IAMJ

INTERNATIONAL AYURVEDIC MEDICAL JOURNAL

Case Report ISSN: 2320-5091 Impact Factor: 6.719

AYURVEDIC MANAGEMENT OF RIGHT ATAXIC HEMIPARESIS (MAR-GAVARANAJANYA PAKSHAGHATA): A CASE REEPORT

Shrilatha Kamath T.[1], Swathi K.S.[2]

[1]HOD-Professor, [2]Consultant Physician
[1]Department of Kayachikitsa and Manasaroga, Sri Dharmasthala Manjunatheshwara College of Ayurveda, Udupi.
[2]Poovallickal Ayurveda, Alakode, Kannur, Kerala.

Corresponding Author:swathiksathyendran@gmail.com

https://doi.org/10.46607/iamj3112082024

(Published Online: August 2024)

Open Access

Article Received:08/07/2024 - **Peer Reviewed:** 29/07/2024 - **Accepted for Publication:** 14/08/2024.

Check for updates

ABSTRACT

Cerebrovascular accidents are the fourth leading cause of death and fifth leading cause of adult disability. It can be defined as a focal neurological deficit due to a vascular lesion lasting longer than 24 hours. The incidence of stroke in India ranges between 105 and 152/1 lakh people per year. The present articles deal with a diagnosed case of Right ataxic hemiparesis presenting with right sided hemiparesis with acute infarct in the left half of the pons. The Ayurvedic diagnosis of *Marmabhighatajanya Dakshina Pakshaghata* was made and managed with *Alepa, Nithya Virechana, Sarvanga Abhyanga* followed by *Shashtika Shali Pinda Sweda, Nasya*, Physiotherapy along with *Shamana Oushadhi*. Assessment of the patient was made before and after treatment using National Institute of Health Stroke Scale (NIH-SS), Modified Rankin Scale (MRS) and Barthel Index Score. Maximum improvement was seen in Dysarthria, fine movements and facial palsy. At the end of treatment, he was able to walk without support and able to look after own affair without support. Ayurvedic treatment procedures along with *Shamana Oushadhi* have a significant role in the management of *Pakshaghata.*

Keywords: Right ataxic hemiparesis, *Pakshaghata*, Stroke, *Vatavyadhi*

INTRODUCTION

The clipped winged bird cannot fly freely as per its wish, like that the person who is affected with Pakshaghata exhibits with loss or reduced movements either fine or gross or both. *Pakshaghata* is one among the *Nanatmaja Vatavyadhi*[1] and it is also mentioned under *Mahavatavyadhi* and *Ashtamahagada*.

The word *Pakshaghata* literally means paralysis of one half of the body, where *Paksha* denotes half of the body and *Aghata* denotes impairment of *Karmendriya, Gyanendruya* and *manas*. The cardinal symptoms of *Pakshaghata* include *Chestahani* (impaired motor activity), *Ruja* (pain), *Vaksthambha* (slurred speech) and *Pada-Hastha Sankocha*.[2] Based on the signs and symptoms *Pakshaghata* can be correlated to Hemiplegia or Hemiparesis based on the severity. Hemiplegia is the severe or complete loss of strength over one side of the body whereas Hemiparesis is the partial loss of strength over one side of the body. Stroke can be defined as a focal neurological deficit due to a vascular lesion lasting longer than 24 hours.[3] It is the fourth leading cause of death and fifth leading cause of adult disability. Previous research suggests that the incidence of stroke in India ranges between 105 and 152/1 lakh people per year.[4] Of the patients presenting with the stroke, 85% will have sustained a cerebral infarction due to inadequate blood flow to some part of the brain.[5] The clinical symptoms will be variable and depends on the extent and site of infract.

In this present case study, treatment is done for *Margavaranajanya Pakshaghata,* such conditions can be managed by Ayurvedic treatment principles, and it shows significant results even in acute conditions. *Panchakarma* is the prime line of treatment for *Pakshaghata*; it is very useful in treating neurological diseases as well as paralysis. In this case, *Bahya Rukshana Karma, Nithya Virechana* followed by *Bahya Snehana* and *Swedana*, *Nasya* and physiotherapy was given along with *Shamana Oushadhi*.

