

# **Pakshaghata (Hemiparesis) management - Cerebral Vascular Event (CVE) Through Panchakarma, Shamana treatment and Physiotherapy - A Case Report**

## **Case Report**

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## **Abstract**

**Background:** Cerebro-vascular complaint is the third most common cause of death and severe physical disability in high-income countries after cancers and ischemic heart complaint. According to ICMR, stroke is the 4th leading cause of death and the 5th leading cause of disability acclimated lifetime (DALY). Stroke is the most common clinical incarnation of Cerebro-vascular complaint and results in brain dysfunction due to focal ischemia or Haemorrhage. **Material & Methods:** An 83 years old male K/H/O HTN was diagnosed with an *Avaranajanya Pakshaghata* with a clinical point. There was a loss of function in the left lower and upper limbs, not able to stand without proper support and weakness of the left upper and lower limb. He was treated with *Shaman Chikitsa* followed by *Shodhan Chikitsa* as *Sarvanaga Abhyanga*, *Marsha Nasya*, *Shashti Shali Pinda Swedana*, *Shirodhara*, *Anuvasana Basti*, and *Niruha Basti* for 15 days. **Result:** The patient was assessed with gold standard stroke parameters, i.e., Barthel Index & National Institute of Health Stroke Scale (NIH-SS), in which scores were turned from 15 & 21 to 65 & 9, respectively. Moreover, significant changes and improvements were observed in clinical features of *Pakshaghata* before and after treatment. **Conclusion:** The first line of Treatment was the elimination of the *Aama* involvement from Chief Complaints. It was done by *Deepana- Pachana* medicine as *Shaman Chikitsa*. After that, the *Shodhan Chikitsa* was started by gaining the *Nirama* condition of *Doshas*. A significant improvement was observed by combining the *Shaman* and *Shodhan Chikitsa* strategically.

**Key Words:** *Pakshaghata*, *Shaman Chikitsa*, *Marsha Nasya*, *Shashti Shali Pinda Swedana*, *Shirodhara*, *Anuvasana Basti*, *Niruha Basti*.

## **Introduction**

Of the 180–three hundred sufferers in step with one hundred populace presenting yearly with a stroke, 85% maintain a cerebral infarction due to insufficient blood float to a part of the brain. The maximum of the rest has intra-cerebral bleeding [1]. About 20% of infarctions are because of embolism from the heart. Similarly, 20% are because of thrombosis in situ resulting from an intrinsic disorder of small perforating vessels (lenticulostriate arteries), generating lacunar infarctions[2]. In *Ayurveda*, the Hemiparesis is correlated to *Pakshaghata*. *Pakshaghata* is a *Vatavyadhi* of the *Nanatmaja* and *Mahavatavyadhi* varieties. The term *Pakshaghata* means paralysis of the half of the body. It causes the deterioration of *Karmendriyas*, *Gnyanendriyas*, and *Mana*[3]. The *Gnyanendriyas* are

considered part of the sensory system, and the *Karmendriyas* are considered part of the motor system. *Pakshaghata* can be correlated with Hemiparesis after a head injury or stroke. In India, studies estimate that prevalence of stroke varies from 116 to 163 per population a/ c to ICMR stroke is 4th commanding cause of death and 5th leading cause of disability acclimated lifetime (DALY)[4]. The most common symptoms of a stroke are sudden weakness or numbness in the face, arm, or leg, mainly on one side of the body. Other symptoms include confusion, trouble speaking, and trouble seeing with one or both eyes; Difficulty walking, dizziness, loss of balance or coordination; severe headache with no known cause; Fainting or loss of consciousness [5].

## **Patient's Information**

An 83-years-old male patient has complained of loss of function in the left lower and upper limb for six months and cannot stand without proper support. He had associated complaints of constipation with hard stools defecation, Excessive salivation in the mouth with tastelessness. He was a K/C/O of Hypertension and Hemiplegia left side with Cerebral infarction (stroke). More Details of Chief & associated complaints with duration are given in Tables 1 & 2, respectively.

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### Progress of Disease

The patient was well six months back, but he suddenly fell while working. At that time, he had a headache and a severe tingling sensation in his body. He could not move his left upper and lower limbs from that incident. There is a loss of function in the left lower and upper limbs. He was not able to stand without proper support. He was having weakness of the left upper and lower limbs. So, the patient came to *Panchakarma* OPD of MGACH & RC for better management. On BP monitoring at the previous medical facility, it was observed that he was hypertensive, and On CT diagnosis, he was diagnosed with Hemiplegia left side with Cerebral infarction (stroke).

### Patient's History

Details of the patient history are given in table no.3.

