

ROLE OF PANCHAKARMA IN PAKSAGHATA WITH SPECIAL REFERENCE TO ISCHEMIC STROKE: A CASE REPORT

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ABSTRACT

Pakṣāghāta is a *Vāta* dominant neurological disorder in Ayurveda, clinically comparable to Ischemic stroke. The condition manifests with sudden onset weakness, impaired mobility, slurred speech and functional disability. In Ayurveda, *Pakṣāghāta* is classified under *Vātavyādhi*, wherein aggravated *Vāta* leads to impairment of motor functions, manifesting as *Ceṣṭā-nivṛtti* and *Vākstambha*, affecting either side of the body. *Pañchakarma* therapies are indicated in the management of *Vāta* disorders and play an important role in neurological rehabilitation. **Objective:** To evaluate the role of *Pañchakarma* in the management of *Pakṣāghāta* with special reference to Ischemic stroke. **Methodology:** The patient underwent *Pañchakarma* treatments in three different sittings. During the first sitting, *Abhyaṅga* was performed using *Nirguṇḍī Taila*, followed by *Nāḍī Svedana* for a duration of three days. This

was followed by *Mātrā Vasti* with *Nirguṇḍī Taila* administered for seven days. Thereafter, *Pañchaprasṛtika Kṣīra Vasti* was given in a *Kālavasti* schedule. The second sitting consisted of *Snehapāna*, followed by *Virecana Karma*. In the third sitting, *Abhyaṅga* with *Nirguṇḍī Taila* followed by *Nāḍī Svedana* was administered for three days, after which *Nasya Karma* was performed using *Dhanvantaram 101 Āvarti Taila* for a period of fourteen days. **Results:** Post-treatment assessment after each sitting showed time-to-time reduction in NIH Stroke Scale scores and walking time. Improvement in muscle power and Barthel Index scores has

also been observed, indicating enhanced functional ability. **Conclusion:** The present study demonstrates the potential role of Pañchakarma therapy in improving neurological and functional outcomes in *Pakṣāghāta* with special reference to Ischemic stroke. Thus *Pañchakarma* can be considered as a better rehabilitative approach in post stroke management.

KEYWORDS: Ischemic stroke, *Pakṣāghāta*, *Vātavyādhi*, *Pañchakarma*.

INTRODUCTION

Pakṣāghāta is one of the major *Vāta* predominant neurological disorders described in Ayurveda and is characterized by loss of voluntary motor functions affecting either side of the body.^[1] The term *Pakṣa* denotes one side or half of the body, while *Ghāta* implies destruction or loss of function, collectively indicating paralysis of either the right or left side. *Pakṣāghāta* is classified under *Nānātmaja Vāta Vyādhi* and also considered as *Mahāgada*.^[2] Features such as *Ceṣṭā-Nivṛtti*, *Ruja*, *Vākstambha*, *Śarīrārdha Akarmanyatā* and *Sandhi bandha Vimokṣa*^[3] closely resemble the presentation of Ischemic stroke.

Stroke is a major public health concern and a leading cause of long-term disability worldwide. The World Health Organization (WHO) defines stroke as a rapidly developing clinical condition characterized by focal or global loss of cerebral function, with symptoms lasting more than 24 hours or leading to death, and of vascular origin.^[4] In 2021, approximately 11.9 million new stroke cases were reported globally, with an estimated 93.8 million people living with its long-term effects. It remains the third leading cause of death and disability worldwide.^[5]

Ischemic stroke accounts for nearly 80–85% of all stroke cases and results from a sudden reduction in cerebral blood flow due to arterial occlusion. The interruption of blood supply leads to cerebral ischemia, triggering a cascade of pathological events including energy depletion, oxidative stress, and neuronal apoptosis, ultimately resulting in varying degrees of neurological impairment. Major risk factors include hypertension, diabetes mellitus, dyslipidemia, smoking, obesity, sedentary lifestyle, and cardiovascular disorders such as atrial fibrillation.^[6] Despite advances in acute stroke management, many patients are left with persistent neurological deficits requiring long-term rehabilitation.

