



Case Study

ISCHEMIC STROKE OF BRAIN MANAGEMENT APPROACH THROUGH AYURVEDA - A SINGLE CASE STUDY

Sahana Krishna^{1*}, C.V Rajashekhar², Nayan J³

*1MD scholar, ²Professor & Head, Department of Kayachikitsa, ³Professor, Department of Agadatantra, Sri Kalabyraveshwara Swamy Ayurvedic Medical College, Hospital and Research Centre, Bangalore, India.

Article info

Article History:

Received: 19-05-2022

Revised: 03-06-2022

Accepted: 16-06-2022

KEYWORDS:

Cerebral infarction,
Lacunar infarcts,
Pakshaghata,
Vatavyadhi,
Panchakarma,
Chikitsa.

ABSTRACT

Stroke is one among such diseases which needs immediate care and attention as it causes death and disabilities in the person, hence considered as a major burden in developing countries like India. The estimated adjusted prevalence rate of stroke in India ranges from 84-262/1,00,000 in rural and 334-424/1,00,000 in urban areas. The incidence rate is 119-145/1,00,000 based on the recent population-based study. The nearest clinical entity for stroke is *Pakshaghata*. **Methodology:** A 51yrs old male patient who is a known case of DM since 6years under regular medication approached to OPD of SKAMCH & RC Bangalore, with a *Lakshana* of loss of function, sensation, speech etc where mainly right half of the body was affected. Based on the clinical presentation and Ayurvedic parameters, the condition was diagnosed as *Pakshaghata* with special reference to ischemic stroke with possible multiple lacunar infarcts and *Chikitsa* was adopted keeping *Dhatukshayajanya* pathology as base. The treatment such as *Sarvanga Abhyanga*, *Sarvanga Nadi swda*, *Sarvanga shashtika shali pinda sweda* and *Basti* with oral medications like *Suvarna sameerapannaga rasa*, *Vidaryadi Kashaya*, *ashtavarga Kashaya*, *balarishta* and *Cap. Palsineuron* were prescribed. **Result:** There were drastic improvements seen in the *Lakshanas*. Overall fruitful result was achieved even follow up were maintained. **Discussion:** This article is a discussion about a case of ischemic stroke of brain which was successfully treated with Ayurvedic approach. The disease *Pakshaghata* with its *Lakshanas*, *Nidana*, *Samprapti*, *Sampraptivighatana* of *Chikitsa* given, along with the approach to conclude its possible modern co-relation as Ischemic stroke of brain were the main points *Sampraptivighatana*, *chikitsa* given, consideration. **Conclusion:** The above-described sets of *Panchakarma* treatment along with *Shamanoushadhi* has shown significant result clinically with speedy recovery within a month in the patient in the present study.

INTRODUCTION

The concept of *Ashtamahagada* includes *Vatavyadhi*.^[1] *Pakshaghata* disease is one type of *Vatavyadhi* belonging to *Madhyama Rogamarga* with *Karmakshaya* as the prevalent *Lakshana*. The other *Lakshanas* like loss of function, pain, loss of speech, and sensation affect in one half of the body are seen in *Pakshaghata*.

In general, *Pakshaghata* is a term that refers to a stroke. Stroke is defined by the World Health Organization as a clinical syndrome consisting of rapidly developing clinical signs of focal (or global in case of coma) disturbance of cerebral function lasting more than 24 hours or leading to death with no apparent cause other than a vascular origin.^[2] The two main reasons for cerebrovascular accidents are hemorrhage and infarction which can be considered as *Dhatukshayajanya* and *Avaranajanya* respectively in Ayurveda. An ischemic stroke happens when there is a loss of blood flow to a part of the brain where the brain cells are unable to get the oxygen and nutrients they need from blood, which will lead to death of brain cells within a few minutes. This can cause lasting brain damage, long-term disability, or even death. Ischemic stroke is not a single disease but a heterogenous

Access this article online

Quick Response Code



<https://doi.org/10.47070/ijapr.v10i6.2391>

Published by Mahadev Publications (Regd.)
publication licensed under a Creative
Commons Attribution-NonCommercial-
ShareAlike 4.0 International (CC BY-NC-SA
4.0)

condition with several very different pathophysiological mechanisms hence identifying the underline cause becomes important.^[3] The cerebral infarction is most common type of stroke which generally caused by one of three pathogenic mechanisms like large artery atherosclerosis in extracranial and large intracranial arteries, embolism from the heart, intracranial small vessel disease (lacunar infarcts). The small vessel infarcts (lacunar infarcts) were first recognized by the French neurologist and neuropathologist in the nineteenth century, who also coined the term lacune from the autopsy finding of a small cavitation. These are considered as a small infarcts with <15mm diameter results from occlusion of single penetrating artery which is usually located in sub cortical, basal ganglion, thalamus, internal capsule, corona radiata and brainstem.^[4]

Masthishka and *Vatavaha srotas* (brain and nervous system) are the important seats of *Vata* in respect of its two functions i.e., *Gati* and *Gandana* which are motor and sensory functions. The qualities like *Amurta*, *Anavasthita*, *Swayambu*, *Sookshma* of *Vata* indicate that phenomena of *Vata* can be assumed as the phenomena of nerve impulse. To counteract this *Kupita Vata* seen in the *Samprapti* of *Pakshaghata* respective *Chikitsa* is applied to overcome the hemiplegia due to ischemia (multiple lacunar infarction).