### Examination

Clinical examination and Specific Examination are depicted in table no.4

*Ashtavidha Pariksha* is shown in table no.5

### Diagnosis

#### As per Ct Scan Brain(Dated on 22-JAN-2021)

- Acute non-hemorrhagic infarct in the right temporo-occipital lobe.
- Diffuse cerebral atrophy is seen with ex-vacuo prominence of bilateral lateral and third ventricles.
- Suggesting Case of Stroke with non-hemorrhagic infarct.

#### As per Ayurveda

By correlating clinical features, finding with symptoms described in Ayurveda classics. It can be correlated with *Pakshaghata*[6]

#### Samprapti Ghataka[7]

- **Dosha-** Prana, Udana and Vyana Vayu, Sadhaka Pitta, Tarpaka Kapha
- **Dushya-** Dhatu- Rasa, Rakta, Mansa, Meda and Majja
- **Updhatu-** Sira and Snayu
- **Srotas-** Raktavaha, Medavaha, Majjavaha
- **Type of Srotodushti-** Sanga, Siragranthi and Vimarg-gamana
- **Vitiation pattern-** Khara, Ruksha and Vishada Guna of Vata, Ushna and Tikshana Guna of Pitta
- **Agni-** Jatharagni, Dhatvagnis of Rakta, Mansa, Meda and Majja
- **Site of production-** Mastishka
- **Site of manifestation-** Sarvanga / Ardhangas

### Therapeutic intervention

The line of Treatment, i.e., *Shamana & Shodhana Chikitsa*, was adopted, as shown in Table no.5 and 6, respectively.

### Observations and results (Diagnostic Assessment)

The assessment carried out before and after the Treatment on two major well-established Scales, i.e., Barthel Index and National Institute of Health Stroke Scale (NIH-SS), is depicted in tables 7 & 8. Improvement in the score of Barthel Index Scale & National Institute of Health Stroke Scale (NIH-SS) was observed which was recorded as Barthel index score increased from 15 to 65 and National Institute of Health Stroke Scale (NIH-SS) score reduced from 21 & 9 respectively. Moreover, significant changes and improvements were observed in clinical features of *Pakshaghata* before and after treatment. Before Treatment, the patient was not able to stand without support. However, he was able to stand and walk with support but could walk only few steps without support after Treatment. Significant improvement in the patient's cognitive functions are observed (image no.1.)

### Discussion

*Pakshaghata* is sort of *Vatvyadhi*. *Vata dosha* gets vitiated and occupies the *Rikta Strotas* (Empty channels) in the body. Where *Dhatu* vitiation if found then *Vatvyadhi* occurs there. An increase in the *Rukshata* (dryness) is the key factor in *Pakshaghata*[8]. In this case, we initiated treatment to counter the *Aama* condition, which is in union with Vitiated *Vata Roga*. Then after obtaining *Niraama* condition, *Vataghana* treatment was initiated as follows:

#### Role of Shamana Chikitsa-

- **Aampachak Vati-** *Aampachana, deepana*
- **Cap. Palsineuron-** It improves metabolic processes in the system and PNS, activates contractor communication, regulates blood provided within the affected area, promotes healing impact in the broken nerves the blood vessels[9]
- **Yograj Guggulu-** It has *Deepana Pachana* properties, the drugs having *Rasayana* and *Balya* property, that replace the damaged nerve tissue, and *Vata Shamaka* properties [10]
- **Punarnavadi Guggulu-** *Punarnavadi Guggulu* contains mainly *Punarnava Erandamoola, Sunthi, Guggulu, Eranda Taila, Makshika Dathu*, etc. which possesses *Vata Kaphahara Anulomaka* and *Shoolahara* property as well as anti-inflammatory, analgesic, muscle relaxant properties, and even regenerative properties which give relief from the disease[11]
- **Sarpagandha Ghan Vati-** Prominent *Rasa* of *Sarpagandhadi Ghana Vati* is *Tikta*, which will act on *Rasa, Rakta Dhatu*, and their *Srotas*. It reduces the *Ama* and there via way of means of viscosity of *Rasa* decreases which results in proper *Rasa Rakta Vikshepana*[12]
- **Chandrprabha Vati-** The home of *Dipana* (appetizer), *Rakta Prasadana* (blood purify), *Pacana* (digestant), *Ama Dosahara* (alleviates undesirable substances), *Lekhaniya* (reducing), *Medogna* (alleviates fat) will assist in lowering the *Avila*

*Mutrata* (turbidity) in urine. *Dipana* (appetizer), *Pachana* (digestant)[13]

