Ayurvedic Management of *Vatika Pakshavadha* (Hemiplegia): A Case Study

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Abstract

Background: *Pakshavadha*, described in *Ayurveda* under the category of *Vāta Vyādhi*, is a neurological disorder caused by aggravated *Vāta doṣa* affecting one half of the body. Clinically, it is correlated with hemiplegia or post-stroke neurological deficits, particularly following ischemic cerebrovascular accidents. Stroke remains a leading cause of mortality and disability worldwide, often leaving patients with residual weakness, gait disturbances, and impaired speech despite modern rehabilitation. Ayurveda offers a holistic approach through *Vāta shamana*, *brimhana*, *balya*, Panchakarma therapies, and rehabilitative measures aimed at restoring neuromuscular coordination and independence. **Case Presentation**: A female patient presented with left-sided hemiplegia following ischemic cerebral infarction. MRI revealed multifocal acute internal watershed infarcts in the right cerebral hemisphere with age-related atrophy. Clinically, she exhibited severe weakness of the left upper and lower limbs, inability to walk independently, loss of functional movement in the left hand, impaired posture, and slurred speech. Ayurvedic assessment confirmed *Vātika Pakshavadha* involving *śirā, snāyu, dhamanī, māṃsa dhātu,* and *majjā dhātu*. **Intervention**: The patient was managed with a comprehensive *Ayurvedic* protocol including *abhyanga* with medicated oils, *swedana*, selected Panchakarma procedures, and internal medicines possessing *Vātahara, balya, brimhana, medhya,* and *rasāyana* properties. Rehabilitation exercises such as assisted mobilization, posture correction, limb movements, and speech clarity practices were incorporated. **Outcome**: After one and a half months of continuous treatment, the patient demonstrated marked improvement: independent walking, enhanced gait and posture, recovery of upper limb movements, improved grip strength, and clearer speech.
Conclusion: This case highlights the potential role of *Ayurveda* in post-stroke rehabilitation. Panchakarma procedures, internal medicines, and rehabilitative exercises acted synergistically to improve neuromuscular coordination, speech clarity, and functional independence. Although

limited to a single case, the encouraging outcome underscores the need for systematic studies with larger cohorts to establish Ayurveda's role in neurorehabilitation and hemiplegia management.

Keywords
Pakshavadha, *Vātika Pakshavadha*, Hemiplegia, Stroke Rehabilitation, Ischemic Stroke, Ayurveda, *Panchakarma*, *Vāta Vyādhi*, Neuromuscular Disorder, *Ayurvedic* Management

1. Introduction

Stroke is a leading cause of mortality and long-term disability globally[1]. The World Health Organization identifies stroke as the second leading cause of death and a major contributor to acquired disability in adults. Post-stroke hemiplegia, characterized by unilateral motor paralysis, significantly impairs quality of life and places a substantial burden on patients, caregivers, and healthcare systems.

In classical *Ayurvedic* literature, this clinical condition is described under the heading of *Pakshavadha* — a disorder categorized as a *Vatika Nanatmaja Vyadhi* (a disease caused exclusively by vitiated *Vata*). *Charaka Samhita* (*Chikitsa Sthana* 28/54–55) and *Ashtanga Hridayam* (Nidana Sthana 15/38)[2] elaborate upon the pathophysiology and clinical presentation of *Pakshavadha*, describing it as a condition in which vitiated *Vayu* seizes half of the body, desiccates the *Sira* (channels) and *Snayu* (tendons/ligaments), and renders one side of the body non-functional and devoid of sensation.

Contemporary medical management of stroke rehabilitation primarily involves physiotherapy, speech therapy, and neuromodulatory pharmacological agents. However, complete motor and functional recovery often remains suboptimal. *Ayurveda*, with its comprehensive approach encompassing *Śamana* (palliative) *Cikitsā* and *Pañcakarma* therapies, offers a promising framework for neuromuscular rehabilitation that has not been adequately explored in the existing literature.

This case study presents the clinical features, Ayurvedic diagnosis (*Samprāpti*), and therapeutic outcomes of a 62-year-old female patient diagnosed with *Śuddha Vātika Pakṣāghāta*, managed through a structured inpatient Ayurvedic treatment protocol over a period of 40 days.