In Ayurveda, the pathogenesis of *Pakṣāghāta* is attributed to aggravated *Vāta* affecting *sirā*,

snāyu, and *dhātus*, either due to *dhātu-kṣaya* or *mārgāvaraṇa*. Vitiating of *Vāyu* results in impairment of motor functions, resulting in partial or complete loss of movement on one side of the body depending on the severity of *Vāta* and associated *doṣas*.

Panchakarma therapies constitute the cornerstone in the management of *Vāta Vyādhi*. Classical texts advocate *Snehana*, *Svedana*, *Virecana*, *Vasti*, and *Nasya* in the treatment of *Pakṣāghāta*^[7] for pacifying aggravated *Vāta*, improving circulation, restoring neuromuscular functions, and preventing further degeneration. Among these, *Vasti* is regarded as the most effective therapy for *Vāta* disorders, while *Virecana* and *Nasya* also play vital roles depending on the clinical presentation and associated *doṣa* involvement.

Considering the disabling nature of Ischemic stroke and the need for supportive rehabilitative approaches, the present study highlights the role of Panchakarma therapy in the management of *Pakṣāghāta* with special reference to Ischemic stroke.

CASE REPORT

A 44-year-old male patient was admitted to the Panchakarma In-Patient Department (IPD No. 906) with complaints of weakness of the right upper and lower limbs associated with difficulty in walking suffering from a period of one year and ten months.

Past History

- K/c/o DM since 2 years 6 months.
- No H/o any Trauma.

History of Present illness

The patient was apparently normal one year 10 months prior to admission. One morning after waking up, he suddenly developed numbness in the right upper limb with inability to lift objects. Three days later, he developed sudden weakness of the right upper and lower limbs, following which he became unable to walk. Throughout the episode, the patient remained conscious. He was taken to a local allopathic hospital, where MRI of the brain was performed, which revealed an acute infarct in the right centrum semiovale along with a large acute infarct involving the left fronto-parietal and temporo-occipital lobes. The patient received allopathic treatment for one week, following which he was able to walk with support and speak; however, weakness of the right upper and lower limbs persisted. Thereafter, for better management, the patient was admitted to Sri Venkateswara Ayurvedic Hospital, where

he underwent three sittings of Pañchakarma treatment.

Family History

Nothing specific.

Table 1: Personal history of the patient.

<i>Agni</i>	<i>Mandāgni</i>
<i>Nidra</i>	Disturbed
<i>Koṣṭha</i>	Mrdu
<i>Āhāra</i>	Mixed
<i>Mūtra</i>	6-8 times per day
<i>Vyasana</i>	Nil

Table 2: *Aṣṭasthāna* and *Daśavidha parīkṣā*.

<i>Aṣṭasthāna parīkṣā</i>	<i>Daśavidha parīkṣā</i>
<i>Nāḍī - Vata</i>	<i>Prakṛti - Vatapitta</i>
<i>Mūtra - Prakṛta</i>	<i>Vikṛti - Vata pradhana tridosha</i>
<i>Mala - Prakṛta</i>	<i>Sara - Avara</i>
<i>Jihva - Alīpta</i>	<i>Samhanana - Avara</i>
<i>Śabda - Prakṛta</i>	<i>Pramana - Madhyama</i>
<i>Sparśa - Ruksha</i>	<i>Satmya - Sarvarasa</i>
<i>Dṛk - Prakṛta</i>	<i>Satva - Avara</i>
<i>Ākṛti - Madhyama</i>	<i>Aharasakti - Avara</i>
	<i>Vyāyāmasakti - Avara</i>
	<i>Vayah - Madhyama</i>

Table 3: General examination of the patient.

Built – moderate	Weight – 65 kgs
Gait – hemiplegic	Oedema – absent
General appearance – normal	Anaemia – absent
Pulse rate – 88 beats/min	Icterus – absent
Respiratory rate – 20 breaths/min	Clubbing – absent
Blood pressure – 130/90 mm of Hg	Cyanosis – absent
Height – 5 feet 7 inches	Deformities – absent

Systemic examination

1. Central nervous system

A. Higher Mental Functions

- Appearance – ill look
- Behaviour – normal
- Consciousness – conscious and alert
- Orientation - well oriented with time, place and person

- Memory
 - Remote – intact
 - Immediate –intact
 - Recent – intact
- Speech – Normal

B. Motor system examination

Table 4: Motor system examination of the patient.

