



An Integrated Approach In The Management Of Haemorrhagic Stroke W.S.R. *Pakshaghata* :A Case Report

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Abstract:

WHO defines stroke as a "neurological deficit of cerebrovascular cause that persists beyond 24 hours or is interrupted by death within 24 hours". There are two main types of stroke: ischemic, due to lack of blood flow, and hemorrhagic, due to bleeding. Both cause parts of the brain to stop functioning properly. Cerebrovascular accident (CVA) is the medical term for stroke. Stroke is a major global public health problem. According to the Global Burden of Diseases (GBD) study in 1990, stroke was the second leading cause of death worldwide. With the rising proportion of mortality, stroke still remains the second leading cause of death worldwide. The present case study elaborates the treatment line and observations made in a 65 year old male presented to OPD in a phase of significant sensory deficit. He had an episode of ataxia at home with sudden power loss in left upper and lower limbs; as narrated by relatives. Thus an MRI imaging of brain was done S/O acute intraparenchymal haematoma involving the right thalamo-capsular region with associated mild surrounding perilesional oedema and mass effect. Contiguous intraventricular extension of the haematoma within the bilateral lateral ventricle and third ventricle. The Ayurvedic diagnosis of *Vama Pakshaghata* was done and managed with *Abhyanga*, *Shastika Shali Pinda Sweda* and *yogabastikrama*. Two assessments were made before and after treatment using the National Institute of Health Stroke Scale (NIHSS). The patient got significant improvement in the signs and symptoms and improvement in movements within 12 days. The results were remarkably encouraging.

Keywords: Stroke, Aneurysm, Hemorrhagic, *Pakshaghata*, *Panchakarma* etc.

Introduction:

The term *Pakshaghata* literally means paralysis of one half of the body, here impairment of *Karmendriyas*, *Gnyanendriyas* and *Manas* are seen. *Gnyanendriyas* are considered as part of the sensory system and *Karmendriyas* are considered a part of the motor system. *Pakshaghata* is a *Vatavyadhi* of *Nanatmaja* variety caused either due to *Dhatukshaya* or *Marga Avarana* explained in different *Ayurveda Samhitas*. The features of *Pakshaghata* are *Chestahani* (impaired motor activity), *Ruja* (pain), *Vakstambha* (slurring of speech), and *Hasta Pada Samkocha* (rigidity of limbs). *Sandhi Bandhavimoksha* (weakness of joints), *Vakvakratha* (mouth deviation), *Sphurana* of *Jihva* (fasciculation of the tongue). *Pakshaghata* can be correlated with Hemiplegia of varied aetiology.

Stroke is defined as a sudden impairment or loss of consciousness, and voluntary motion that is caused by rupture or obstruction (as by a clot) of a blood vessel supplying the brain, and is accompanied by permanent damage of brain tissue. A stroke occurs when the flow of blood to part of the brain is cut off or significantly reduced..

Strokes can be classified into two major categories: ischemic and hemorrhagic. Ischemic strokes are caused by interruption of the blood supply to the brain, while hemorrhagic strokes result from the rupture of a blood vessel or an abnormal vascular structure. About 87% of strokes are ischemic, the rest being hemorrhagic. *Margavrodhajanya samprapti* of intracerebral hemorrhage leads to arrest of blood supply and thus ultimately results into stroke. There are two main types of hemorrhagic stroke:

A) Intracerebral hemorrhage, which is basically bleeding within the brain itself (when an artery in the brain bursts, flooding the surrounding tissue with blood), due to either intraparenchymal hemorrhage (bleeding within the brain tissue) or intraventricular hemorrhage (bleeding within the brain's ventricular system).

B) Subarachnoid hemorrhage, which is basically bleeding that occurs outside of the brain tissue but still within the skull, and precisely between the arachnoid mater and pia mater (the delicate innermost layer of the three layers of the meninges that surround the brain).

There are two possible causes of a ruptured blood vessel in the brain. The most common cause is an aneurysm. An aneurysm occurs when a section of a blood vessel becomes enlarged from chronic and dangerously high blood pressure or when a blood vessel wall is weak, which is usually congenital. This ballooning leads to thinning of the vessel wall, and ultimately to a rupture.

Panchakarma is one of the important treatment modalities of *Ayurveda*. It is very useful in treating almost all neurological diseases i.e., *Vatavyadhi*. Here is a case of Haemorrhagic stroke treated with *Panchakarma* therapies effectively.

CASE presentation:

A 65 year old male patient presented in the OPD of Sane Guruji Arogya Kendra, complaining of tingling sensation and heaviness in left upper and lower limbs since yesterday night around 11.30 pm. He had deviation of angle of mouth towards right accompanied by ataxia. Also patient experiencing generalized weakness and excessive sleep from morning.

The patient has been experiencing these complaints from yesterday night. For which, he consulted today morning at local clinic. On examination, BP was found to be raised, hence patient referred to our hospital for further management.

He had no history of any co-morbidities or any other medical illnesses. There was no history of any known drug or food allergies and had no kind of addictions. Also, there was no history of any surgical or family illness.