The patient's written informed consent was obtained for publication of this Paper and any accompanying images in accordance with ethical standards for clinical case study.

2. Case Presentation

2.1 Patient Information and History

The patient's baseline demographic and clinical characteristics, including age, gender, socioeconomic status, comorbidities, premorbid condition, symptom onset, and prior hospitalization, are summarized in **Table 1**

Table 1. Demographic and Clinical profile of patient

PARAMETER	DETAILS
Age	62 years
Gender	Female
Socioeconomic Status	Low economic Status
Known Comorbidities	Hypertension and Type 2 Diabetes Mellitus (since 2 years); irregular medication compliance
Premorboid Condition	Completely functional approximately 2.5 Months Ago
Onset of Symptoms	Sudden
Prior Hospitalization	Admitted at Civil hospital, Ahmedabad for 5 days following the acute event.

2.2 Chief Complaints

At the time of presentation to the *Kayachikitsa* OPD, the patient reported the following symptoms (with their Ayurvedic nomenclature):

1. *Vama Hasta-Pada Shula* - Pain in the left upper and lower limbs
2. *Vama Hasta-Pada Alpa Karmanyata* - Markedly reduced voluntary movements of the left upper and lower limbs
3. *Hasta Paad pradeshe Sira Snayu Sankoch* – Atrophic changes in bilateral upper and limbs.
4. *Vak Aspashtatā* - Slurred and indistinct speech
5. *Daurbalyanubhuti* - Generalised body weakness
6. *Sharirbhar Hani* – Weight loss

2.3 Clinical Examination at Admission

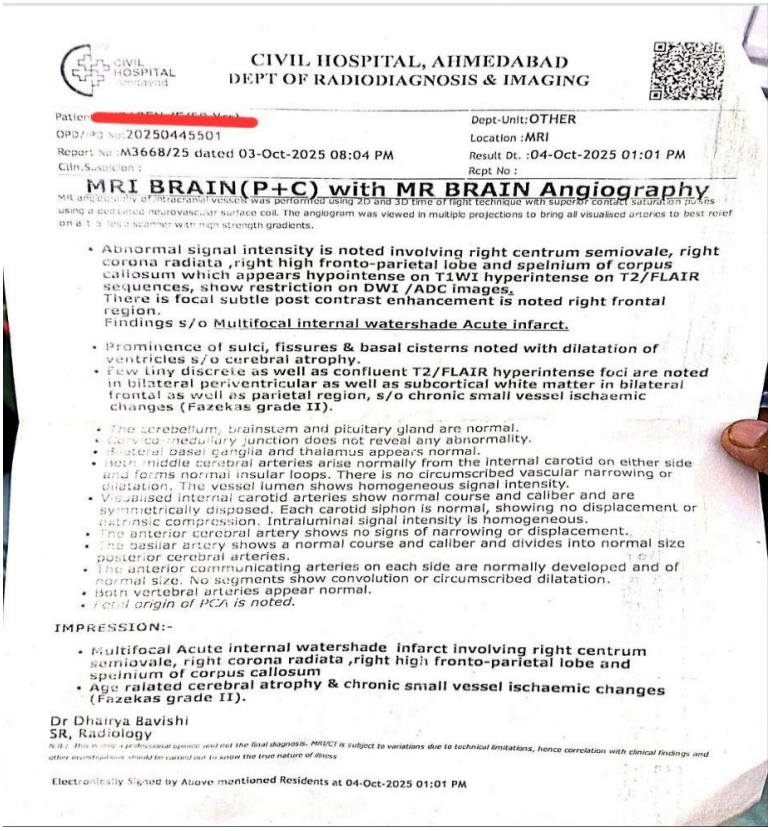
On physical examination at admission, the patient was unable to stand independently or walk unassisted. There was complete loss of voluntary movement of the left upper limb. Muscle tone assessment revealed spasticity on the left side with an upper motor neuron pattern of weakness.

2.4 Investigations

MRI Brain Findings: Multifocal acute internal watershed infarcts were identified in the following regions:

- Right centrum semiovale
- Right corona radiata
- Right high fronto-parietal lobe
- Splenium of the corpus callosum (Figure 1)

Additionally, age-related cerebral atrophy was noted. The pattern of infarction is consistent with haemodynamic compromise affecting border zone (watershed) territories, commonly seen in the setting of hypoperfusion secondary to hypertension and cardiovascular disease.



