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CASE STUDY

A Clinical Ayurvedic Management on Post-Chikungunya Arthropathy as *Aamvata*-Case Study

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ABSTRACT

Introduction: Post-viral arthritis (PVA) is a condition characterized by temporary inflammatory symptoms, such as joint pain, stiffness, and swelling that develop following viral infections. As described by *Acharya Charaka* in the *Charaka Samhita*, complications following fevers can lead to a *Vata*-dominant *Sannipataja* condition, marked by the aggravation of *Vata Dosha*. This imbalance manifests as joint pain, stiffness, a sense of heaviness, headaches, and dizziness, often involving *Pitta* and *Kapha Doshas* as well.

Objectives: This study aims to evaluate the effectiveness of Ayurvedic interventions, particularly Panchakarma therapies, such as *Panchtikatksheer basti* and *Anuvasan basti* in the management of PVA.

Materials and Methods: A 34-year-old female patient visited the outpatient department with a history of Chikungunya fever 7 days prior. She presented with body ache, fever, and reddish patches all over the body. Three to four days later, after the appearance of red rashes, she developed joint stiffness, joint pain, and mild swelling in the face, as well as in the upper and lower limbs. Severe stiffness in both knees caused significant difficulty in walking without assistance. The treatment protocol included *Panchakarma* therapies, along with oral Ayurvedic medications.

Results: The patient exhibited marked improvement in joint flexibility and experienced substantial relief from symptoms. After 16 days of Ayurvedic treatment, there was a significant reduction in joint pain, stiffness, and swelling.

Conclusion: This case highlights the potential of Ayurvedic therapies, including *Panchakarma* and *Shamana* treatments, in effectively managing PVA. These approaches not only provide symptomatic relief but also help correct underlying Doshic imbalances, thereby enhancing joint mobility and overall quality of life.

1. INTRODUCTION

Chikungunya is a mosquito-borne viral illness caused by the Chikungunya virus, which is primarily transmitted by *Aedes aegypti* and *Aedes albopictus* mosquitoes.[1] The disease is characterized by the sudden onset of high-grade fever, rashes, myalgia, and severe polyarthralgia.[2,3] While the fever and rashes typically subside within a week, in many patients, joint pain persists for weeks to months, significantly affecting quality of life. This condition, commonly referred to as Chikungunya-induced arthritis, is a post-viral inflammatory arthritis that clinically mimics rheumatoid arthritis in its chronic form.

From an Ayurvedic perspective, the clinical presentation of Chikungunya-induced arthritis bears a strong resemblance to *Aamvata,* a disorder resulting from the combined aggravation of *Vata Dosha* and accumulation of *Ama* (toxins formed due to impaired digestion). The root cause is traced to the weakening of *Agni* (digestive fire) during the viral illness. When the digestive strength is compromised, the body fails to metabolize food and toxins effectively, resulting in *Ama* formation. Simultaneously, the viral infection leads to *Vata Prakopa* (aggravation of *Vata*), which facilitates the movement of *Ama* into the

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Sandhis (joints), where it gets lodged and causes symptoms, such as pain, stiffness, swelling, and restricted movements.

Classical Ayurvedic texts describe *Aamvata* as:

Ama combines with aggravated *Vata*; it migrates and localizes in joints, resulting in the clinical condition known as *Aamvata*. The prodromal and acute symptoms of Chikungunya (fever, body ache, anorexia, heaviness) followed by chronic joint involvement, support this Ayurvedic pathogenesis.

In terms of *Samprapti* (pathogenesis), the vitiation of *Vata Dosha* and formation of *Ama* leads to *Srotorodha* (blockage of body channels), particularly affecting *Asthivaha* and *Majjavaha Srotas*, resulting in joint inflammation and chronic pain. This condition is often associated with *Rasa Kshaya, Rakta Dushti*, and *Ojakshaya*, reflecting a weakened immune system and poor tissue nutrition.[4-6]

1.1. Clinical Findings

The patient presented with the chief complaints of generalized body ache, high-grade fever, and reddish rashes distributed over the entire body for the past 4 days. She had taken allopathic treatment during this acute phase, which provided temporary relief.

However, after 3–4 days, she began to experience severe joint pain, stiffness, and swelling, initially affecting the knees and ankles, and later involving the wrists. The swelling gradually extended to the face, upper limbs, and lower limbs. She also reported a significant reduction in appetite, disturbed sleep, and a feeling of fatigue and heaviness in the body. Her bowel habits remained normal. On clinical examination, tenderness and swelling were observed in the affected joints with morning stiffness. A faint residual maculopapular rash was still visible on the whole body.