		Rt. UL	Lt. UL	Rt. LL	Lt. LL
Muscle Bulk	Mid arm	23.5cm	24 cm	-	-
	Mid thigh	-	-	35cm	37cm
	Mid calf	-	-	24cm	27cm
Muscle Tone		Hypertonic	Normal	Hypertonic	Normal
Muscle Power		2/5	5/5	3/5	5/5

Table 5: Deep tendon reflexes of the patient.

Deep reflexes	Rt. UL	Lt. UL	Rt. LL	Lt. LL
Biceps	4+	2+	-	-
Triceps	4+	2+	-	-
Supinator	0	0	-	-
Knee jerk	-	-	4+	2+
Ankle jerk	-	-	0	2+

Rt. UL – Right Upper Limb, Lt. UL – Left Upper Limb, Rt. LL – Right Lower Limb, Lt. LL – Left Lower Limb.

Table 6: Superficial reflexes of the patient.

Superficial reflexes	Right	Left
Corneal reflex	Present	Present
Abdominal reflex	Present	
Plantar reflex	Present	Absent

C. Sensory system examination

Table 7: Sensory system examination of the patient.

Superficial and Deep sensation	Right	Left
Pain	Intact	Intact
Temperature	Intact	Intact
Pressure	Intact	Intact
Touch	Intact	Intact
Vibration	Normal	Normal
Joint position	Normal	Normal

2. Cardiovascular system – S1S2 heard, no murmurs.

3. Respiratory system – B/L normal vesicular breath sounds heard.

Investigations

MRI – BRAIN (plain) – Dated 08/05/2021.

- Large Acute Infarct in left fronto-parietal, temporo-occipital lobes.
- Acute Infarcts in right centrum semiovale and coronaradiata.
- MRA revealed narrowing of bilateral ICA and right fetal PCA.

MODERN DIAGNOSIS

Patient was diagnosed as a case of Ischemic stroke.

AYURVEDIC DIAGNOSIS

Patient was diagnosed as a case of *Pakṣāghāta*.

Treatment Given

Table 8: Panchakarma treatment protocol.

Sittings of Treatment	Treatment Given	Observations
First Sitting (4/4/23 to 30/4/23)	<i>Abhyaṅga</i> with <i>Nirguṇḍī Taila</i> and <i>Nāḍī Sveda</i> for 3 days. <i>Mātra Vasti</i> with <i>Nirguṇḍī Taila</i> for 7 days. <i>Pañcaprasṛtika Kṣīra Vasti</i> in <i>Kālavasti</i> format i.e for 16 days.	Stiffness over Rt. UL relieved by 50%. Able to sit without support easily from lying position. Able to walk with help of stick support.
Second Sitting (10/10/23 to 24/10/23)	<i>Dīpana-Pāchana</i> with <i>Citrakādi vati</i> for 3 days. <i>Snehapāna</i> with <i>Mūrchita Tila Tailam</i> for 3 days. <i>Abhyaṅga</i> with <i>Nirguṇḍī Taila</i> and <i>Nāḍī Sveda</i> for 3 days. <i>Virecana karma</i> with <i>Trivṛttādi Tarpana</i> . <i>Samsarjana krama</i> for 3 days.	Appetite – Improved Attainment of <i>Samyak Snigdha Lakṣaṇas</i> . No. of vegas - 8 Able to flex his Rt. UL fingers but not able to extend. Able to lift the hand up to level of head.
Third Sitting (1/6/24 to 19/6/24)	<i>Abhyaṅga</i> with <i>Nirguṇḍī Taila</i> and <i>Nāḍī Sveda</i> for 3 days. <i>Nasya karma</i> with <i>Dhanwantaram 101 Āvarti Taila</i> for 14 days.	Able to extend his Rt. UL fingers to some extent. Able to lift the Rt. UL above head.

ASSESSMENTS AND RESULTS

Table 9: Assessment and results.