Patient History

A male patient aged 53yrs who is a known case of type 2 DM since 6yrs with regular medication noticed increased sugar levels in the morning on 28/11/21 for which he had consulted a physician nearby and advised to do blood investigations where noticed increased levels of FBS-250mg/dl and PPBS-380mg/dl while doing general examination consultant also noticed increased blood pressure i.e., about 180/100mmhg for which the doctor advised the patient to visit Hindupur hospital for further management. The patient came back home and travelled by car to Hindupur which is almost 50km away on the same day. In the evening he started noticing bilateral UL and LL numbness with pain. Patient also noticed disturbed sleep that night. The patient was taken home on 29/11/21 and numbness persisted for the whole day. On 30/11/21 morning around 7:30 am when the patient's party tried to feed milk to the patient, but he couldn't drink it. He was unable to open his mouth and milk spilt down. The patient experienced weakness in the right half of the body. By 10 am patient was taken to Chikkaballapura Jeevan hospital in a car, where they advised the patient to undergo investigations. On clinical examination patient's BP was high for which treatment was given to control the same (details unknown). By evening

patient developed symptoms similar to stroke such as reduced strength in right UL and LL, unable to walk and treated with medications for the same. The patient was discharged and taken to Virupakshipuram Tamilnadu by the next day morning where they noticed deviation of angle of the mouth towards the left side, dribbling of saliva, watering from the right eye, reduced strength in Rt UL & LL, unable to walk and double vision. As per the patient and patient's bystander words, patient was conscious throughout the series of events and it was not associated with headache, vomiting or convulsions. In Virupakshipuram clinic they had treated patient with Folklore internal medication details unknown and was advised to approach them every 15days once for three times. After the first visit patient started using the medications and continued for few days. Since the complaints persisted and no improvement seen in patient they approached to our hospital for the management of the same.

Past History

H/O Covid in December 2020 and was admitted in the hospital about 20days for the same (for isolation purposes)

Family History

- Patient mother was a known case of hypertension, and she also had a history of stroke.
- Patient brother is a known case of diabetes mellitus under medication.
- Patient is a known case of Diabetes mellitus since 6yrs (under medication) and recently since 8 days after stroke diagnosed as hypertensive for which he is under medication.
- All other family members are said to be healthy.

Personal History

- Diet: mixed diet meal intake 3times/day, non- veg intake once in a week preferably egg and chicken more likeliness towards spicy food items and deep-fried items.
- Appetite: Good
- Bowel: Regular, once daily (Before stroke) since 8 days constipated
- Micturition: Regular, 3-4 times/day, 1-2 times in the night, no burning or pain during micturition
- Habit : Nil
- Sleep : 6-7hrs/night , disturbed since 8days

Occupational History

- Occupation: Driver
- Working since: 16yrs
- Working timing: 10am – 6pm day shift
- Working stopped: since 1yr due to Covid
- Working type: Should load the material such as fridge, washing machine, cooler etc to luggage auto

and that should be delivered safely to the respective address.

- Total trips: 2-4 trips and each trip journey was about 30-40km

Treatment Details

Following list of medicines were consumed by the patient for HTN and DM

- Sugaflo TM 1-0-1
- Ecosprin Av 75 0-0-1
- Cilacar 5 1-0-0
- Glitaray M2 1-0-1

Physical Examination and Vital Sign

- Attitude: Sitting position with Hip and Knee flexed and semi flexed right elbow joint.
- Built: Moderately built
- Nourishment : Moderate
- Pallor: Absent
- Icterus: Absent
- Clubbing: Absent
- Cyanosis: Absent
- Lymphadenopathy: Absent
- Oedema: Absent
- Temperature: 97.6 degree F
- Pulse: 74bpm
- Respiratory rate: 20/min
- BP: 130/90mmhg
- Height: 172cm
- Weight: 60kg
- BMI: 20.3 kg/m²
- Heart rate: 80/min
- Tongue: *Alipta*

Systemic Examination

CVS: S1S2+no added sounds, no abnormality detected.

