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MANAGEMENT OF PAKSHAGHATA WITH MUSTADI RAJA YAPANA BASTI: A CASE REPORT

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ABSTRACT

Background: Pakshaghata is one of the major Vata Vyadhi described in Ayurveda and is clinically comparable to hemiplegia following ischemic stroke. Although advances in acute stroke management have improved survival, many patients continue to experience persistent neurological deficits requiring long-term rehabilitation. Ayurveda advocates a multimodal treatment approach involving Panchakarma procedures, internal medications, and rehabilitative therapies to enhance functional recovery. **Case Presentation:** A 63-year-old male presented with right-sided hemiplegia associated with slurred speech, deviation of the angle of the mouth towards the left side, and difficulty in walking for two years following an ischemic stroke. He had initially received conservative treatment at a modern medicine hospital but remained functionally dependent with persistent neurological deficits. He was subsequently admitted to an Ayurvedic hospital for further management and rehabilitation. **Intervention:** The patient underwent an integrative rehabilitation protocol comprising Nasya, Mukhabhyanga, Dhoomapana, Shirodhara, Vestana, Udwartana, Sarvanga Abhyanga with Swedana, and Mustadi Raja Yapana Basti, along with appropriate internal Ayurvedic medications and physiotherapy. **Outcome:** Improvement was observed in motor function, speech, gait, activities of daily living, and overall functional independence. Clinical outcomes were assessed using the National Institutes of Health Stroke Scale (NIHSS) and the Barthel Index, which demonstrated improvement following the intervention. **Conclusion:** This case highlights the potential role of an integrative Ayurvedic rehabilitation protocol incorporating Panchakarma procedures and physiotherapy in improving functional outcomes in a patient with chronic Pakshaghata following ischemic stroke. Further well-designed controlled clinical studies are warranted to establish its efficacy and safety.

KEYWORDS: Pakshaghata, Ischemic stroke, Hemiplegia, Mustadi Raja Yapana Basti, Integrative Ayurveda, Panchakarma, Neurorehabilitation, Functional independence.

INTRODUCTION

Pakshaghata is a disease in which excessively aggravated Vata Dosha affects the dhamanis, spreading upward, downward, or laterally, resulting in laxity of the joints and ligaments and weakness affecting 63one half of the body. The term Paksha denotes one half of the body, while Aghata denotes impairment or loss of function of the Karmendriyas and Jnanendriyas. Hence, Pakshaghata is considered an Indriya Pradoshaja Vikara. Acharya Charaka describes Pakshaghata as a condition in which aggravated Vata affects one half of the body (Paksha) and produces Cheshtanivritti (loss of voluntary movements), along with Ruja (pain), Vakstambha (speech impairment), and Padasankocha (contracture of the lower limb). Acharya Vagbhata explains that aggravated Vata occupies one half of the body, affecting the Sira and Snayu, leading to loss of motor activity, restricted movements, contractures, pain, and speech disturbances. Acharya Sushruta defines Pakshaghata as "Paksham Sharirardham Hanti", meaning destruction of motor function of one half of the body, resulting in Akarmyata (loss of functional activity). Hence, Pakshaghata is considered an Akarmya Vata Vyadhi. According to Acharya Sushruta, Pakshaghata caused by

Kevala Vata is Krichhrasadhya, when associated with other Doshas it is Sadhya, and when associated with Dhatukshaya it becomes Asadhya. The Chikitsa Sutra of Pakshaghata includes Basti, Nasya, and various Bahirparimarjana Chikitsa procedures such as Abhyanga, Shirodhara, Pichu, and Veshtana, aimed at pacifying aggravated Vata, nourishing the tissues, and restoring functional capacity.[1,2,3.4]

Ischemic stroke is the most common type of stroke, accounting for approximately 85% of all stroke cases. It occurs due to occlusion of a cerebral artery by a thrombus or embolus, commonly originating from the heart, aortic arch, or carotid arteries. The interruption of cerebral blood flow deprives the affected brain tissue of oxygen and glucose, initiating a cascade of neuronal injury that may lead to irreversible cerebral infarction if perfusion is not restored promptly. Clinical manifestations commonly include sudden onset of unilateral weakness or numbness, facial deviation, slurred speech, visual impairment, gait instability, and impaired coordination. Major risk factors include hypertension, diabetes mellitus, atrial fibrillation, dyslipidemia, smoking, obesity, and advancing age.[5,6]

In Ayurveda, Panchakarma plays a vital role in the management of neurological disorders such as Pakshaghata. In addition to the five principal Panchakarma procedures, therapies such as Snehana, Swedana, picchu, and vestana are widely employed to alleviate aggravated Vata and facilitate neurological recovery.