CASE DESCRIPTION

A 55-year-old male patient came to our hospital (16/10/2023) with complaints of reduced strength over the right side of the body including face and inability to walk without support and slurred speech for 12 days.

HISTORY

55-year-old male patient was who is known case of Diabetes Mellitus and Hypertension not on any medication was apparently normal 12 days back, on 4/10/2023, after returning from the job, he felt mild giddiness and neglected it, but later the severity of giddiness increased and his relatives noticed slurred speech, by 7 pm he was taken to nearby allopathic hospital. The routine investigations done from hospital revealed high BP (240/140mmHg) and he underwent CT and MRI scan on next day. During the course of this time, he lost strength over right side, upper and lower limbs, he also felt difficulty in swallowing food as well as urine and bowel incontinence. For this, he underwent Ryle's tube insertion and catheterization. He was admitted in ICU and treated with IV fluids, IV antibiotics, antacids along with other symptomatic and supportive measures. After one week he was discharged. By that time, he regained urine and bowel continence, and he was able to swallow food. But there was reduced strength over the right side of the body including face and he was unable to walk without support and speech was slurred. No past history of head injury, dyslipidemia could be elicited.

CT BRAIN – 05/10/2023

- Few old lacunar infarcts in bilateral fronto-parietal white matter.
- No evidence of acute infarct or hemorrhage.
- No evidence of intracranial space occupying lesion.

MRI BRAIN – 05/10/2023

- Acute infarct in the left half of the pons.
- Chronic lacunar infraction with chronic ischemic changes.

MR ANGIOGRAM – 05/10/2023

- Normal MR angiogram of circle of willis.

HEAMATOLOGICAL INVESTIGATIONS

- FBS – 135 mg/dl

- PPBS – 149 mg/dl
- HBA1C – 8.8%
- Hemoglobin –11.2gm%
- ESR – 100 mm/1hour

CLINICAL EXAMINATION FINDINGS

Gait - Spastic hemiparetic gait

Higher mental function

- Conscious and oriented to time, place and person
- Recent and remote memory – Intact
- Speech – Dysarthria
- Agraphia present

Cranial nerves

- Facial nerve affected (Symmetry of smile, puffing of cheek, forehead furrowing isaffected, mild drooping of corner of mouth, not able to whistle)
- Spinal accessory nerve affected (Shrugging of shoulders not possible)
- Hypoglossal nerve affected (Dysarthria present)

Sensory system

- Intact on bilateral upper and lower limbs.

Coordination tests

- Finger nose test – Not able to perform due to weakness of upper limb
- Heel shin test – Abnormal
- Diadochokinesia – Not able to perform
- Tandem walking Couldn't elicit (As patient was unable to walk without support)
- Romberg test – Couldn't elicit (As patient was unable to stand without support)

DIAGNOSIS

Right ataxic hemiparesis

Margavaranajanya dakshina pakshaghata

TREATMENT

Initially, *Alepa* chikitsa and *Nithya Virechana* were done for 7 dyas followed by *Sarvanga Abhyanga*, *Shashtika Shali Pinda Sweda*, *Nasya* and *Dashamoola Kwatha Parisheka* along with oral medications and physiotherapy. The patient was discharged on 30/10/2023 with oral medications prescribed for 30 days.