CIVIL HOSPITAL, AHMEDABAD
DEPT OF RADIODIAGNOSIS & IMAGING

Dept-Unit:OTHER
Location :MRI
Result Dt. :04-Oct-2025 01:01 PM
Rcpt No :

OPD/IPD No:20250445501
Report No:M3668/25 dated 03-Oct-2025 08:04 PM
Clin.Suspicion :

MRI BRAIN(P+C) with MR BRAIN Angiography

MR angiography of intracranial vessels was performed using 2D and 3D time of flight technique with superior contrast saturation pulses using a dedicated neurovascular surface coil. The angiogram was viewed in multiple projections to bring all visualised arteries to best relief on a 1.5 Tesla scanner with high strength gradients.

- Abnormal signal intensity is noted involving right centrum semiovale, right corona radiata ,right high fronto-parietal lobe and spelnium of corpus callosum which appears hypointense on T1WI hyperintense on T2/FLAIR sequences, show restriction on DWI /ADC images.
  There is focal subtle post contrast enhancement is noted right frontal region.
  Findings s/o Multifocal internal watershade Acute infarct.
- Prominence of sulci, fissures & basal cisterns noted with dilatation of ventricles s/o cerebral atrophy.
- Few tiny discrete as well as confluent T2/FLAIR hyperintense foci are noted in bilateral periventricular as well as subcortical white matter in bilateral frontal as well as parietal region, s/o chronic small vessel ischaemic changes (Fazekas grade II).
- The cerebellum, brainstem and pituitary gland are normal.
- Cervicomedullary junction does not reveal any abnormality.
- Bilateral basal ganglia and thalamus appears normal.
- Both middle cerebral arteries arise normally from the internal carotid on either side and forms normal insular loops. There is no circumscribed vascular narrowing or dilatation. The vessel lumen shows homogeneous signal intensity.
- Visualised internal carotid arteries show normal course and caliber and are symmetrically disposed. Each carotid siphon is normal, showing no displacement or extrinsic compression. Intraluminal signal intensity is homogeneous.
- The anterior cerebral artery shows no signs of narrowing or displacement.
- The basilar artery shows a normal course and caliber and divides into normal size posterior cerebral arteries.
- The anterior communicating arteries on each side are normally developed and of normal size. No segments show convolution or circumscribed dilatation.
- Both vertebral arteries appear normal.
- Fetal origin of PCA is noted.

IMPRESSION:-

- Multifocal Acute internal watershade infarct involving right centrum semiovale, right corona radiata ,right high fronto-parietal lobe and spelnium of corpus callosum
- Age ralated cerebral atrophy & chronic small vessel ischaemic changes (Fazekas grade II).

Dr Dhairya Bavishi
SR, Radiology

N.B.: This is only a professional opinion and not the final diagnosis. MRI/CT is subject to variations due to technical limitations, hence correlation with clinical findings and other investigations should be carried out to know the true nature of illness

Electronically Signed by Above mentioned Residents at 04-Oct-2025 01:01 PM

Figure 1. MRI Finding of Acute Internal watershed Infarct

Blood Glucose: Random blood glucose (RBS) at admission ranged between 180–200 mg/dL, indicating suboptimally controlled diabetes.

3. *Ayurvedic* Diagnosis

3.1 *Nidana* (Aetiology)

The patient had a history of hypertension and Type 2 diabetes mellitus, along with irregular medication adherence. Additionally, the patient belonged to a low socio-economic background and reported *Pramitāśana* (inadequate dietary intake) and consumption of *Rūkṣa Āhāra* (dry, non-nourishing food), contributing to nutritional deficiencies. These factors collectively indicate a state of *Rasa–Rakta kṣaya*[3]. *Furthermore*, advanced age, which is inherently associated with *Vāta*-predominance (*Vāta-prakopa kāla*), served as an additional predisposing factor.

From an *Ayurvedic* perspective, prolonged *Nidāna-sevana* (continued exposure to etiological factors), along with senility, leads to *Vāta prakopa* (aggravation of *Vāta doṣa*). Due to the *viśada guṇa* (drying quality) of aggravated *Vāta*, structural fragility (*śfutana*) may occur in the vascular channels, including cerebral capillaries, predisposing them to rupture and resulting in cerebral infarction.