Physiotherapy serves as an important adjunct to Ayurvedic treatment by improving muscle strength, joint mobility, balance, coordination, and functional independence while preventing complications and recurrence.

Considering the increasing burden of ischemic stroke and the need for effective rehabilitation, the present case study was undertaken to evaluate the clinical efficacy of a planned Ayurvedic treatment protocol, including Panchakarma procedures and physiotherapy, in the management of Pakshaghata (ischemic stroke) and to assess its impact on functional recovery and quality of life.

CASE STUDY

The present case study deals with a 63-year-old male patient who presented with complaints of weakness of the right upper and lower limbs, associated with slurred speech, difficulty in walking, and deviation of the angle of the mouth towards the left side, since the past two years. The patient was a diagnosed case of ischemic stroke with residual right-sided hemiplegia (Pakshaghata) and was admitted for Ayurvedic management and rehabilitation.

History of present illness

The patient was apparently normal until two years ago, when he suddenly developed weakness of the right upper and lower limbs, slurred speech, and deviation of the angle of the mouth towards the left side. He was diagnosed with ischemic stroke and was initially admitted to a modern medicine hospital, where he received conservative management. Although his condition stabilized, he continued to have significant residual neurological deficits and remained bedridden with marked functional dependence over the following two years. Owing to the persistent disability and the need for comprehensive rehabilitation, he was subsequently admitted to the Ayurvedic hospital for further management.

HISTORY OF PAST ILLNESS

Patient was k/c/o type 2 DM and HTN
Patient is on regular medication
No H/o any food allergy

Drug history

T.Metformin 500mg
T. Telmisartan 40mg
T.Aspirin 150mg

Vitals

Temp – Afebrile
Pulse rate – 80bpm
Bp – 130/90mmHg
RR – 19cpm

Ashtavidha pareeksha

Nadi : vata pradhana kapha	Shabda: slurred speech
Mala :2 times/day	Sparsha: samasheetoshna
Mutra:5-8times/day	Druk: prakrutha
Jihwa: alipta	Akruthi: Madhyama

Dashavidha pareeksha

Prakruthi: kapha pradhana vata	satva: Avara
Vikruthi: vata	aahara shakthi: Madhyama
Sara: Madyama	vyayama shakthi: Avara
Samhanana: Avara	satmya: Avara
Pramana: Madhyama	vaya: vrudda

Systemic examination

CVS – S1 and S2 heard RS – NVBS
No murmur sound heard No added sounds
GIT – P/A soft and non-tender
CNS – Higher mental functions: Motor function:
Consciousness – conscious Gait – unable to walk
Orientation – oriented to time, place and person
Memory – intact
Behavior – friendly
Speech – slurred speech
Cranial nerve examination:
Facial nerve examination – slight deviation of mouth to left side

Muscle power

	Before treatment		After treatment	
	Right	Left	Right	Left
Upper limb	0/5	5/5	3/5	5/5
Lower limb	1/5	5/5	4/5	5/5

Muscle tone

	Right	**Left**
Upper limb	Spasticity	Normal
Lower limb	spasticity	Normal

Reflexes

	Right	**Left**
Biceps	Exaggerated	Normal
Triceps	Exaggerated	Normal
Brachioradial	Exaggerated	Normal
Knee	Exaggerated	Normal
Achills tendon	Exaggerated	Normal
Plantar	Exaggerated	Normal

