was evident, with contributory involvement of Kapha dosha. Accordingly, the treatment protocol prioritized vata Upakrama, while also addressing kapha aspects. Initial management focused on the presence of ama, that may be precipitated by sudden and intense physical or mental activity. This pathological accumulation has the potential to disrupt normal metabolic processes, thereby contributing to systemic imbalances necessitating the need for proper Rookshana. This was achieved through Ruksha Pinda Sweda, which facilitated the removal of ama and prepared the body for further intervention. In this phase, treatment focused on the following Ayurvedic principles: Amapachana, Agnideepana, Srotosodhana and Vatanulomana with most interventions comprising classical herbal formulations. In the subsequent phase, with emphasis on pacifying the aggravated Vata, Snigdha Pinda Sweda was administered to restore balance and support tissue nourishment. Significant functional improvement was achieved within two weeks by exclusively administering Pinda swedas. Socioeconomic assessment using the Kuppuswamy scale classified the patient in the lower-middle class, indicating limited financial resources that precluded the use of expensive therapeutic modalities.[7] Consequently, the treatment strategy prioritized cost-effective approaches, utilizing minimal yet standardized classical medicines and procedures.

By aligning therapeutic decisions with economic realities, the care regimen successfully balanced affordability with clinical efficacy, demonstrating that meaningful outcomes in stroke rehabilitation can be achieved through accessible

Ayurvedic interventions. This case represents a multifaceted cerebrovascular event characterized by acute and chronic ischemic changes, mild cerebral atrophy, and generalized intracranial atherosclerosis, as evidenced by CT, MRI, and MRA imaging. The most significant acute finding is a 25×20 mm infarct in the left posterior capsulo-ganglionic region, involving the posterior limb of the internal capsule and adjacent basal ganglia structures. This area is critical due to its dense concentration of motor and sensory projection fibres. Damage here typically results in contralateral hemiparesis or hemiplegia, with possible sensory deficits. Given the left hemispheric involvement, the patient may also exhibit right-sided motor weakness and, if cortical areas are secondarily involved, speech or language impairments depending on the extent and individual cerebral dominance. In addition to the acute infarct, there is evidence of chronic small vessel ischemic disease, including: A chronic lacunar infarct in the right corona radiata. A small old infarct in the right anterior capsulo-ganglionic region, likely affecting fronto-thalamic connections and contributing to cognitive slowing or executive dysfunction.

Diffuse white matter ischemic gliotic changes and mild cerebral atrophy, suggesting long-standing small vessel disease, which may be related to ageing, hypertension, or metabolic risk factors. These findings point towards a mixed-type stroke aetiology, primarily involving: Large vessel atherosclerosis: as shown by MRA, which revealed mild to moderate atherosclerotic changes in all major vessels, stenosis at the origin of the left internal carotid artery (ICA), and poor distal flow in the intracranial segment of the left ICA. Small vessel (lacunar) disease reflected by the chronic infarcts in deep white matter territories and ischemic gliotic changes. The left ICA supplies the anterior circulation, including the middle cerebral artery (MCA) and anterior cerebral artery (ACA). The poor distal flow signals in the left ICA suggest impaired perfusion through the left MCA territory, which aligns with the location of the acute infarct. This indicates compromise of the anterior portion of the Circle of Willis, specifically affecting the ICA-MCA axis. No evidence of aneurysms or arteriovenous malformations (AVMs) rules out structural vascular anomalies, reinforcing the diagnosis of an atherothrombotic stroke in the setting of diffuse atherosclerosis. In this case study patient got satisfactory symptomatic relief and functional improvement through 2 weeks of ayurvedic conservative management along with physiotherapy and he was continuing the Ayurvedic internal medicines and passive exercises after the treatment.