CLINICAL FINDINGS:General Examination

BP - 190/100mm Hg

PR - 88 bpm

RR - 24/min

Height - 168 cm

Weight - 58 kgs

RS-AEBE & clear

CVS- S1S2 normal

CNS:Conscious and oriented

SpO2:98 %on room air

Ashta Sthana Pariksha

Nadi - 88/bpm

Mala - Once/day

Mutra - 3-4/1-2 times D/N

Jihva - Alipta

Shabda - Prakrutha

Drik - Prakrutha

Akriti - Madhyama

Sparsha - Prakrutha

Patient had *Vata Pitta* pre dominance *Prakriti* with *Madhyama Sara* (medium strength), *Madhyam Samhanana* (medium built), *Sama Pramana* (proportionate body), *Madhyama Satmya* (medium homologation), *Madhayam Satva* (medium mental strength), *Madhyam Vyayamshakti* (medium capability to carry on physical activities), *Madhyama Ahara Shakti* (medium food intake capacity) and *Uttama Jaranashakti* (optimum digestive power).

MRI BRAIN(STROKE PROTOCOL):

Acute intraparenchymal haematoma involving the right thalamocapsular region with associated mild surrounding perilesional oedema. Intraventricular hemorrhage within the body of right lateral ventricle with minimal dependent hemorrhage within the occipital horns of both lateral ventricle.Chronic lacunar infarcts in left posterior parietal periventricular matter and right hemipons. MR angiography within normal limits. No e/o significant stenosis and thrombosis.

Laboratory investigations Values

Hematological investigations

WBC	8450 /uL
Neutrophils (%)	74.18
Lymphocytes (%)	14.17
Monocytes (%)	8.19
Eosinophils (%)	3.26
Basophils (%)	0.2
Haemoglobin (g/dL)	9.4
Platelets (lac/uL)	223x10 ³
MCV(fl)	65.4

Biochemical investigations

Blood urea (mg %)	15.5
Serum creatinine (mg/dL)	0.52

Liver function test

SGOT (IU/L)	26.3
SGPT (IU/)	13.5
Alkaline phosphate (IU/L)	172.1.
Total protein(g/dl)	6.22
Albumin(g/dl)	3.55
globulin(g/dl)	1.33
Total bilirubin(mg/dl)	0.47
Direct bilirubin(mg/dl)	0.07
Indirect bilirubin(mg/dl)	0.4

Serum

Electrolytes:

Sodium(mmol/L)	141.5
Potassium (mmol/L)	3.76
Ionic Calcium(mmol/L)	1.03
I.N.R.	1.31

USG (Abdomen and Pelvis) – NAD

ECG – Sinus rhythm

Chest x-ray-NAD

2D ECHO – Moderate concentric LVH. No RWMA. EF-60%. No PAH.

Urine analysis (routine and microscopic) Within limits

Serology - Negative

CNS Examination:

Function.

Orientation - Well oriented to time, place and person.

Cooperative

Memory - Immediate - Intact, Recent - Intact, Remote - Intact

Higher Mental

Consciousness - Altered.

Behaviour -

Attentiveness -Conscious

Cranial Nerve Examination

Cranial nerve examination - Intact.

Examination - Intact.

1. Tropical changes - No Pressure sores.

hypertrophy - Absent.

irritability - Absent.

Absent.

6. Muscle power: (BT)

	Right	Left
Upper limb	5/5	3/5
Lower limb	5/5	4/5

7. Muscle tone (BT)

Right limb	Left limb
normotonic	normotonic

8. Reflexes

	Right limb	Left limb
Bicep's	Normal	Exagerrated
Tricep's	Normal	Normal
Supinator	Normal	Normal
Knee Jerk	Normal	Exagerrated
Ankle Jerk	Normal	Exagerrated
Babinski sign	Normal	Positive

9. Co-ordination test

Finger nose test - Not possible in left hand..

Not possible in left leg.

hand..

Gait - Ataxia

Sensory System

Motor System Examination

2. Atrophy /

3. Fasciculation and

4. Contraction and Contracture -

5. Involuntary movements - Absent.

Knee heal test -

Dysdiadochokinesia- Not possible in the left

10. Clonus - Absent.

11.NIHSS SCORE SCALE ASSESSMENT:

SN	NIH SCALE	RANGE OF SCORE	BEFORE TREATMENT	AFTER TREATMENT
1a	Level of consciousness	0 to 2	1	0
1b	LOC questions	0 to 2	0	0
1c	LOC commands	0 to 2	0	0
2	Best gaze	0 to 2	0	0
3	Visual	0 to 3	1	0
4	Facial palsy	0 to 3	2	0
5	Motor arm	0 to 4	3	0
6	Motor leg	0 to 4	2	1
7	Limb ataxia	0 to 2	1	1
8	Sensory	0 to 2	1	0
9	Best language	0 to 3	0	0
10	Dysarthria	0 to 2	1	0
11	Extinction and inattention	0 to 2	0	0
	Total	42	12	2