NIHSS SCORE

NIHSS SCORING	**score**	**CRITERIA**	**BEFORE TREATMENT**	**AFTER TREATMENT**
1a.Level of conciousness	0	Alert	0	0
	1	Not alert, arosal by minor stimulation		
	2	Requires repeated or painful stimulation		
	3	Reflex responses only		
1b.Level of consciousness questions	0	Answers both correctly	0	0
	1	Answers one correctly		
	2	Answers neither correctly		
1c.Level of consciousness commands	0	Performs both correctly	0	0
	1	Performs one correctly		
	2	Performs neither		
2.Best gaze	0	Normal	0	0
	1	Partial gaze palsy		
	2	Forced deviation		
3.Visual fields	0	Normal	0	0
	1	Partial hemianopia		
	2	Complete hemianopia		
	3	Bilateral blindness		
4. Facial Palsy	0	Normal	2	0
	1	Minor paralysis		
	2	Partial paralysis		
	3	Complete paralysis		
5a & 5b. Motor Arm	0	No drift	Left arm =0 Right arm=4	Left arm=0 Right arm=2
	1	Drift		
	2	Some effort against gravity		
	3	No effort against gravity		
	4	No movement		
6a & 6b. Motor Leg	0	No drift	Left leg=0 Right leg=3	Left leg=0 Right leg=1
	1	Drift		
	2	Some effort against gravity		
	3	No effort against gravity		
	4	No movement		
7.Limb Ataxia	0	Absent	0	0
	1	Present in one limb		
	2	Present in two limb		

8.Sensory	0	Normal	1	0
	1	Mild to moderate sensory loss		
	2	Severe or complete sensory loss		
9.Language	0	Normal	2	0
	1	Mild aphasia		
	2	Severe aphasia		
	3	Mute/global aphasia		
10.Dysarthria	0	Normal	1	0
	1	Mild to moderate dysarthria		
	2	Severe dysarthria or unintelligible		
11. Extinction	0	Normal	0	0
	1	mild neglect		
	2	Severe neglect		
Total score	0-42		13	3

Barthels index

Assessment	Barthels index
Before treatment	30 (severe dependency)
After treatment	80(moderate dependency with improved independence)

Investigation

1.CT Brain (03 June 2024)

Non-contrast CT brain demonstrated hypodense lesions involving the left posterior limb of the internal capsule and right hemipons, suggestive of acute cerebral infarction. A chronic lacunar infarct was noted in the left hemipons. A calcified granuloma measuring 3.5 × 3.7 mm was present in the right parietal lobe without surrounding edema. No intracranial hemorrhage, midline shift, or hydrocephalus was observed. MRI brain was advised for further evaluation.

2. MRI Brain with MR Angiography (03 June 2024)

MRI brain revealed acute multifocal ischemic infarcts involving the left thalamus, left periventricular region, left temporal lobe, and right pons, characterized by T1 hypointensity, T2/FLAIR hyperintensity, and diffusion restriction. Bilateral thalamic calcifications were noted on susceptibility-weighted imaging (SWI). Periventricular white matter hyperintensities were suggestive of chronic small-vessel ischemic changes. No evidence of intracranial hemorrhage, extra-axial hematoma, or significant midline shift was noted. MR angiography demonstrated a normal Circle of Willis without significant stenosis, narrowing, or occlusion.

3. Carotid and Vertebral Artery Doppler (27 April 2026)

Color Doppler examination revealed diffuse intima-media thickening with multiple atherosclerotic plaques in the bilateral common and internal carotid arteries. Approximately 50% focal stenosis was noted in the right proximal internal carotid artery (10 mm segment), while approximately 30% focal stenosis was present in the left proximal internal carotid artery (8 mm segment). Bilateral vertebral arteries demonstrated normal antegrade flow.

Treatment advised

Internal medication.

Sl no	Name of medication	Dose	Time	Anupana
1	Syp. Danadanayanadi Kashaya	20ml -0-20ml	BD	Water
2	Tab. BVC with gold	1-0-1	BD	Water
3	Tab Palsineuron	1-0-1	BD	Water

Treatment

Sl no	Procedure	Date	No of days
1	Sarvanga udwartana	27/6/26 to 29/6/26	3
2	Sarvanga parisheka with DMK	27/6/26 to 29/6/26	3
3	Nasya with KB taila 8/8 drops, Mukhabhyanga with KB taila, Dhoomapana with haridradi varti	27/6/26 to 03/7/26	7
4	Niruha basti	27/6/26 to 10/7/26	6
5	Anuvasana basti	27/6/26 to 10/7/26	8
6	Sarvanga abhyanga with murchita taila	30/6/26 to 6/7/26	7
7	SSPS	30/6/26 to 6/7/26	7