1.2. Diagnostic Approaches

Accurate diagnosis is based on clinical evaluation supported by laboratory findings:

- C-reactive protein, Anti-cyclic citrullinated peptide, erythrocyte sedimentation rate.

1.2.1. Personal history

- Name-xyz Bowel-clear
- Age-34 years Appetite-decreased
- Marital status-Married Height-165 cm
- Occupation-nursing officer Weight-59 kg
- Diet-veg Sleep-decreased

1.2.2. Clinical examination

- General condition: Moderate
- Pulse rate: 76/min, regular and of full volume
- Heart rate: 76/min
- Blood pressure: 122/74 mmHg (Right arm, sitting)
- Respiration rate: 20/min.

1.2.3. Ashtavidha Pariksha

- *Naadi* (Pulse): *Vata kapha Pradhana Nadi*, irregular
- *Mutra* (Urine): Quantity: 900–1100 mL/day, Frequency: Normal, Color: Normal, Odor: Foul smell
- *Mala* (Stool): Consistency: normal, Color: Yellow, Frequency: Regular
- *Jihva* (Tongue): coated, Color: Normal
- *Shabda* (Speech): Normal
- *Sparsha* (Touch): joint tenderness and swelling, dryness in skin
- *Drik* (Vision): Normal vision
- *Akriti* (Body Built): Normal.

1.2.4. Dashavidha Pariksha[7]

- *Prakriti* (Constitution):
- *Sharirika* (Physical): *VataPittaja*
- *Manasika* (Mental): *Rajasika*
- *Vikriti* (Disease State): Prakritivisam samvet
- *Dosha: Vata, kapha*
- *Dushya* (Tissue elements affected): *Rasa* (Plasma), *Rakta* (Blood), *Mamsa dhatu, Asthi dhatu, Shleshmaka kapha*
- *Adhisthana* (Seat of the disease): *Sandhi, snayu* (ligaments), *peshi* (muscles), *Kaya* (whole body), *Amashaya* (gastrointestinal tract)
- *Srotodushti* (Channel impairment): *Sanga, Vimargagamana* (detour)
- *Saara* (Essence): *Madhyama* (Average)
- *Samhanana* (Physique): *Madhyama* (Average)
- *Pramana* (Metabolism): *Madhyama* (Average)
- *Satmya* (Dietary preferences): *Avar* (reduced due to improper *ahar-vihar*)
- *Satva* (Mental state): *Madhyama* (Average)
- *Ahara Shakti* (Digestive power): *Mandagni*
- *Vyayama Shakti* (Physical strength): *Avar*
- *Vaya* (Age): *Yuva* (30–60 years).

1.3. Assessment

The Assessment criteria of subjective[8-11] and objective parameter[10,12,13] is given in Table 1.

1.4. Interventions

1.4.1. Shodhan chikitsa[14]

1.4.1.1. Panchatikta ksheera basti- kaal basti karma

Typically contains:

1. *Panchatikta Dravya* (Five bitter herbs):
   - *Nimba* (Azadirachta indica)
   - *Vasa* (Adhatoda vasica)
   - *Guduchi* (Tinospora cordifolia)
   - *Patola* (Trichosanthes dioica)
   - *Kantakari* (Solanum xanthocarpum)
2. *Ksheera* (Cow's milk) - Acts as a *Vata* pacifier and nourishing agent
3. *Ghrita -Panchatikta Ghrita*
4. *Madhu* (Honey) - *Yogavahi* and enhances absorption
5. *Saindhava Lavana* (Rock salt) Improves bioavailability and action
6. *Kalka Dravya* (Herbal paste) - From *Panchatikta* herbs.

Anuvasan basti – Brihat saindhavadi taila (60 mL).

The schedule of *kala basti* is given in Table 2.

Shamana chikitsa[15,16] is given in Table 3.

2. RESULTS

After 16 days of treatment, significant relief was observed in joint swelling, stiffness, and systemic symptoms. Improved appetite, reduced fatigue, and normalized inflammatory markers suggested effective *Aam pachana, Shoth harana*, and *Vata shamana*. The results are shown in Tables 4-6.