RS: Normal vesicular breathing sound heard+ Bilaterally, NAD

P/A: Soft, no organomegaly, no other abnormal signs, NAD

CNS: Mental status examination:

General appearance and Behavior

- Level of Consciousness: Conscious
- Orientation to time, place and person : Intact

Posture and motor behavior

- Posture - Sitting with knee hip flexed
- Pace of movements - Reduced due to weakness in affected side
- Range of movements- Reduced due to weakness in affected side
- Character of movements- Under voluntary control
- Dress, grooming and personal hygiene- Maintained
- Facial expression- normal
- Manner, affect and relationship to people and things - Normal

Speech and language

- Quantity - Normal
- Rate: Slow
- Volume: Normal
- Articulation of words: Dysarthria present
- Fluency: Affected (Word output difficulty, initiation difficulty and reduced flow)

Comprehension

- One stage command – intact
- Two stage command – intact
- Repetition: intact
- Naming: intact
- Reading: intact
- Writing: Not able to perform

Mood - Normal

Thoughts and perceptions

- Thought process: Abnormalities are absent.
- Thought content: Abnormalities are absent.
- Perceptions: Abnormalities are absent.
- Insight & Judgment: Normal

Cognitive functions

- Orientation to time, place and person: Intact
- Attention - Intact
- Memory:
 - A. Immediate - Intact
 - B. Recent – Intact
 - C. Remote - Intact
- Emotional disturbances: Absent
- Hallucination: Absent
- Delusion: Absent
- Speech disturbances: Present
- Handedness: Right

Cranial Nerve Examination

CN-I Olfactory Nerve

Perception of smell: intact

CN-II Optic Nerve

- Acuity of vision: Within normal limit
- Colour vision: Can able to read Ishihara's test plate
- Visual field: Normal (mild Difficulty noticed due to double vision)
- Light reflex: Normal
- Accommodation reflex: Normal

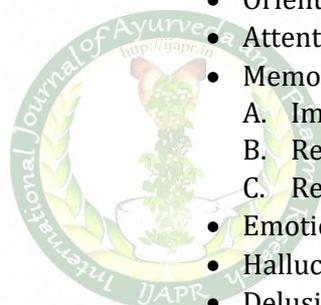
CN-III Oculomotor, CN-IV Trochlear, CN-VI Abducens Nerve

- Pupil (position, shape, size, symmetry): NAD
- Eye ball movement: Possible in all direction
- Ptosis, squint, nystagmus: Absent

CN-V Trigeminal Nerve

Sensory

- Light touch– right side– not perceived , left side– intact



- Pin prick test- right side- perceived, left side- intact
- Temperature- right and left side- intact

Motor

- Deviation of jaw- absent
- Deviation of angle of mouth- deviated to left side
- Movement of jaw- possible
- Clenching of teeth – not possible
- Opening mouth against resistance - possible

Reflexes

- Jaw jerk – present
- Corneal reflex – present
- Conjunctival reflex – intact

CN-VII Facial Nerve

- Sense of taste in anterior 2/3rd of tongue – intact
- Sensation of face – hampered in right side

Motor

- Eyebrow raising: Possible
- Frowning of forehead: possible
- Complete closure of eyes: Not possible in right side
- Clenching of teeth: possible
- Blowing of cheek: Not possible
- Naso - labial fold: flattened in right side

CN- VIII Vestibulocochlear Nerve**Vestibular Nerve**

- Nystagmus: Absent
- Gait and stance - unable to walk
- Romberg's test - Not able to perform

Cochlear nerve

- Rinne's test and webbers test- right and left ear – normal

CN-IX Glosopharyngeal Nerve

- Taste sensation of posterior 1/3rd of tongue: Intact
- Gag reflex: Intact
- Uvula: Slightly deviated towards left side
- Dysphagia: Absent

CN-X Vagus Nerve

- Gag reflex: Intact
- Swallowing: Possible
- Uvula: Slightly deviated towards left side

CN-XI Accessory Nerve

- Shrugging of shoulder with resistance- Possible
- without resistance- Possible
- Trapezius muscle atrophy- absent
- Right side shoulder droop- present

CN-XII Hypoglossal Nerve

All movements of tongue are possible

Sensory

- Light touch: Not able to appreciate right side left side is normal

- Superficial pain: Not able to appreciate right side left side is normal

- Deep pain: Intact
- Temperature: Intact

Proprioception

- Position- Intact bilaterally
- Vibration- Intact bilaterally
- Stereognosis: Can be able to recognize objects
- Graphesthesia: Affected in right side normal in left side
- Two-point discrimination: Not able to recognize in right half of the body

Motor System**Muscle bulk**

Muscle bulk	Right	Left
Mid-calf	28cm	28cm
Mid-thigh	39cm	40cm
Mid-arm	24cm	25cm

Muscle tone

- Right upper limb: Hypertonic clasp knife spasticity
- Left upper limb: Normotonic
- Right lower limb: Hypertonic clasp knife spasticity
- Left lower limb: Normotonic