8	Shirodhara with Dhanwantara taila +KB taila + Brahmi taila	04/07/26 to 10/07/26	7
9	Veshtana to B/L UL and LL	29/7/26 to 10/7/26	12
10	Physiotherapy (stimulation and exercise)	27/6/26 to 10/7/26	14

KARMA BASTI

27/6/26	28/6/26	29/6/26	30/6/26	1/7/26	2/7/26	3/7/26
A	N	A	N	A	N	A
4/7/26	5/7/26	6/7/26	7/7/26	8/7/26	9/7/26	10/7/26
N	A	N	A	N	A	A

MATERIALS AND METHODS

Mustadi raja yapana niruha basti
Honey- 25ml
Saindhava lavana – 5g
Mahamasha taila -25ml
Musta and ashwagandha kalka- 25g
Mustadi kwatha-200ml
Ksheera-50ml
Anuvasana basti with sahacharadi talia -80 ml

Shamanadi Yoga

BVC with gold (1-0-1)
Cap.parsineuron(1-0-1)
Danadanyadi Kashaya (20ml-0-20ml)

RESULT

Following the intervention, the patient demonstrated improvement in right-sided motor function, speech, facial symmetry, gait, and activities of daily living. The National Institutes of Health Stroke Scale (NIHSS) score decreased, while the Barthel Index score increased, indicating improvement in neurological status and functional independence. No treatment-related adverse events were observed during the study period.

	1st day		7th day		On discharge	
	UL	**LL**	**UL**	**LL**	**UL**	**LL**
Power	0/5	1/5	2/5	3/5	3/5	4/5
Tone	spastic	spastic	spastic	Mildly increased	Mildly increased	Near normal
Reflex	Exaggerated (3+)	Exaggerated(3+)	Exaggerated(3+)	Brisk(2+)	Brisk (2+)	Normal (2+)
Speech	slurred	slurred	improved	improved	normal	normal
Angle of deviation	Mouth deviated to left	-	Deviation reduced	-	No deviation	-
Gait	-	unable to walk	-	circumduction gait	-	normal walk

DISCUSSION

Pakshaghata is one of the Mahavatavyadhi described in Ayurveda and is characterized by loss of motor function affecting one half of the body. The clinical presentation closely resembles hemiplegia following ischemic stroke, with manifestations such as unilateral weakness, facial deviation, speech impairment, and difficulty in walking. According to Acharya Charaka, aggravated Vata Dosha affects one side of the body, producing Cheshta nivritti (loss of voluntary movements), Vakstambha (speech impairment), Ruja (pain), and Padasankocha (contracture). Acharya Vagbhata explains that aggravated Vata affects the Sira and Snayu, resulting in impaired motor activity and contractures, while Acharya Sushruta describes Pakshaghata as "Paksham Sharirardham Hanti", indicating destruction of motor function affecting one half of the body. Therefore, the primary treatment objective is Vata Shamana, Brimhana, restoration of neuromuscular function, and improvement of functional independence.[1-4]

The patient in the present case had chronic right-sided hemiplegia of two years' duration following an ischemic stroke. Recovery after chronic stroke is often incomplete because of persistent neuronal damage and impaired neuroplasticity. Hence, comprehensive rehabilitation is essential to improve motor recovery, functional independence, and quality of life.[5,6] Accordingly, an integrative rehabilitation protocol consisting of Sarvanga Abhyanga, Swedana, Udwartana, Nasya, Mukhabhyanga, Dhoomapana, Shirodhara, Veshtana, Mustadi Raja Yapana Basti, Yoga, Pranayama, internal Ayurvedic medications, and physiotherapy was adopted.

Udwartana was employed as an adjunctive therapy to stimulate peripheral circulation and improve muscle tone. The friction produced during the procedure enhances local blood flow, stimulates superficial sensory receptors, reduces stiffness, and improves proprioceptive feedback. These effects facilitate neuromuscular activation and support functional rehabilitation.[3]

Sarvanga Abhyanga provides Snigdhata to the body, alleviates the Ruksha and Khara qualities of aggravated Vata, improves peripheral circulation, reduces muscle stiffness, nourishes muscles and ligaments, and enhances joint mobility.