TREATMENT: Modern Medicine Chart

Sr.No.	Medicine	Dose	Dose	Time
1)	Inj. Levetiracetam	500mg	IV	BDx 5 days
2)	Tab.Levitiracetam	500mg	P.O.	BD
3)	Inj. Monocef	1gm	IV	BDx 5days
4)	Inj. Mannitol 20%	100mg	IV	TDS X 2 DAYS BD X 2DAYS OD X 2DAYS
5)	Inj. Omez	40mg	IV	BDx 5 days
6)	Tab.Telma AM	(40/5 mg)	P.O.	1 OD

AYURVEDIC MEDICINE: Abhyantara Chikitsa

Sr.No.	Medicine	Dose	Dose	Time
1)	<i>Ekangveer Rasa</i>	250mg	P.O.with <i>Koshna jala</i>	TDS (After meal)
2)	<i>Jivhadi Kashaya</i>	20ml	P.O. with <i>Koshna jala</i>	BD(After meal)
3)	<i>Vishtinduka Vati</i>	250mg	P.O. with <i>Koshna jala</i>	OD (After breakfast)
4)	<i>Gandharvahastadi taila</i>	10 ml	P.O. with milk before food at night	before food at night

Bahya-Chikitsa:

Sr.No.	Upakrama	Medicine	Duration
1)	<i>Sarvanga Abhyanga</i>	<i>Maha Masha Taila</i>	8 days
2)	<i>Sarvanga Sweda</i>	<i>Shasti shali pinda sweda</i>	8 days
3)	<i>Anuvasana Basti</i>	<i>Sahachara Taila</i>	5 days
4)	<i>Niruha Basti</i>	<i>Erand-dhashmooladi kwatha</i>	3 days

DISCUSSION:

Acharya Charaka has described *Pakshaghata* in *Vata Nanatmaja Vyadhi* and Acharya Sushruta has mentioned in *Mahavatvyadhi* and also Acharya Charaka & Sushruta has given treatment protocol of *Pakshaghata* which is *Snehana*, *Swedana*, *Mridu Virechana*, *Basti Karma*. Accordingly treatment was given in this patient.

Treatment was started with *Gandharvahastadi Taila* internally along with *Ekangveera rasa* and *Vishtindukadi vati*. *Ekangveera Rasa* has ability to pacifying vitiated *Vata Dosha* as it is having *Madhura Rasa*, *Snigdha Guna*, *Ushna Veerya* and *Madhura Vipaka*. *Gandharvahastadi Taila* is a *Snigdha Anulomaka* which balances *Tridosha*'s in the body specially *Vata*. It can be considered effective in reducing the brain edema also. After 10 days of administration of *Gandharvahastadi Taila*, the stiffness and heaviness of left half of the body was reduced. *Vishtinduk Vati* contains a single ingredient purified *Kupilu* (*strychnos nux-vomica*). It acts on nerves, senses and muscles and thus helps in reducing *Vata*. As mentioned earlier, haemorrhage causes *Strotavrodha*. *Vishtinduk Vati* also helps in reducing *Strotavrodha*.

Ingredients of *Jivhadi Kashaya* are mainly *Gojivha*, *Vacha*, *Brahmi* and *Yashti*. It has *Medhya gunas* and especially useful in neurological disorders. The *Guru*, *Madhura* and *Sukshma gunas* have significant efficacy in *Vata Shamana* and indicated in *Pakshaghata* and *Ardita* and is *Balya*. Significant results in memory, mood and motor functions were also observed during the time of its administration.

The treatment protocol of *Pakshaghata* which was followed is 'Swedanam Snehasanyuktam Pakshaghate Virechanam.' I.e. *Dosha Pachana*, *Vata Shamana* and

later *Brimhana* respectively. Initially the patient was treated with *abhyantara aushadhi* for *dosha pachana*, followed by *Sarvanga Abhyanga* with *Maha Masha Taila*. *Sarvanga swedana* done with *Shastika Shali Pinda Sweda* and *bala Taila*. *Shasti Shali Pinda Sweda* is a *Santarpana/Brimhana* therapy which nourishes the body and gives *Bala*. *Bala Taila* is *Snigdha, Vatapittashamaka & Balya*.

Anuvasana Basti with *Sahachara taila* was started after *Koshta Shodhana* with *Gandharvhastadi taila* which is commonly used to treat *Vata Roga*. It is *Brihmana, Snehana* and *Kupita Marga Shodhaka*. Initially the patient was not able to even move the left limb but after treatment for 12 days, he was able to walk independently for a long distance without support.

CONCLUSION:

This case study demonstrates the successful management of a case of *Pakshaghata* using integrated treatment. There was a significant improvement in all assessments of NIHSS criteria, the total score reduced from 12 to 2. Initially the patient came in OPD in a wheelchair and later at the time of discharge he was able to walk independently without support. Significant improvement in muscle power, muscle tone and movement were observed. On the basis of results observed in this case; it can be said that, integrated treatment along with *Panchakarma* are effective in the management of *Pakshaghata*. These approaches are safe and effective. This case report serves as a lead for further researches in the management of haemorrhagic stroke w.s.r. to *Pakshaghata*.

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