- **Tab. Mahayograj Guggulu-** It acts in *Katigraha*, *Katishoola*, has antispasmodic action due to magnesium-based *Abhrak Bhasma*. It also contains *Guggul*, *Rajat Bhasma*, and *Triphala*, which helps in reducing tenderness, muscle pain, and tiredness[14]
- **Maharasanadi Kashayam-** *Maharasnadi Kashayam* possesses anti-inflammatory, analgesic & antioxidant activities through which it produces its anti-arthritis effects[15]
- **Gandharva Haritaki Churna-** It pacifies *Vata Doshas*, acts as *Anulomaka*, Clears bowels
- **Hingwashtak Churna-** It balances *Vata* and *Kapha dosha* like in bloating. It removes excess *Vata dosha* from abdomen and gives relief in abdominal discomfort and distention[16]

#### Shodhana:

- **Anu tail for Nasya:** To achieve the benefits of *Anu taila*, it is used best in *Nasya* form. *Nasya* is nasal insufflation of medicated Oil, Decoction, or Powder. Nasal drug delivery systems are the best drug delivery systems for diseases related to the brain and Upper part of the Sternum[17]
- **Shirodhara with Brahmi oil:** *Shirodhara* helps regulate imbalance by launching numerous neurotransmitters in the mind. *Shirodhara* also helps in neuromuscular relaxation of the mind to relieve stress, anxiety, fatigue, improved blood stress, and intellectual disorders[18]
- **Niruha Basti:** It expels the Vitiated *Doshas* from the body as it has decoction, *Saindhava*, which do *Lekhana Karma* or Scrapping with the initiation of *Lekhana Karma*. It breaks down the *Aama* and *Doshas* Union and converts *Saama* condition into *Niraam* condition[19]

#### Niruha Basti Contents

- **Dashmoola Bharad:** (Coarse Powder) is a combination of ten herbs having *Vata* pacifying effects used in conditions related to nerves, muscles, and bones. It exhibits Anti- Inflammatory, Antioxidant, and moderate Analgesic actions[20]
- **Punarnava Churna:** It pacifies *Vata* and *Kapha Doshas*. It possesses Anti-inflammatory and mild Diuretic action. It is also cardioprotective, Nephroprotective, and Lithontriptic action, Reduces Bilirubin levels also[21]
- **Musta Churana:** It balances *Kapha* and *Pitta Dosh*, It is *Grahi-* absorbent, *Deepana*, *Pachana*, *Trushnahara*, *Jantughana*, *Raktajit*, *Pittajwarahara*, *Jwaratisarahara*[22]
- **Ashwagandha Churna:** As muscle wasting is there in this case. It balances Three *Doshas*, especially *Kapha* and *Vata*, It is *Balya*, *Vaajikari*, *Vrushya*, *Rasayani*, *Pushtiprada*, *Kaasa hara*, *Anila hara*, *Vranaan hara*, *Shoph* *hara*, *Kshata hara*[23]
- **Saindhava Lavana:** It balances three *Doshas*. It is *Rochana-* improves taste, improves digestion(*Dipana-*) and possesses *Vrushya*, *Chakshushya*, *Avidaahi*, *Hrudya*, *Hikkanashana*[24]

- **Honey:** It balances *Kapha* and *Pitta Dosh*, It is *Agnideepanam*, *Varnayam*, *Svarya*, *Sukumara-* improves the softness of Skin, *Hrudya*, *Sandhaana*, *Prasadhana-* *Sookshma Marganusari*, *Pitta Shleshmahara*, *Medohara*[25]
- **Anuvasana Basti:** Finishes Dryness from the body, balances *VataDosh*, Gives relief from Obstructed channels of the body, And does *Rihanna Karma*[26].
- **Shashti Shali Pinda Swedana:** It balances all three *Doshas*. It strengthens and is wholesome in quality and stimulates digestive fire[27]. Various published studies suggested that *Basti* is an effective treatment for *Vata* disorders[28,29,30].