Swedana relieves Stambha, Gaurava, and Shoola, promotes flexibility, and prepares the body for Basti therapy by facilitating the movement of vitiated Doshas. Together, these procedures improve muscle tone and voluntary movements.[1,3]

Nasya is indicated in disorders affecting the head and neck because "Nasa Hi Shiraso Dvaram". Administration of medicated oil through the nasal route helps pacify Urdhvajatrugata Vata, improves facial muscle strength, speech, swallowing, and higher neurological functions. Mukhabhyanga improves facial muscle tone and circulation, while Dhoomapana helps eliminate residual Kapha from the upper respiratory tract and supports the proper functioning of the sensory organs.[1,3]

Shirodhara exerts a calming effect on the central nervous system by promoting relaxation and reducing stress. It may improve autonomic nervous system balance, sleep quality, and psychological well-being, all of which positively influence neurological rehabilitation.

Veshtana provides external support to weakened muscles, improves proprioception, minimizes abnormal limb positioning, enhances muscle tone, and facilitates better posture and gait during rehabilitation.[3]

Mustadi Raja Yapana Basti constituted the principal therapeutic intervention in the present case. Basti is regarded as the most effective treatment for Vata Vyadhi and is described as Ardha Chikitsa by Acharya Charaka. Raja Yapana Basti possesses both Shodhana and Brimhana properties and contains drugs with Balya, Rasayana, Brimhana, and Vatahara actions. It nourishes depleted Dhatus, strengthens muscles and nerves, improves neuromuscular coordination, and promotes functional recovery. Because of its nourishing nature, Yapana Basti is particularly useful in chronic neurological disorders without causing excessive depletion.[1,2,4]

Yoga and Pranayama were incorporated as supportive therapies. Regular practice improves flexibility, muscle strength, balance, coordination, respiratory efficiency, and mental well-being. Pranayama enhances oxygenation, reduces stress, improves autonomic regulation, and may facilitate neuroplasticity, thereby complementing both Ayurvedic interventions and physiotherapy.[8]

Physiotherapy formed an integral component of rehabilitation. Range-of-motion exercises prevented joint stiffness and contractures, strengthening exercises improved muscle power, while balance and gait training enhanced functional mobility and reduced the risk of falls. Repetitive task-oriented exercises facilitate cortical reorganization and motor relearning through neuroplasticity, thereby improving functional independence.[8,9]

Following completion of the treatment protocol, the patient demonstrated improvement in motor function, facial symmetry, speech, gait, and activities of daily living. Functional assessment using the National Institutes of Health Stroke Scale (NIHSS) and the Barthel Index showed improvement, indicating enhanced neurological recovery and functional independence.

Although this is a single case report, the observed clinical improvement suggests that an integrative rehabilitation protocol incorporating Panchakarma procedures, Mustadi Raja Yapana Basti, Yoga, Pranayama, and physiotherapy may provide beneficial functional outcomes in patients with chronic Pakshaghata following ischemic stroke. However, larger randomized controlled clinical trials are required to establish its efficacy and safety.

CONCLUSION

The present case demonstrates that an integrative Ayurvedic rehabilitation approach comprising Mustadi Raja Yapana Basti, Nasya, Sarvanga Abhyanga with Swedana, Udwartana, Mukhabhyanga, Dhoomapana, Shirodhara, Veshtana, internal Ayurvedic medications, Yoga, Pranayama, and physiotherapy was associated with improvement in motor function, speech, gait, facial symmetry, and activities of daily living in a patient with Pakshaghata following ischemic stroke. Improvements observed in the National Institutes of Health Stroke Scale (NIHSS) and the Barthel Index indicate enhanced neurological status and functional independence after treatment. This case suggests that an integrative rehabilitation protocol based on Ayurvedic principles may serve as a beneficial adjunct in the management of chronic post-stroke hemiplegia. However, larger well-designed randomized controlled clinical studies are required to validate these findings and establish the efficacy and safety of this treatment approach.

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