Muscle power

UL	3/5	5/5
LL	4/5	5/5

- Involuntary movement: Absent
- Co-ordination:

Test	
Romberg's test	Couldn't elicit (as patient was unable to stand)
Finger -nose test	Not able to perform
Heel -shin test	Not able to perform

Reflexes**Superficial reflexes**

- Corneal reflex- Intact
- Abdominal reflex- Absent
- Plantar reflex- Extension of great toe in right lower limb

Deep reflexes

- Biceps, Triceps, supinator, knee jerk, ankle jerk- all reflexes are 4+ in right side and 2+ in left side

Spine examination**Inspection**

- Gait: Unable to walk
- Spine curvature: Normal curvature maintained
- visible scar swelling discoloration: Absent

Palpation

- Tenderness: Absent



Movements

- Flexion, extension and lateral rotation- Not possible

Investigations

FBS - 149mg/dl

PPBS- 206mg/dl

Urine routine- under normal limits

CT Brain- Impression dated on 30/11/21 reveals no significant neuroparenchyma abnormalities detected

MRI brain plain- Impression dated on 1/12/21 reveals mild diffuse cerebral atrophy, no MRI c/o acute infracts/ hemorrhage/mass/ aneurysm.

Ashtavidha Pareeksha

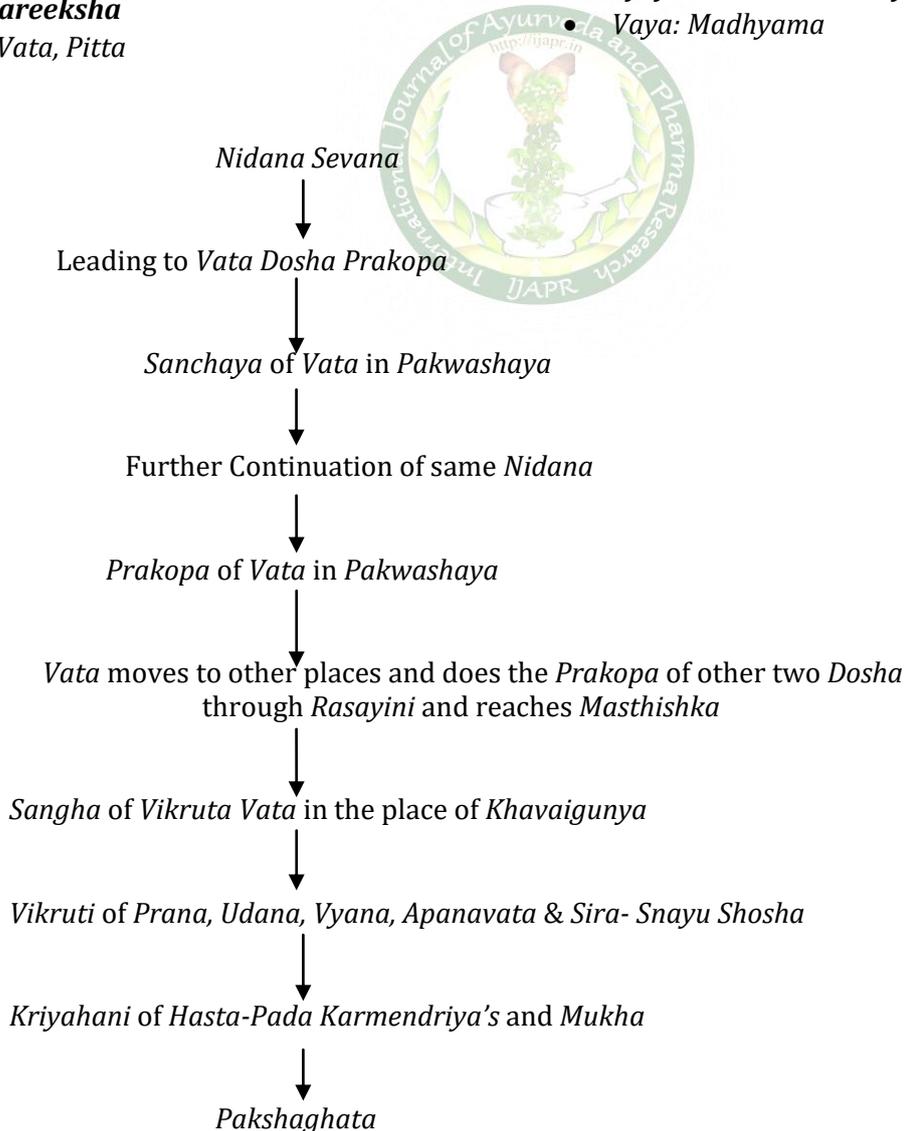
- *Nadi*: 74bpm
- *Mala*: stools were regular before, now since 5days did not pass stools, only after bats passed.
- *Mutra*: 4-5 times/day and 1-2 times/night
- *Jihwa*: *Alipta*
- *Shabda*: Slurred speech
- *Sparsha*: *Anushna sheeta*
- *Drik*: Double vision present
- *Akruti*: *Madhyama*