Physiotherapy exercises depicted in table no.7 collectively shown significant benefit increasing range of motion of knees[31], core exercises which increase strength[32], helps in maintaining body balance, strengthen the muscles of the legs, including the squads, hamstrings, glutes, and calves[33], strengthens the muscles in the legs, quadriceps, calves, and hamstring, strengthens the knee joint, strengthens the lower back[34], reinforces Quadriceps muscle and hip flexors[35], strengthens gluteus maximus, medius, minimus, and hamstrings muscles[36], increases ROM of shoulder and elbow[37], increases range of motion and flexibility of muscles. These exercises collectively showed significant benefit in increasing the range of motion of muscles and joints. Due to the union of *Aama* with *Vata dosha*. *Aam Pachana* treatment with *Shaman* medicine like *Hingwashtak Churna*, *Maharasanadi Kwath*, *Yograaj Gugullu*, *Gandharva Haritaki* was given. Then *Niruha Basti* was administered, which is having vitiated *Doshas* Scrapping activity. Then after obtaining *Nirama* Condition, *Anuvasana Basti* was administered with *Dashmoola* Oil, which has *Vata-* *ghana* properties. *Shiro-abhyanga*, *Nasya Karma*, gives magnificent results in disorders above the shoulder region, having *Balya*(strengthening) and Purification properties. *Shashti Shali Pinda Swedana* has *Shashti* Rice, Fine Powder of *Bala Churna*, bolus prepared and dipped in a hot milk mixture with *Bala Churna* in it. It strengthens muscles and has a local analgesic effect, resulting in muscle wasting because it is *Balya*. This case demonstrates a successful control of a case of *Pakshaghata* (CVE) via way of means of *Ayurveda* ideas.

#### Conclusion

The collaborative approach based on *Panchakarma*, *Shamana* treatment with physiotherapy is effective to manage *Pakshaghat* (Hemiparesis). Further trails can also be performed on this. This case demonstrates a successful control of a case of *Pakshaghata* (CVE) via way of means of *Ayurveda* ideas. There is a significant improvement in Barthel Index, National Institute of Health Stroke Scale NIH-SS, muscle nourishment, strolling without support, slurred speech, and weak points with expanded excellent lifestyles. Hence, it proves that remedy with *Ayurveda* ideas in conjunction with *Panchakarma*



treatment plans has a secure and green position in coping with Pakshaghata (Hemiparesis).

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**Images :**

**Image No.1: Showing improvement after and before treatment**



**Tables:**

**Table No. 1: Details of Chief complaints with duration**

S. N.	Nature of Chief complaint	Duration
1	Weakness in left side of body since 6 months	6 months
2	Difficulty in walking and standing (unable to walk and stand without support)	Six months

**Table No. 2: Details of Associated complaints with duration**

S. N.	Nature of complaint	Duration
1	Constipation with Hard stools for 15 days Hesitancy in Urination for 15 days Tastelessness in the mouth with excessive salivation for 15 days Hypertension (un-noticed)	15 days
2	Hesitancy in Urination for 15 days	15 days
3	Tastelessness in the mouth with excessive salivation for 15 days	15 days
4	Hypertention(un-noticed)	

**Table No.3: History Of Patient**

S.N.	Head	Details of the patient
1	<b>Past History</b>	Hemiparesis left side with Cerebral infarction (stroke) as per CT Scan and clinical features Hypertension
2	<b>Family History</b>	Mother –K/C/O/ DM) HTN and IHD Father –HTN,IHD, and osteoarthritis (knee) Siblings: one brother –K/C/O/HTN.
3	<b>Personal History</b>	Sleep: 5-6 hours Sleep- 5-6 hours Addiction- Tobacco chewing

**Table No. 4: Clinical Examination and Specific Examination**

Clinical Examination	Specific Examination
<ul style="list-style-type: none"> <li>• Pulse – 71/min</li> <li>• B.P. – 130/80 mmHg</li> <li>• RR- 20/min</li> <li>• Temperature – 98 F</li> <li>• Weight - 65 kg</li> </ul>	<b>Asthavidha Pariksha:</b> <ul style="list-style-type: none"> <li>• <i>Nadi</i> – <i>Vaat-kaphaja</i></li> <li>• <i>Mala</i> – <i>once/ day with hard stools Vibhandha</i></li> <li>• <i>Mutra</i> – <i>5-6 times a day, with hesitancy</i></li> <li>• <i>Jivha</i> – <i>Saama / coated</i></li> <li>• <i>Shabda</i>– <i>Spashta</i></li> <li>• <i>Sparsha</i> – <i>Anushna Sheet</i></li> <li>• <i>Drik</i> – <i>Samyak</i></li> <li>• <i>Akruti</i> – <i>Madhyama</i></li> </ul>