Before Treatment	After 1 st Phase	After 2 nd Phase	After 3 rd Phase
Walking Time – 19.3 sec/10mtrs on an average 3 times with support.	Walking Time – 11.4 sec/10mtrs on an average of 3 times without support	Walking Time – 9.6 sec/10mtrs on an average of 3 times without support	Walking Time – 8.4 sec/10mtrs on an average of 3 times without support
NIH Stroke Scale – 12/21	NIH Stroke Scale – 10/21	NIH Stroke Scale – 4/21	NIH Stroke Scale – 2/21
Barthel Index – 60/100	Barthel Index – 70/100	Barthel Index – 85/100	Barthel Index – 90/100
Muscle Power – 2/5 in Rt. UL	Muscle Power – 3/5 in Rt. UL	Muscle Power – 3/5 in Rt. UL	Muscle Power – 4/5 in Rt. UL
Muscle Power – 3/5 in Rt. LL	Muscle Power – 4/5 in Rt. LL	Muscle Power – 4/5 in Rt. LL	Muscle Power – 5/5 in Rt. LL
Stiffness over Right Upper Limb	Stiffness over Right Upper Limb relieved by 50%	Stiffness over Right Upper Limb relieved by 65%	Stiffness over Right Upper Limb relieved by 80%
Difficulty in Sitting from Lying position without support	Able to sit easily from lying position without support	Able to sit easily from lying position without support	Able to sit easily from lying position without support
Unable to flex and extend Rt. UL fingers.	Able to flex his Rt. UL fingers but not able to extend.	Able to extend his Rt. UL fingers to some extent.	Able to extend his Rt. UL fingers to some extent.

DISCUSSION

Pakṣāghāta is a *Vāta pradhāna* disorder characterized by loss of motor functions affecting one side of the body. In the present study, the clinical features of unilateral weakness, and functional impairment following Ischemic stroke can be correlated with *Pakṣāghāta*. The chronicity of the condition suggests predominance of aggravated *Vāta* associated with possible *dhatu kṣaya*, leading to impaired neuromuscular functions.

Rationale for *Basti Cikitsā*

Ācārya Caraka has emphasized *Vasti* as both *Ardha Cikitsā* (half of the treatment) and *Pūrṇa Cikitsā* (complete therapy) in Ayurveda^[8], highlighting its comprehensive therapeutic significance. In the *samprāpti* of *Pakṣāghāta*, *Vāta* is the predominant *doṣa* involved. *Basti Chikitsā* is considered the principal line of treatment for *Vāta* disorders. Although primarily indicated for *Vāta Vyādhi*, *Basti* is also effective in correcting the associated vitiation of *Pitta*, *Kapha*, and *Rakta*.

Pañchprasṛtika Kṣīra Vasti^[9] is a classical *Nirūha Vasti* indicated in *Vāta* dominant

disorders such as Pakṣāghāta, particularly in conditions associated with *dhātu-kṣaya*. When administered in a *Kāla Vasti* schedule, it provides both *śodhana* and *bṛmhaṇa* effects, thereby pacifying aggravated *Vāta* and improving neuromuscular function.

Mūrccchita Tila Taila^[10] used as *Anuvāsana Vasti* possesses *snigdha*, *guru*, and *uṣṇa* qualities that counteract the *rūkṣa*, *laghu*, and *śīta* attributes of *Vāta*, helping to reduce stiffness and improve muscle tone. According to *Ācārya Caraka*, *Vasti* is the prime therapy for *Vāta Vyādhi*, and its *vīrya*, when administered into the *pakvāsaya*, spreads systemically through the *srotas*, producing overall therapeutic effects.