### *The scientific rationale for the probable mode of action of internal medications*

Gandharvahasthaadi kashayam is meant for the anulomana of vata as vyana and apana vata are affected.[8] It also helps in restoring agni, to remove constipation (malashodhanaaya). Ashtavargam kashayam is having vatakapha hara property, aavaranaghna, srotoshodhana, Deepana, pachana, amahara, anulomana properties.[9] It has a strong effect on dhatus due to its ushna veerya, laghu ruksha guna, katu vipaka in initial management. Vaiswanaram choornam in correcting agni.[10] Given in the initial stages to correct koshta related problems in patient. Agni deepana, anulomana effect since hareethaki is more in quantity. Maharasnadi kashayam is having vata samana property and very good effect in paralytic disorders. It is brimhana in nature. Mahamasha tailam as it is brimhana and can be administered in the final phase.[11] Sahacharadi taila has effect in improving motor activities of lower limbs. Thus, the combination of these internal medicines helps to decrease the inflammation, pain and to repair, restore the functional mobility.

### *The scientific rationale for the probable mode of action of procedures*

Since the patient has spasticity, stiff rigid muscles, stiffness in the upper limbs and lower limbs, there is vatakapha predominance symptoms with the involvement of prana, vyana, apana vata. Choorna pinda sweda removes sthamba, gourava, sheeta from the body. Done to bring vitiated dosha to alimentary canal for eliminating out of body. Snigdha sweda kriyas in the form of Patra potali sweda increases blood flow, thus eases down the inflammation, and stimulation of the sympathetic nervous system for vasodilation which leads to revascularization of tendons around the joints and speeds up the healing process.[12] Passive exercises help to restore muscle strength and mobility of joints.

## CONCLUSION

This case report effectively demonstrates the significant potential of Ayurvedic interventions. The treatment protocol prioritized Vata Upakrama, while also addressing Kapha aspects secondarily in the acute management of ischemic stroke (Pakshaghata). Despite the presence of multiple fixed and modifiable risk factors, and a delayed presentation to specialized care for the acute event, the patient experienced remarkable improvement in pain, neurological deficit, and functional ability within a two-week period. This outcome underscores Ayurveda's valuable role not only in post-stroke rehabilitation but also in facilitating rapid recovery and enhancing the quality of life in stroke patients, thereby complementing conventional modern medical approaches.

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*Ethical approval: Not required*

## REFERENCES

1. Kasper F. Harisson’s Principles of Internal Medicine. 19th ed. Vol. 1. USA: McGraw-Hill Medical Publishing Division. 2005;3270.

2. Srikantha Murthy KR. Astanga Hridayam Vagbhata chikitsasthana. 4th ed. Vol. 2. Chowkhamba Krishnadas Academy, Varanasi. 2021;21-44.
3. Sharma RK, Bhagwan D. Caraka Samhita chikitsasthana. Reprint 2009 ed. Vol. 5. Chowkhamba Krishnadas Academy, Varanasi. 2009;28-100.
4. Giri PV, Kamat TNM. Developing ama grading tool for Ayurvedic research-a conceptual framework. Contemporary research in India. 2018.
5. Hinkle JL. Reliability and Validity of the National Institutes of Health Stroke Scale for Neuroscience Nurses. Stroke. 2014;45(3):e32-4.
6. Lalit S. Visual Analog Scale for Pain (VAS): Scoring Pain on 100 mm Line. We Capable. 2020. Available at: https://wecapable.com/vas-pain-scale-100mm-line/. Accessed on 1 June 2025.
7. Saleem SM, Jan SS. Modified Kuppuswamy socioeconomic scale updated for the year 2021. ResearchGate. Indian J Forens Commun Med. 2021;8(1):1-3.
8. Pillai KVKV. Chikitsasarasarvasvam/Sahasrayogam. Mullakkal Alappuzha: Vaidyarambam Publishers. 35th ed; 2017: 78.
9. Pillai GS, Vaidyan KVK. Chikitsasarasarvasvam/ Sahasrayogam. 35th ed. Mullakkal, Alappuzha: Vaidyarambam Publishers. 2017; 190.
10. Pillai GS, Vaidyan KVK. Chikitsasarasarvasvam/ Sahasrayogam. 35th ed. Mullakkal, Alappuzha: Vaidyarambam Publishers. 2017; 302.
11. Mukherjee A, Dwivedi OP, Jain J, Khuje S. Clinical potency of Patra-Pottali Sweda. J Drug Deliv Therap. 2018;8(6-s):400-3.

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