The classical description of *Pakshavadha* from the Charaka Samhita (Chikitsa Sthana 28/54–55) states:[4]

हत्वैकं मारुतः पक्षं दक्षिणं वाममेव वा कुर्याच्चेष्टानिवृत्तिं हि रुजं वाक्स्तम्भमेव च

गृहीत्वाऽर्धं शरीरस्य सिराः स्नायूर्विशोष्य च पादं सङ्कोचयत्येकं हस्तं वा तोदशूलकृत्॥

Vitiated *Vayu*, after seizing half of the body and desiccating the *Sira* (vessels) and *Snayu* (tendons), causes contracture and painful dysfunction of either a limb or the hand. *Ashtanga Hridayam* (*Nidana Sthana* 15/38) similarly describes the disorder as *Ekanga roga* (monoplegia) or *Pakshavadha* (hemiplegia), with the affected half rendered functionless and devoid of sensation.

3.2 *Samprapti* (Pathogenesis)

The Ayurvedic evaluation revealed a predominance of Vata dosha (mainly Vyana Vayu and Prana Vayu) with involvement of Rakta, Mamsa, Meda, Majja, Snayu, and Sira. The pathology was associated with the Raktavaha Srotas, exhibiting Vimargagamana (Raktasrava), with the Mastishka as the primary site of disease. The condition was classified under Madhyama Roga Marga, indicating the involvement of the nervous system and deeper tissues. The detailed Samprapti Ghataka is presented in Table 2.

Table 2. *Samprapti Ghatak*

Samprati Ghatak	Description
Dosha	*Vata* (Predominantly *Vyana* and *Prana vayu*)
Dushya	*Rakta, Mamsa, Meda, Majja, Snayu, Sira*

Srotas	*Raktavaha*
Srotodusti	*Vimargagaman (raktasrav)*
Adhisthana	*Mastishka*
Roga Marga	*Madhyam Rogmarga* (Nervous System, Joints and deeper tissues)

This *Samprāpti* correlates well with the neuroanatomical findings of a watershed infarct involving the right cerebral hemisphere, leading to ischemia and consequent contralateral (left-sided) motor and speech deficits. This closely mirrors the Ayurvedic construct, wherein dysfunction of *Vyāna Vāyu* results in impaired motor activity, while derangement of *Prāṇa Vāyu* leads to disturbances in speech and higher neurological functions.

4. Treatment Protocol

4.1 Therapeutic Rationale

The overarching therapeutic goals were:
(1) *Vatashaman* — pacification of aggravated *Vata dosha*;
(2) *Balya* — strengthening of neuromuscular apparatus; and
(3) *Brumhana* — nourishment and rejuvenation of depleted tissues (*Dhatu*). Treatment was administered in two sequential phases based on the patient's clinical status and glycaemic control.

4.2 Phase I: Days 1–20

Considering the acute–subacute stage of the condition and the patient's elevated blood glucose levels (RBS 180–200 mg/dL), *Basti Karma* (medicated enema), although indicated, was initially deferred. This decision was made in view of the contraindication of *Anuvāsana Basti* in patients with *Prameha*. The following therapeutic interventions were therefore instituted (Table 3):

Table 3. Phase 1 Therapeutic Intervention

	Interventions	Dose/Method	Therapeutic Rationale
1	*Ashwagandha Churna* + *Kauncha Churna*	6 gms + 3 gms twice daily with Water	*Vatashaman*, *Balya*, *Rasayan*, reduces Spasticity and improves neuro muscular strength
2.	*Dashamoola Kwatha*	20 ml twice daily before meals	Potent *Vatahara* and *Shothahara*; reduces cerebral edema, relieves

			stiffness, improves circulation
3	*Sarvanga Abhyanga & Swedana*	Full-body with *Mashadi Taila Sarvanga nadi svedan*	Muscle relaxation, improved peripheral circulation, neuromuscular facilitation
4	*Nasya*	*Anu Taila*, instilled nasally	Best *Karma* for *Shirogata Vyadhi*; pacifies *Prana Vata*; improves speech and cognition
5.	*Eranda Taila*	3 tsp at bedtime for 20 days	*Snigdha Virechana*, as it is mentioned in *pakshaghat* chikitsa, also *snigdha virechana* is line of treatment mentioned in *Vyana vayu aavaran*