The components of *Pañchprasṛtika Kṣīra Vasti*, including *Madhu*, *Saindhava Lavaṇa*, *Mūrccchita Tila Taila*, *Mūrccchita Go Ghṛta*, *Śatapuspā* and *Go Kṣīra*. *Madhu* facilitates better drug penetration and uniform mixing of ingredients, thereby enhancing absorption and systemic distribution. *Saindhava Lavaṇa*, owing to its *sūkṣma*, *snigdha*, and *uṣṇa* properties, aids in *Vātānulomana* and *srotoviśodhana*, which are essential in *Pakṣāghāta*. *Mūrccchita Go Ghṛta* possesses *bālya*, *rasāyana*, and *ojovardhaka* properties, contributing to tissue nourishment and neurological strengthening. *Mūrccchita Tila Taila*, with its *snigdha*, *guru*, and *uṣṇa* guṇas, effectively counteracts the *rūkṣa* and *śīta* qualities of aggravated *Vāta*, helping to reduce stiffness and improve motor function. *Go Kṣīra*, considered an *ājāsrika rasāyana*, provides *dhātupoṣaṇa* and *jīvanīya* effects, supporting recovery in chronic and debilitating conditions like *Pakṣāghāta*.

Rationale for Virechana Karma

Snehapāna with Mūrccchita Tila Taila was administered as a preparatory measure prior to *Virecana* to mobilize the morbid doṣas from the peripheral tissues (*śākhā*) towards the gastrointestinal tract (*koṣṭha*). *Mūrccchita Tila Taila*, described in the classics as the best among *sthāvara Sneha*^[11], possesses *madhura rasa*, *madhura vipāka*, and *uṣṇa vīrya*, which are effective in pacifying aggravated *Vāta*. *Snehapāna* facilitates softening and loosening of vitiated *doṣas* due to its *kledana* property, enhances penetration into micro-channels (*srotas*), and prepares the body for effective *śodhana*. Individualized dosing based on *agni* and *koṣṭha* ensured attainment of *samyak snigdha lakṣaṇas* without compromising digestive capacity.

Virecana Karma was administered using ***Trivṛttādi Tarpana***^[12], containing *Bhṛṅga*, *Elā*, *Nīlī*, *Trivṛt*, *Śarkarā*, *Kṣaudra*, *Dāḍima phala rasa*, and *Śaktu*. *Virecana* helps in *Vātānulomana*, *srotoviśodhana*, and removal of morbid doṣas through the lower pathway,

thereby restoring normal physiological functions. *Trivṛttādi Tarpana*, described as a safe and effective formulation for *Virecana*, possesses *recanā* and *bhedana* properties that facilitate smooth evacuation and metabolic purification. This sequential approach of *Snehapāna* followed by *Virecana* likely contributed to improved neuromuscular function and enhanced response to subsequent therapies in *Pakṣāghāta*.

Rationale for *Nasya Karma*

Nasya Karma is considered an important therapeutic procedure in disorders of the head and neck, as stated in the classical dictum “*Nāsa hi śirasō dvāram.*”^[13], indicating that the nose is the gateway to the head. In *Pakṣāghāta*, vitiated *Vāta* affects the functions of the central nervous system, leading to impairment of *indriya*, *vāk*, and *gati*.

Dhanwantaram 101 Āvarti Taila was selected for *Nasya* due to its strong *Vātaśāmaka* and *bālyā* properties. *Taila* is considered the best *sneha* for *Vāta* disorders because of its *uṣṇa*, *guru*, and *snigdha* qualities. Repeated processing (*āvartana*) with *Vātahara dravyas* enhances the potency of the oil, enabling deeper action in subtle channels.^[14] In this study, *Nasya* with *Dhanwantaram 101 Āvarti Taila* helped in pacifying aggravated *Vāta* and contributed to improvement in motor functions and gait.

CONCLUSION

The present study demonstrates the potential role of Pañchakarma therapies in the management of *Pakṣāghāta* with special reference to Ischemic stroke. A phased therapeutic approach involving *Basti Chikitsā*, *Virecana Karma*, and *Nasya Karma* resulted in significant improvement in neurological and functional outcomes, including motor function, gait, and activities of daily living. Notable reductions in walking time and NIH Stroke Scale scores, along with marked improvement in muscle power, Barthel Index, stiffness, and fine motor functions, were observed across successive treatment phases. These clinical benefits may be attributed to effective *Vātaśamana* and neuromuscular strengthening achieved through Pañchakarma interventions. Although the findings are encouraging, further well-designed clinical studies with a reasonably suitable sample size are required to substantiate the role of Pañchakarma in neurological rehabilitation.

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