3. DISCUSSION

Post-Chikungunya arthritis presents with symptoms closely resembling *Aamvata*, such as joint pain, swelling, stiffness, fatigue, and appetite loss, particularly following a febrile viral illness. According to Ayurveda, *Aamvata* occurs due to the accumulation of *Aama* (undigested metabolic waste) and aggravated *Vata dosha*, often triggered by *mandagni* and improper dietary habits during fever convalescence.

In this case, the patient developed polyarthralgia and edema after Chikungunya fever, which is a classical clinical manifestation of *Aamvata*. The Ayurvedic management was therefore planned with a focus on *Aam pachana* (digestion of *Aama*), *Vata shaman*, and *Shoth hara* (anti-inflammatory) *chikitsa*.

- *Singhnad Guggulu* was administered for its *deepana-pachana*, anti-inflammatory, and *Vata-Kapha shamak* properties. Its ingredients, such as *Triphala, Gandhak*, and *Eranda Taila,* aid in removing *Aama* and relieving joint inflammation.

A combination of *Aamvatari Ras, Godanti Bhasma, Punarnava Mandoor*, and *Arthocare Churna* was given to strengthen the treatment outcome:

- *Aamvatari Ras* is a classical formulation specifically indicated in *Aamvata*. It aids in *Aama* digestion and relieves pain and stiffness by balancing *Vata* and *Kapha*
- *Godanti Bhasma*, a calcium-based mineral preparation, supports the bone tissue and alleviates headache, fever-related symptoms, and muscle pain associated with post-viral states
- *Punarnava Mandoor* has proven efficacy in reducing inflammation, edema, and correcting anemia, often seen in chronic inflammatory conditions
- *Arthocare Churna* (a proprietary or composite formulation) likely contains herbs beneficial for joint health, *Shoth hara*, and *Vata* pacifying, thus complementing the overall line of treatment.

3.1. *Panchatikta Ksheer Basti*

Panchatikta Ksheer Basti is a *niruha basti* formulation prepared using *panchatikta kashaya* (five bitter drugs*), ksheera* (milk), and medicated oils/ghee.

It has been traditionally used in *Vatavyadhi, Asthi-Sandhigata Roga*, and Chronic inflammatory conditions. This *Basti* has *tridosha* pacifying properties with a special emphasis on *Vata* and *Kapha*, and its ingredients help in *Aama pachana, Shotha hara,* and *Asthi dhatu poshana.*

- The *tikta rasa dravyas* (like *Nimba, Patola, Vasa, Guduchi,* and *Kantakari*) act as *deepana-pachana*, help clear *Srotorodha* (channel obstruction) caused by *Aama*, and are also anti-inflammatory.
- *Ksheera* (milk) acts as a *balya* and *rasayana*, reducing the roughness and degeneration caused by *Vata*.
- This *basti* helps restore joint mobility, relieves pain and stiffness, and improves *dhatu agni* and *srotas* function.

3.2. *Brihat Saindhavadi Taila Anuvasana Basti*

Brihat Saindhavadi Taila, administered as *Anuvasana Basti*, was selected for its specific indication in *Vata vyadhi* with *Aama* and *Shotha* features. This taila is *Vata-Kapha hara*, *shothahara*, and *snehana* in nature, formulated with *Saindhava lavana, Dashamoola, Eranda*, and other *Vataghna dravyas*.

- It acts locally at the sandhi level, reducing stiffness and improving *snayu-sandhi bala.*
- The *sneha* property counters the *rukshata* and *laghuta* induced by chronic *Vata* aggravation.
- It enhances the effectiveness of *Niruha Basti* by preparing and lubricating the colon, facilitating better absorption and deeper systemic action.

When used alternately with *Panchatikta Ksheer Basti*, it potentiated the outcomes by ensuring synergistic *Vata shamana*, joint lubrication, and detoxification, while preventing dryness and fatigue associated with repeated decoction-based bastis.

4. CONCLUSION

In the present case of Post-Chikungunya Arthropathy, the clinical features resembled *Aamvata* as described in Ayurveda. The patient showed significant improvement through a well-planned Ayurvedic treatment protocol aimed at *Aam pachana, Vata shamana, Shoth hara,* and *Agni deepana.*

The internal administration of *Singhnad Guggulu, Aamvatari Ras, Godanti Bhasma, Punarnava Mandoor,* and *Arthocare Churna* effectively reduced systemic inflammation, improved joint mobility, and enhanced digestion and strength. The inclusion of *Panchatikta Ksheer Basti* (as *Niruha Basti*) and *Brihat Saindhavadi Taila Anuvasana Basti* played a pivotal role in addressing the chronicity and *Vata-Kapha* dominance of the condition. This illustrates the classical Basti *Chikitsa* approach in *Vatavyadhi* as described in *Charaka Samhita*, where Basti is referred to as "*Ardha Chikitsa*" due to its comprehensive therapeutic potential.