Dashavidha Pareeksha

- *Prakruti*: *Vata, Pitta*
- *Vikruti*

Samprapti

- *Hetu: Aharaja*: *Ruksha pradhana ahara sevana* such as *Nishpava, Chanaka, Kalaya, Mudga, Masura, Chapati (dry), Katu rasa pradhana ahara sevana*
- *Viharaja*: Excessive travelling, excess lifting of weight
- *Manasika*: *Chinta, shoka*
- *Dosha*: *Vata*
- *Dushya*: *Rasa, Rakta, Mamsa, Medo dhatu, Sira* and *Snayu*
- *Prakruti*: *Pitta, Vata*
- *Desha*: *Sadharana*
- *Kala*: *Hemanta*
- *Bala*: *Madhyama*
- *Sara*: *Madhyama*
- *Samhanana*: *Madhyama*
- *Pramana*: *Deergha - 172cm, Bhara - 60kg*
- *Sathmya*: *Madhyama*
- *Satwa*: *Madhyama*
- *Ahara shakti*:
- *Abhyavarana shakti*: *Madhyama*
- *Jarana shakti*: *Madhyama*
- *Vyayama Shakti*: *Madhyama*
- *Vaya*: *Madhyama*



Samprapti Ghataka

- *Dosha: Vata*
- *Dushya: Rasa, Rakta, Mamsa, Medo dhatu, Sira and Snayu*
- *Agni: Jataragni and Dhatwagni*
- *Srotas: Rasavaha, Raktavaha, Mamsavaha, Medovaha, Vatavaha*
- *Srotodushti Prakara: Sangha*
- *Udbhava sthana: Pakwashaya*
- *Sanchara sthana: Rasayini's*
- *Vyakta sthana: Dakshina paksha*
- *Roga marga: Madhyama*
- *Vyadhi swbhava: Ashukari*

Differential Diagnosis

Disease	Lakshana	Inclusion	Exclusion
<i>Ardita</i> [5]	<i>Ardha mukha sankocha, Vakrata of Nasa, Bhru, Lalata, Akshi, Hanu, Stabda netrata, Deena, Samutshipta, Danta Chalana, Sravana badha, Pada, Hasta, Akshi, Janga uru, Shanka Shravana, Ganda ruk, Vak sangha, Netradeenam vikruti</i>	Deviation of <i>Asya</i> to one side, <i>Vaksthamba, Netradeenam vikruthi</i>	All other symptoms are absent
<i>Sarvanga roga</i> [6]	<i>Vata prakopa in Sarva deha leads to Hasta pada sankocha</i>	<i>Sankocha of Hasta and Pada of right side of the body</i>	All the four limbs are not affected
<i>Asthimajagata vata</i> [7]	<i>Bheda of Asthi and Parvas, Sandhi shoola, Balamamsa kshaya, Aswapna, Ruk</i>	<i>Balakshaya, Aswapna</i>	<i>Bheda of Asthi and Parva, Sandhi shoola</i>
<i>Pakshaghata</i> [8]	<i>Cheshta nivritti of Ardha shareera, Ruja, Vakstambha</i>	<i>Cheshta nivritti of Ardha shareera, Vakstambha</i>	

Diagnosis based on Anatomical location

Sign	UMN	LMN	Extra pyramidal	Cerebellar
Power	Weakness	Weak	No weakness	No weakness
Waisting and atrophy	Absent	Present after an interval	None	none
Fasiculation	None	Present after an interval	None	None
Tone	Spasticity	Flaccidity	Rigidity	Normal/reduced
Deep tendon reflexes	Exaggerated	Reduced/ absent	Normal	Normal/pendular
Superficial reflexes	Lost	Lost	Normal	Normal
Plantar response	Extensor	Flexor	Flexor	Flexor
Coordination	Reduced due to weakness	Reduced due to weakness	Normal but slow	Impaired

Cortical	Sub cortical	Brain stem
<ul style="list-style-type: none"> • Monoplegia/ Contralateral hemiplegia • Speech disturbance • Jacksonian convulsions and headache • Cortical type of sensory loss 	<ul style="list-style-type: none"> • Monoplegia/ Contralateral hemiplegia • Speech disturbance • Loss of tactile localization and discrimination 	<ul style="list-style-type: none"> • Vertigo • Nausea • Vomiting • Crossed hemiplegia • Brainstem syndrome • Horner's syndrome • Cerebellar involvement <p>Pons</p> <ul style="list-style-type: none"> • Deep coma, Pin point pupil, hyperpyrexia, decortical rigidity, Absence of lateral movement of eye on head turning. <p>Mid brain and medulla</p> <ul style="list-style-type: none"> • Loss of consciousness, • Quadriplegia • Cheyne stroke breathing • Decerebrate rigidity