Table 1 Interventions

***Panchakarma* procedures**	
16/10/2023 to 22/10/2023	1. *Alepa* 2. *Nithya Virechana*
23/10/2023 to 30/10/2023	1. *Sarvanga Abyanga* followed by *Shashtika Shali Pinda Sweda* 2. *Nasya (*till *29/10/2023)*
27/10/2023 to 30/10/2023	1. *Dashamoola Kwatha Parisheka*
17/10/2023 to 30/10/2023	1. Physiotherapy
Oral medications	
16/10/2023 to 20/10/2023	1. *Brhat vata Chintamani (gold) 1-0-1* 2. *Cap. Gururasayana (Shilajathu Loha Rasayana) 4-4-4* 3. *Cap. Nuro 1-1-1*
21/10/2023 to 30/10/2023	1. *Brhat vata Chintamani (plain) 1-1-1* 2. *Cap. Gururasayana 4-4-4* 3. *Cap. Nuro 1-1-1* 4. *Tab. DBN 2-2-2*
Medicines prescribed at the time of discharge	
31/10/2023 to 30/11/2023	1. *Brhat vata Chintamani (plain) 1-1-1* 2. *Cap. Gururasayana 4-4-4* 3. *Cap. Nuro 1-1-1* 4. *Tab. DBN 2-2-2* 5. *Cap. Lashuna 2-0-2*

RESULT

The condition of the patient was improved significantly during the course of treatment. After the 3rd day of treatment,the patient was able to walk without the support of a walker. The strength and power of right upper and lower limbs were increased to 4/5 from 3/5, and tone of the muscle also improved. Exaggerated deep tendon reflexes became normal after the course of treatment. Speech also improved. After the completion of 15 days of treatment, the patient was able to do daily routine activities like eating, drinking, bathing etc and to stand and walk by himself without support. The fine movements also improved significantly. The effect of treatment was assessed by using various scales. On NIH-SS scale score was reduced to 1 from 12 and in Modified Rankin Scale (MRS) was 4 before treatment indicating moderately severe disability was reduced to 2 after treatment indicating slight difficulty. The Barthel Index score was 40 before the ayurvedic intervention which indicates severe dependency improved to 85 after 15 days of treatment indicating moderate dependency.

Table 2 Motor System Examination

Extremity	BT	AT
Muscle power		
Right upper limb	3/5	4/5
Right lower limb	3/5	4/5
Left upper limb	5/5	5/5
Left lower limb	5/5	5/5
Muscle tone		
Right upper limb	Hypertonic	Normal tone
Right lower limb	Hypertonic	Normal tone
Left upper limb	Normal tone	Normal tone
Left lower limb	Normal tone	Normal tone
Reflex		
Right biceps	3+	2+
Right triceps	3+	2+
Right supinator	3+	2+
Right knee	2+	2+
Right ankle	2+	2+

Table 1 Assessment Scale – NIH-SS

NIH Stroke scale score		Range of score	BT	AT
1.a	Level of consciousness	0 to 3	0	0
1.b	LOC – Questions	0 to 2	0	0
1.c	LOC – Commands	0 to 2	1	0
2	Best gaze	0 to 2	0	0
3	Visual	0 to 3	0	0
4	Facial palsy	0 to 3	2	0
5	Motor arm	0 to 4	2	0
6	Motor leg	0 to 4	2	0
7	Limb ataxia	0 to 2	2	1
8	Sensory	0 to 2	1	0
9	Best language	0 to 3	1	0
10	Dysarthria	0 to 2	1	0
11	Extinction and inattention	0 to 2	0	0

Total score	42	12	1

Score = 0 No stroke, score 1-4 Minor stroke, score 5-15 Moderate stroke, score 15-20 Moderate to severe stroke, Score 21-42 Severe stroke.

Table 2 Assessment scale - Barthel Index

Activity	Range of score	BT	AT
Feeding	0 to 10	0	5
Bathing	0 to 5	0	5
Grooming	0 to 10	0	0
Dressing	0 to 10	5	10
Bowel	0 to 10	10	10
Bladder	0 to 10	10	10
Toilet use	0 to 10	0	10
Transfers (bed to chair and back)	0 to 15	5	15
Mobility (on level surfaces)	0 to 15	10	15
Stairs	0 to 10	0	5
Total		40	85

Score 0-20 Total dependency, score 21-60 Severe dependency, Score 61-90 Moderate dependency, 91-99 Slight dependency