The classical reference from *Charaka Samhita* (*Chikitsa* Sthana 28) endorses the use of *Abhyanga* with *Sneha* followed by Virechana in the management of *Pakshavadha*:

"स्वेदनं स्नेहसंयुक्त पक्षाघाते विरेचनम ।"[5]

4.3 Phase II: Days 21–40

Following clinical stabilisation and normalisation of blood glucose levels within the first 20 days, the treatment protocol was upgraded to incorporate more targeted neuromuscular therapies (Table 5):

Table 4. Phase 2 Therapeutic Intervention

	Intervention	**Dose/Method**	**Therapeutic Rationale**
1	*Ashwagandha Churna + Kauncha Churna*	6 gms + 3 gms twice daily with Water	*Vatashaman, Balya, Rasayan*, reduces Spasticity and improves neuro muscular strength
2	*Mashatmaguptadi Kwath*	20 ml twice daily before meals	Specific action on neuromuscular Disorders; aids regeneration.
3	*Nasya with Mashadi taila*	Nasal Instillation	Continued support for speech, Sensory-motor coordination and

			cerebral function
4	*Sarvanga Abhyanga & Svedana*	*Mashadi taila* (Continued)	Maintenance of muscle tone, reduction of contractures, improved morbidity
5	*Matra Basti*	With *Mashadi taila* 30 ml	Key therapy for chronic *vata* disorders, nourishes *Snayu*, *Majja*, *Sira*, reduced Spasticity, improves Motor function

5. Results

5.1 Clinical Outcomes at 40 Days

After 40 days of integrated Ayurvedic management, the patient demonstrated significant clinical improvement. Functional recovery was observed in ambulation, left upper limb motor function, speech, glycemic control, and overall physical strength. A comparison of the patient's clinical status before and after treatment is presented in **Table 5.**

Table 5. Comparative clinical outcomes at baseline and after 40 days

Outcome Domain	**Before Treatment**	**After 40 days**
Ambulation	Unable to stand or walk	Walking independently
Left upper limb movement	Complete loss of movement	Marked improvement in voluntary motor control
Speech	Slurred and indistinct	Clear and Comprehensible
Blood Glucose (RBS)	180-200 mg/dL	Normalised within 20 days
General Weakness	Significant	Substantially reduced

The patient progressed from a state of complete functional dependence — unable to stand, walk, or communicate effectively — to regaining independent ambulation, meaningful left upper limb function, and intelligible speech within a 40-day inpatient Ayurvedic management protocol. Photographic documentation was obtained at baseline Day 1 (First Hospital Visit) (Figure 2) , Day 10 (Figure 3), Day 20 (Figure 4), and Day 30 (Figure 5), Day 40 (Figure 6) with the patient's informed consent, confirming the clinical improvements described above.

Figure 2 Patient's First visit to OPD

Figure 3. After 10 days of Treatment

Figure 4. After 20 days of Treatment

Figure 5. After 30 days of Treatment

Figure 6. After 40 days of Treatment

6. Discussion

This case demonstrates the potential of a structured, sequentially administered Ayurvedic protocol in achieving clinically significant functional recovery in a post-stroke hemiplegia patient. The theoretical basis, classical references, and pharmacological rationale underlying each therapeutic intervention are described below.

6.1 *Ashwagandha* (Withania somnifera) and *Kauncha* (Mucuna pruriens)

Ashwagandha Churna is a well-recognised *Rasayana* drug with established *Balya* (strength-promoting), *Vatashaman*, and adaptogenic properties. While *Ashwagandha* has *Tikta Rasa* (bitter taste), it does not provoke *Vata* aggravation due to its *Ushna virya* and *Guru* (heavy) *Gunas*, which counterbalance the drying tendency of *Vata*. *Kauncha* is similarly *Balya* and *Vatahara*, with experimental evidence supporting dopaminergic and neuroprotective effects[6]. The combination of these two drugs provided a sustained foundation for neuromuscular recovery throughout both phases of treatment.

6.2 Dashamoola Kwatha

Dashamoola is a classical polyherbal formulation of ten roots, collectively acting as a potent *Vatahara* and *Shothahara* (reduce cerebral edema) agent. In the acute-subacute phase, when the

risk of exacerbating edema was high, this formulation helped modulate the inflammation that happens due to Infarct and edema while simultaneously addressing *Vata* vitiation.