Diagnosis based on type

	Haemorrhage	Infarction
Onset	Sudden	Slowly / sudden
Precipitating factor	During exertion	During sleep / exertion
Headache	Severe	Less/ absent
Vomiting	common	Less/absent
Convulsion	Absent	Common/ rare
Uncontiousness	common	Variable/rare
Neck stiffness	May present	Absent
Blood pressure	High	May be high/ normal
Pulse	Low	Normal / irregular
Shifting haemiplagia	Never	Never / may be present
Chyne stroke breathing	Usually present	Absent

Type of Infarction

- Thrombus
- Emboli
- Lacunar infarction

Based on artery involved

- Anterior cerebral artery
- Posterior cerebral artery
- Mid cerebral artery

Diagnosis based on progression of the disease.

- Transient ischemic attack (TIA).
- Stroke in evolution
- Completed stroke
- Reversible ischemic neurological deficit (RIND)
- Partial non-progressive stroke (PNS)

Diagnosis

Dakshina Parshva Pakshaghata in terms of CVD with right sided hemiplegia due to ischemia (possible multiple lacunar infarction) in subcortical region involving MCA.

Chikitsa Given**Phase 1**

Date	Treatment	Observations
4/12/21 to 7/12/21	<i>Sarvanga Abhyanga</i> with <i>Ashwagandha Bala Lakshadi Taila + Kayatirumeni Taila</i> F/B <i>Sarvanga Dashamoola Sidda Nadi Sweda Kalabasti</i> Orally 1. <i>Suvarna Sameerapannaga Rasa 1-0-1</i> (B/F) 2. <i>Vidaryadi Kashaya + Ashtavarga Kashaya + Balarishta</i> Each 10ml TID With equal quantity of Water (A/F) 3. <i>Cap Palsineuron 2-0-2</i> (A/F)	<ul style="list-style-type: none"> • Difficulty to walk • Weakness of right LL & UL persists • Watery eye (right side) reduced by 60% • Numbness in B/L UL & LL reduced by 40% • Deviation of angle of mouth reduced • Dribbling of saliva reduced • Improved vision

Phase 2

Date	Treatment	Observations
8/12/21 to 11/12/21	- <i>Sarvanga Abhyanga</i> with <i>Ashwagandha Bala Lakshadi Taila + Kayatirumeni Taila</i> F/B <i>Sarvanga Dashamoola Sidda Nadi Sweda</i> - <i>Sarvanga Shashtika Shali Pinda Sweda</i> - <i>Kalabasti</i> Orally 1. <i>Suvarna Sameerapannaga Rasa 1-0-1</i> (B/F) 2. <i>Vidaryadi Kashaya + Ashtavarga Kashaya + Balarishta</i> Each 10ml TID With equal quantity of Water (A/F) 3. <i>Cap Palsineuron 2-0-2</i> (A/F)	<ul style="list-style-type: none"> • Weakness of right LL & UL reduced more than 50% • Watery eye (right side) reduced by 90% • Numbness in B/L UL & LL reduced by 60% • Deviation of angle of mouth reduced upto 80% • Dribbling of saliva reduced completely • Pt can walk with the help of walker • Body Pain + • Sleep improved • Diplopia reduced completely by 6th day of treatment

Basti Ingredients

- *Anuvasana* with *Sahacharadi Mezbugupaka 30ml + Dhanwantaram Mezbugupaka Taila 30ml*
- *Niruha* with
- *Madhu* – 60ml
- *Saindhava* – 10gm
- *Dhanwantara taila* = 75ml
- *Ashwagandha churna* 15gm
- *Erandamoola + Balamoola Kashaya* – 300ml

Date	4/12/21	5/12/21	6/12/21	7/12/21	8/12/21	9/12/21	10/12/21	11/12/21
Morning	A	N	N	N	N	N	N	A
Evening		A	A	A	A	A	A	A

Advice on Discharge

- *Dhanwantara kashaya + Sahacharadi kashaya + Balarishta* each 10ml TID with equal quantity of water (A/F)
- *Ekangaveera rasa 2 BD* (A/F) x 1month
- Numbness in B/L UL & LL reduced completely
- Deviation of angle of mouth reduced completely
- Dribbling of saliva reduced completely
- Pt can walk comfortably without any support
- Body Pain reduced completely
- Sleep normalized

Follow up on 15/01/2022

- Weakness of right UL & LL reduced more than 95%
- Watery eye (right side) reduced completely

Patient current status dated on 05/05/2022

Pt can do his routine activity and continue working as driver.