**Table No.5: Line of Treatment: Shamana Chikitsa**

Sr. No.	Medicine	Dose and Frequency	Duration	Anupana
1	Cap. Palsineuron	One cap. twice a day after food	15 days	With Honey
2	<i>Aampachak Vati</i>	250mg 2tab twice a day before meal	15 days	Water
3	<i>Yograaj Guggulu</i>	250mg 3tab twice a day after meal	15 days	Water
4	<i>Punarnavadi Guggulu</i>	250mg 3 tabs twice a day after meal	15 days	Water
5	<i>Sarpagandha Ghana Vati</i>	250mg 2 tab Twice a day before meal	15 days	Water
6	<i>Maharasanadi Kashayam</i>	15ml twice a day 1hr before meal	15 days	Water
7	<i>Gandharva Haritaki Churna</i>	10gm HS	15 days	Lukewarm Water
8	<i>Mahayograaj Guggulu</i>	250mg 3 tabs twice a day after meal	15 days	Water
9	<i>Chandraprabha Vati</i>	250mg 3 tabs Four times a day	15 days	Water
10	<i>Hinguwashtak Churna</i>	5gm Twice a day before food	15 days	Lukewarm Water

**Table No.6: Line of Treatment: Shodhana Chikitsa**

Sr. No.	Procedure	Drugs Used	Duration
1	<i>Sarvanaga Abhyanga</i>	<i>Dashmoola Taila</i>	15 days
2	<i>Anuvasana Basti</i>	<i>DashmoolaTaila 100 ml</i>	15 days
3	<i>Marsha Nasya</i>	<i>Anutaila(8-8 drops each nostril</i>	15 days
4	<i>Niruha Basti</i>	<i>(Dashmoola+ Punarnava+ Musta+Ashwagandha) 800ml</i>	15 days
5	<i>Shasti Shali Pinda Swedana</i>	<i>Shashti Shali Rice and Bala Powder and Milk</i>	15 days
6	<i>Shirodhara</i>	<i>Brahmi Tail 500ml+ Tila Taila 1000ml</i>	Seven days

**Table no.7: Physiotherapy Exercises done**

S.N.	Exercise	Days
1	Heel Slides	15 Days
2	Static ABS	
3	BSS(Bulgarian split squad)	
4	Dynamic Squads	
5	SLR(Straight Leg Raise)	
6	Bridging	
7	AA(Active assisted) ROM Shoulder and Elbow	
8	Reach out with left U/L Wt. bearing	

**Table no.8: Assessment and Observations according to Barthel Index**

S.N.	Domain Name	Gradation	Before Treatment	After Treatment
1	Feeding	0 = unable 5 = needs help in cutting, Spreading butter, etc, or required modified diet 10 = independent	5	10
2	Bathing	0 = Dependent 5 = Independent	0	5
3	Grooming	0 = need to help with personal care 5= Independent face/ hair/ teeth/ shaving (Implements provided)	0	0

4	Dressing	0 = dependent 5 = needs help but can do about half unaided 10 = independent (including buttons, zips, laces etc.) 0 = incontinent(or need to given enemas) 5 = occasional accident 10 = Continent	0	5
5	Bowel	0 = incontinent or catheterized and unable to manage alone 5 = occasional accident 10 = Continent	5	10
6	Bladder	0 = incontinent or catheterized and unable to manage alone 5 = occasional accident 10 = Continent	5	10
7	Toilet use	0 = dependent 5 = needs someone help but can do something alone 10 = Independent( on and off, dressing, wiping)	0	5
8	Transfers (bed to chair and back)	0 = unable to, no sitting balance 5 = major help,( of one or two people, physical) can sit 10 = minor help ( verbal or physical) 15 = independent	0	5
9	Mobility (on level surface )	0 = immobile or < 50 yards 5 = Wheelchair independent, including corners, > 50 yards 10 = Independent( but may use any aid : for example, stick) > 50 yards 15 = independent	0	10
10	Stairs	0 = unable 5 = needs help ( verbal, physical, carrying aid)	0	5
<b>Total Score</b>			<b>15</b>	<b>65</b>

**Table no.9: Assessment and Observation according to National Institute of Health Stroke Scale NIH-SS**

S.N.	Heads NIH Scale	Range of Score	Before Treatment	After Treatment
1-a	Level of consciousness	0-3	2	0
1-b	LOC(Questions)	0-2	1	0
1-c	LOC(Commands)	0-2	2	0
2	Best Gaze	0-3	1	0
3	Visual fields	0-3	0	0
4	Facial Palsy	0-3	2	1
5	Motor Arm	Right-0-4	1	0
		Left-0-4	3	2
6	Motor Leg	Right-0-4	1	0
		Left- 0-4	3	2
7	Limb Ataxia	0-2	0	1
8	Sensory	0-2	1	0
9	Best Language	0-3	1	1
10	Dysarthria	0-2	2	1
11	Extinction & Inattention	0-2	1	1
<b>Total</b>			<b>21</b>	<b>9</b>

0= No Stroke, 1-4= Minor Stroke, 5-15= Moderate Stroke, 15-20= Moderate, 21- 42= Severe Stroke

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