6.3 Mashatmaguptadi Kwatha [7]

This formulation was introduced in Phase II specifically for its documented efficacy in neuromuscular disorders. *Bhavaprakasha* explicitly endorses *Mashatmaguptadi Kwatha* for *Pakshavadha*.

माषा आतमगुप्ता वातारि वाट्यालकजटाश्रुतम ।
हिंगु सैन्धवसंयुक्त पक्षाघात विनाशयेत। भा.प्र

constituent drugs — *Masha* (Vigna mungo), *Atmagupta* (Mucuna pruriens), *Vatari*, and others combined with *Hingu* and *Saindhava* — synergistically promote *Snayu Pushthi* (tendon nourishment) and neuromuscular regeneration.

6.4 *Sarvanga Abhyanga* and *Swedana* with *Mashadi Taila[8]*

Topical application of *Mashadi Taila* through *Abhyanga* (therapeutic massage) followed by *Swedana* (sudation) was employed as a primary local therapy. This combination achieves *Snehana* (lubrication), and *Brimhana* (nourishment) at the peripheral neuromuscular level. *Abhyanga* facilitates transdermal absorption of the active phytoconstituents of *Mashadi* Taila, which include *Masha* (black gram), *Atmagupta*, and *Rasna* — all documented *Vatahara* agents.

माषसिन्धुबलारास्नादशमूलकहिङ्गुभिः। वचाशिवजटाख्याभिः सिद्धं तैलं सनागरम् ॥
ऊर्ध्व भक्ताशनाद् हन्याद् बाहुशोषापबाहुको। विश्वाचीमुद्धताञ्चापि पक्षाघातं तथाऽर्दितम् । भा.प्र

6.5 *Nasya* Karma

Nasya is prescribed in *Ayurveda* as the prime therapeutic modality for disorders affecting the structures above the clavicle (*Shirogata Vikaras*). In stroke rehabilitation, it targets *Prana Vata* — the sub-type of *Vata* governing cognitive function, speech, and sensory-motor integration. Anu Taila, administered in Phase I, is a classical medicated oil formulation with established *Medhya* (cognitive-enhancing) and *Vatashaman* properties. *Nasya* with *Mashadi Taila* in Phase II extended this benefit with more targeted neuroregenerative effects.

6.6 *Eranda Taila* (Castor Oil) as *Snigdha Virechana*

Eranda Taila acts as a Snigdha (unctuous) *Virecana*, facilitating the resolution of pathology at the Srotas level without causing excessive aggravation of *Vāta*, which is otherwise a potential risk with *Rūkṣa* (dry) purgatives. This was especially critical in this patient to reduce *Srotodusti* and create a conducive internal environment for the subsequent *Basti Karma*. *Virechana* is also mentioned in the chikitsa of *Vyana Vayu aavarana [9]*.

6.7 Matra Basti* with *Mashadi Taila

Basti Karma is considered the supreme therapy for *Vata*-predominant disorders in classical *Ayurveda*. *Matra Basti* — a small-volume medicated oil enema administered rectally — is

specifically indicated when the patient is debilitated or when high-volume *Basti* is not feasible. In this case, *Matra Basti* with *Mashadi Taila* (30 ml) was commenced following glycaemic stabilisation in Phase II. The *Pakvashaya* (large intestine) is considered the primary seat of *Vata* according to *Ayurveda*; *Basti* acts directly on this site, achieving systemic *Vata* pacification, nourishment of *Snayu* and *Majja*, and restoration of neuromuscular function[10].

7. Conclusion

This case study demonstrates that a structured, two-phase *Ayurvedic* inpatient protocol—integrating *Śamana Auṣadhi*, *Pañcakarma* therapies (Nasya, Basti), and localized *Abhyanga–Svedana*—can achieve clinically meaningful neuromuscular rehabilitation in post-stroke Vātika *Pakṣāghāta*. The sequential titration of therapy based on glycaemic status underscores the importance of individualized Ayurvedic case management.

The outcomes observed in this patient, including independent ambulation, improved motor function of the left upper limb, and enhanced speech clarity, were achieved within 40 days of treatment.

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