DISCUSSION

Discussion on Disease

- *Pakshaghata* is one such disease with predominant *Karmakshaya Lakshanas* due to which the person will lose his independence in doing all his routine work, he even lose his confidence in the society and completely depended on other people which will affect both *Shareera* as well as *Manas* hence treatment of this disease becomes very important to increase the quality of life.
- In our classics more importance is given to *Vatavyadhi* because this is more *Balishta*, few of them are *Ashukari*, they are more in number, *Dussadhya* for *Chikitsa*, *Vishishta Chikitsa* is necessary, few of them even need the immediate attention and treatment which include *Pakshaghata* also. Hence separate chapter is described for the same.

Discussion on the Diagnosis of the Disease

- As the diagnosis is already drawn based on certain criteria which is explained above and concluded possibly as *Dakshina Parshva Pakshaghata* in terms of CVD with right sided hemiplegia due to ischemia (possible multiple lacunar infarction) in subcortical region involving MCA where the possible pathology for lacunar infarcts is mainly due to Lipohyalinosis due to HTN/DM which causes the fibrinoid deposition in the walls of artery leads to narrowing of lumen of artery which will reduce the blood supply and oxygen carrying capacity. This further leads to fibrinoid necrosis causing ischemia with leakage of plasma proteins.
- Since there is no complete blockage of artery rather narrowing is seen with the leakage of plasma proteins this can be considered as *Kevala Vataja Dhatukshayajanya Pakshaghata* rather considering as *Avarajanya* hence treatment protocol for *Dhatushayajana* is adopted.

Discussion on Selection of Basti Chikitsa

- As *Basti* is considered as *Arda Chikitsa* in *Kayachhikitsa Vyadhi* and counteracts *Vata dosha* this is selected instead of *Virechana*. This is best for *Sadhyobalajanarthas* as the patient had reduced *Bala* to undergo for *Virechana Karma*.
- Considering the *Bala*, affordability, willing for quick recovery, busy lifestyle etc factors the *Kala Basti* is chosen as the disease is *Gambeera* with *Upachita Dhatu*. Hence the *Basti* is modified and given in 8 days of duration which is widely practiced now days and even getting better result.
- As per Sushrutacharya explanation if the *Bhishak* is very well versed in the Science they have the

complete liberty to try hundreds of permutation and combination of *Basti Yogas* according to his logic and interpretation on the nature of medicine and disease hence *Kalabasti* pattern of *Basti* are modified and adopted in the duration of 8 days.

Discussion on Mode of Action of Treatment Adopted

- As the *Chikitsasutra* of *Pakshaghata* explains *Snehanam Swedanam* and *Virechanam* hence in the patient *Sarvanga Abhyanga* with *Ashwagandha Bala Lakshadi Taila*, *Kayatirumeni Taila* and *Sarvanga Dashamoola Sidda Nadisweda* is adopted where it acts on *Brajakapitta* and improves the circulation. Later it absorbs the *Veerya* present in *Abhyanga Oushadi* and few amount of in it. The absorbed *Sneha* will help to increase *Snehatwa* in the *Sira* and *Snayu* which intern helps to reduce the *Sira Snayu Shosha* and helps to increase the *Bala* in affected area. The *Swedana karma* does the *Paka* of *Sneha* which is absorbed and helps for *Deha Saathveekarana*. Hence these two will help to do *Vilayana* of the *Sangha* present in *Shiras* and bring them to *Koshta*.
- *Shashtikashali Pinda Sweda* is a kind of *Snehayukta Sweda* which also acts on the same principles mentioned above.
- For *Anuvasanartha Sahacharadi Mezugupakam* and *Dhanwantara Melagupakam (Taila)* were selected. The *Sahacharadi Mezugupakam* contains *Dashamoola*, *Kushta Devadaru* etc are mainly *Vatahara*. Acharya Vagbhata in the *Phala Shruti* told *Hanti Vaatan*. The main ingredient of this *Taila* is *Sahachara* which is told well in the disorders where there is *Karma Kshaya* of *Paada* are seen because it has the potency to rejuvenate the nerves helps the patient to walk. Hence it acts at its best in neurological cases. *Dhanwantara Melagupakam* contains drugs like *Triphala*, *Ashwagandha*, *Shatavari*, rock salt, *Ksheera* etc which all acts as *Vatahara* (corrects *Apanavata Dushti* also). Hence oil is selected.
- In *Pakshaghata* the main *Anuvasana Basti* should be in the form of *Taila*, due to its *Snigdha Guna* it acts on *Vata*. With the help of its *Snigdha Guna* it nourishes the *Meda* and *Majja Sneha*. Through *Meda Sneha Sira* and *Snayu* which is getting nourished by *Medo Dhatu* will be nourished properly due to which the *Shoshana* of *Sira-Snayu* which is seen in the *Samprapti* of *Pakshaghata* will be reduced. Apart from this as we know *Pakwashaya* is the *Pradhana Vata Sthana* it counters the morbid *Vata* and helps in the formation of *Shudda Vata*.
- *Balamoola* is an analgesic, anti-inflammatory, antioxidant in nature. *Bala* possess *Madhura Rasa*, *Laghu*, *Snigdha*, *Picchila Guna*, *Sheeta Veerya*, *Vatahara*, *Balya*, *Brahmana*. In *Pakshaghata* specific