DISCUSSION

In the present case, patient is having an acute infarct in the left half of the pons and chronic lacunar infract with chronic ischemic changes in MRI. The patient has *Pakshaghata Lakshana* like *Dakshina Paksha Chestahani*, *Vaksthmbha.* Difficulty in speech can be understood as *Kapha Avrtha Udana Vata*.[6] The infract in the pons can also correlated to *Kapha Avarana*. *Sama Vata Lakshna* like *Vibandha, Agnisada* also seen in this patient. So, the case was diagnosed as *Margavaranajanya Dakshina Pakshaghata* (Right ataxic hemiparesis). Along with this, the patientwas also diagnosed with Primary Hypertension and type 2 Diabetes Mellitus.

Since the patient was in *Sama* and *Avarana* condition, the treatment started with *Rukshna chikitsa*. Hence *Alepa* was initiated as the first line of treatment for this patient. *Alepa (Agnilepa)* is one among the folklore practices of *lepa kalpana* which is practiced in southern part of Karnataka in the management of various musculoskeletal and neuromuscular disorders. It has proved to be effective in the management of *Sama* and *Avarana* conditions of *Pakshaghata*.[7] In addition to this, *Nithya Virechana* with *Gandharvahastha Eranda taila* in dose of 10 ml in empty stomach also started from the initial day. *Virechana* is the common line of treatment in *Pakshaghata* mentioned by various *Samhitha.* By the *Anuloma Karma* of *Virechana*, obstruction of the *Prana Vata* can be relieved and natural direction of *Prana Vata* can be achieved. And also, *Virechana* is best to remove the *Avarana* of *Vata* by *Kapha*, *Pitta* and *Medha*. *Eranda Taila* is antagonistic *Vata* due to the innate qualities and it has *Pakvashaya Shodhaka Karma*.

After attaining *Nirama Avastha, Samanya Vatavyadhi Chikitsa* was adopted. *Sarvanga Abhyanga* with *Mahanarayana Taila* followed by *Shashtika Shali Pinda Sweda* was given for the next 8 days. Removing the *Hastha-Pada Sankocha* seen in patients of *Pakshaghata Abhyanga* is essential, in addition to that it helps to strengthen and nourish the muscles. *Swedana* will give relief from stiffness and heaviness. *Shashtika Shali Pinda sweda* removes stiffness of joints vitiated by *Vatadosha*, cleanses the Srotas of the body, improves blood circulation, removes sluggishness of the body and is also act as *Balya*. By the application of *Snehana* followed by *Swedana Karma* even dry wood becomes soft and becomes easy to bend.[8] *Abhyanga* followed by *Shashtika Shali Pinda*

Sweda will pacify *Vata*, increase strength and restore motor as well as sensory functions.

As nose is the gateway for *Shira*, nasal drug administration will have a significant effect on the functions of CNS. For this patient *Snaihika Nasya* with *Karpasathyadi Taila* was given. The drug administered through nose stimulates the higher centers of brain through the olfactory nerve pathway which is connected to hypothalamus and limbic system.[9] In *Pakshaghata*, *Prana* and *Udana Vata* vitiation will be there, and *Shiras* is the main *Sthana* of these, the drug administered through nose reaches the head and scratches the morbid *Dosha* from the *Shira*. Quick and significant improvement in facial paralysis can also be achieved by *Nasya Karma*. After *Dashamoola Kwatha Parisheka* there was a considerable reduction in the stiffness and heaviness over the right upper and lower extremities. This showed the reduction in *Kapha Aavarana. Dashamoola* is *Tridoshagna* and *Ushna Virya*, so it will pacify *Vatavyadhi*.