Asthapana Basti is not mentioned in our classics Acharyas had given clue of incorporating the drugs which are *Vata hara* in nature. Through *Snehana Karma* gets *Vilayana*, from *Swedana* travel to *Koshta* and eliminates the materials which are responsible for *Sangha*. Apart from that due to its *Vatahara Guna* it prevents the recurrent obstructions in *Masthishka* as well as acts as *Vata Shamaka*.

- The conglomeration of all these *Dravyas* in *Basti* acts as great *Vatahara* and *Balya*. The *Basti* has showed its action at the level of *Masthishka*. Thus it helped the patient for speedy recovery.

CONCLUSION

If *Pakshaghata* is newly origin after stabilizing the patient along with *Snehana* and *Swedana* if *Basti Karma* is adopted taking into consideration of type of *Pakshaghata* and *Bala* of the patient who is not fit for *Virechana karma* we can definitely find promising results which includes the improvements in the *Lakshanas* seen in the disease. *Basti karma* not only does the *Srotoshuddi* this also does the *Panchavata Shamana*, *Dhatuposhana*, *Rasayana*, *Sira Snayu Poshana* and *Balajanarthakara*. In this patient recovery was seen within a month, which is suggestive of quicker beneficial effects of Ayurvedic treatment. Thus it can be concluded that Ayurvedic management is clinically highly effective in the treatment of CVD like *Pakshaghata*.

REFERENCES

1. Vaidya Jadavji Trikamji Acharya. Sushruta Samhita, Nibandha sangraha of Dalhanacharya commentary. Varanasi. Chaukhambha surabharathi prakashan; 2008. p-144
2. Chugh C. Acute Ischemic Stroke: Management Approach. Indian Journal of Critical Care Med 2019; 23(Suppl 2): S140-S146. P-01
3. Michael brainin, wolf-dieter heiss. Common causes of ischemic stroke. Text book of stroke medicine. Third edition. United States of America. Cambridge University Press; 2010. P-28
4. Michael brainin, wolf-dieter heiss. Common causes of ischemic stroke. Text book of stroke medicine. Third edition. United States of America. Cambridge University Press; 2010. P-35
5. Vaidya Yadavji Trikamji Acharya. Charaka Samhita, Ayurveda Deepika commentary of Chakrapani. Varanasi. Chaukhambha surabharathi prakashan; 2008. P-618
6. Vaidya Yadavji Trikamji Acharya. Charaka Samhita, Ayurveda Deepika commentary of Chakrapani. Varanasi. Chaukhambha surabharathi prakashan; 2008. P-619
7. Vaidya Yadavji Trikamji Acharya. Charaka Samhita, Ayurveda Deepika commentary of Chakrapani. Varanasi. Chaukhambha surabharathi prakashan; 2008. P-617
8. Vaidya Yadavji Trikamji Acharya. Charaka Samhita, Ayurveda Deepika commentary of Chakrapani. Varanasi. Chaukhambha surabharathi prakashan; 2008. P-619

Cite this article as:

Sahana Krishna, C.V Rajashekhar, Nayan J. Ischemic Stroke of Brain Management Approach through Ayurveda - A Single Case Study. International Journal of Ayurveda and Pharma Research. 2022;10(6):54-63.

<https://doi.org/10.47070/ijapr.v10i6.2391>

Source of support: Nil, Conflict of interest: None Declared

*Address for correspondence

Dr. Sahana Krishna

MD(Ayu) Scholar,
Department of Kayachikitsa,
Sri Kalabyraveswara Swamy
Ayurvedic Medical College, Hospital
and Research Centre, Bangalore.

Email: drsahanamallur@gmail.com

Ph no: 9986777578

Disclaimer: IJAPR is solely owned by Mahadev Publications - dedicated to publish quality research, while every effort has been taken to verify the accuracy of the content published in our Journal. IJAPR cannot accept any responsibility or liability for the articles content which are published. The views expressed in articles by our contributing authors are not necessarily those of IJAPR editor or editorial board members.