Brhat Vata Chintamani acts as *Dhatu Pushtikara, Vata Shamaka, Rasayana*. It also improves blood circulation and rejuvenates the cells of the brain and nervous system. *Rasasindhura* present in the BVC have excellent penetration power which fastens the absorption medicines. The capsule Nuro contains *Rasasindhura, Chitraka, Sameerapannaga Rasa, Swarnamakshika Bhasma, Triphala* and *Shuddha Guggulu*. *Sameerapannaga Rasa* is a content of Cap. Nuro acts as *Pranavatanulomana* and *Kapha-Vata Shamaka* whereas *Swarnamakshika Bhasma* is *Rasayana, Balya* and *Yogavahi*, it also stimulates the digestive fire. *Shilajatu-Loha Rasayana (Cap. Gururasyana)* will reduce the *Kapha* and *Medas* by its *Ruksha* and *Lekhana Guna*, hence it is best choice for *Pakshaghata* caused by *Margavaranajanya* pathology. DBN tablet contains *Shilajatu, Haridra, Jambu Phala* and *Tvak, Amalaki, Asana and Madhumehari*. All these ingredients are Pramehahara. *Lashuna* is one of the most potent drugs that can be used as *Rasayana* in *Vatavyadhi*. It helps to lower blood pressure, blood sugar and LDL Cholesterol. In addition to this *Lashuna* helps to avert the formation of blood clots and reduces the possibility of strokes.

Physiotherapy is the treatment modality that helps people to restore, maintain and maximize their physical strength, function, motion and overall wellbeing. Throughout the treatment, physiotherapy was done to improve the range of motion of joints as well as flexibility of muscles. It also improves the circulation to extremities. Proper Ayurvedic treatment along with physiotherapy, speech therapy and other rehabilitation measures helps the patient to become self-sufficient.

CONCLUSION

This case report demonstrates a successful management of *Pakshaghata* case (Right ataxic hemiparesis) using Ayurvedic treatment. There was a marked change in the muscle power, reflexes and muscle tone. Maximum improvement was seen in dysarthria, fine movements and facial palsy. At the end of treatment,the patient was able to walk without support and able to look after their own affair without support. Hence, it can be concluded that Ayurvedic treatment principles along with physiotherapy are highly effective in management of *Pakshaghata*.

REFERENCES

1. Acharya Y T, editor, (1st ed.). Charaka Samhitha of Agnivesha. Sutrastana; Maharoga Adyaya, Chapter20, Verse11, Varanasi Chaukambha Prakashana, 2013;P113
2. Acharya Y T, editor, (1st ed.). Charaka Samhitha of Agnivesha. ChikistaStana, VatavyadiChikistitamAdyaya, Chapter28, Verse53-55, Varanasi Chaukambha Prakashana, 2013;P 619
3. Nicki R. Colledge, Brian. R. Walker, Stuart H. Ralson editors. Davidson's principles and practice of medicine, 21st edition. 2010, Churchill Livingstone Elsevier; P.1180
4. https://pubmed.ncbi.nim.nih.gov/34114912/
5. Nicki R. Colledge, Brian. R. Walker, Stuart H. Ralson editors. Davidson's principles and practice of medicine, 21st edition. 2010, Churchill Livingstone Elsevier; P.1181.
6. R.K. Sharma, Bhagwan Dash, English translation on Caraka Samhita of Agnivesha. Volume 4, Chikitsasthana, Vatavyadhi Chikitsa Adyaya, Chapter

28, Verse 62-63, Chowkhamba Sanskrit Series of Varanasi, reprint edition: 2009, P.467
7. Patanjali, SDMCA&H, Udupi, A clinical study on the effect of Agni Chikitsa in Pakshaghata. 2006
8. R.K. Sharma, Bhagwan Dash, English translation on Caraka Samhita of Agnivesha. Sutra Sthana, Chapter14, Dvividhaopakramaniyamadyaya, Varanasi Chaukhambha 2011P.218
9. Kumar V. a Conceptual Study on Mode of Action of Nasya. International Journal of Ayurveda and Pharma Research. 2017;5(7):100-102

Source of Support: Nil
Conflict of Interest: None Declared

How to cite this URL: Shrilatha Kamath T et al: Ayurvedic management of right ataxic hemiparesis (margavaranajanya pakshaghata): a case reeport. International Ayurvedic Medical Journal {online} 2024 {cited August2024} Available from: http://www.iamj.in/posts/images/upload/1601_1607.pdf