This case highlights the efficacy of a classical Ayurvedic approach in managing post-viral inflammatory joint disorders and reinforces the potential of *Basti* therapy and *Rasayana*-based oral medication in chronic *Aamvata*-like conditions. Early Ayurvedic intervention can offer safe, effective, and sustainable recovery without dependency on long-term analgesics or steroids.

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All the authors contributed equally in the design and execution of the article.

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8. ETHICAL APPROVALS

This study does not require ethical clearance as it is a case study.

9. CONFLICTS OF INTEREST

Nil.

10. DATA AVAILABILITY

This is an original manuscript and all data are available for only review purposes from the principal investigators.

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Table 1: Subjective grading

1. Pain (Visual Analog Scale [VAS] 0–10):
0: No pain (VAS 0).
1: Mild pain, tolerable without medication (VAS 1–3).
2: Moderate pain, occasionally requiring medication (VAS 4–6).
3: Severe pain, frequent need for medication, affecting daily activities (VAS 7–10).
2. Stiffness Duration (Morning Stiffness):
0: No stiffness.
1: Stiffness lasting<15 min
2: Stiffness lasting 15–30 min
3: Stiffness lasting>30 min or persisting throughout the day.
3. Swelling (Patient-reported feeling of heaviness or swelling):
0. No swelling.
1. Mild swelling, no visible changes
2. Moderate swelling, visible but not restricting movement.
3: Severe swelling, visible and restricting joint movement.
4. Functional Limitation:
0: No limitation, can perform all activities.
1. Mild difficulty in performing some activities.
2: Moderate difficulty, dependent on support for some activities.
3: Severe limitation, completely dependent on support for basic activities.
Objective grading
1. Range of Motion (ROM) limitation (% of normal ROM):
0: Full ROM
1: ROM reduced by <25%.
2: ROM reduced by 25-50%.
3: ROM reduced by >50%.
2. Tenderness (Tenderness Grading Scale):
0: No tenderness.
1: Tenderness on palpation, no grimace.
2: Tenderness with grimace or flinch.
3: Tenderness with withdrawal or verbal complaint
3. Functional Mobility (Timed up and go test):
0: Completes in <10 s (normal).
1: Completes in 10–15 s (mild limitation).
2: Completes in 15–20 s (moderate limitation).
3: Takes >20 s (severe limitation).

Table 2: Schedule of *kala basti*

Days	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Basti	A	A	N	A	N	A	N	A	N	A	N	A	N	A	A	A

Table 3: *Shamana chikitsa*

S. No.	Drug	Content	Dose	Anupan
1.	*Singhnad Guggulu*	*Haritaki, Amalaki, Bibhitaki, Shudda Guggulu, Shudda gandhaka, Murchita Erenda taila.*	2 tablet BD After food	Lukewarm water
2.	*Aamvatari ras* *Godanti bhasma* *Purnarnava mandoor* *Arthocare churna*	*- Sodhit parad, shodhit gandhak, shodhit guggul, haritaki, bibhitaka, amalaki, chitraka moola, erand taila* *- Godanti (gypsum)* *- Punarnava, mandoor Bhasma, Nishoth, Sunthi, Pippali* *- Methidana, Chandrasoor, Kaloongi, Ajwayan, Haritaki, Aaswganda*	250 mg 250 mg 250 mg 3 g BD (before food)	*Madhu*

Table 4: Investigation before and after treatment

Test	Before	After	Normal range
Erythrocyte sedimentation rate	38	24	0–20 mm/h
Anti-cyclic citrullinated peptide	20	7	7–17 U/mL
Rheumatoid factor IgA	Reactive	Non-reactive	
C-reactive protein	3.4	0.8	0.3–1 mg/dL

Table 5: Subjective criteria

Symptoms	Before treatment	After treatment
Pain	2	0
Morning stiffness	1	0
Swelling	2	0
Functional limitation	1	0

Table 6: Objective criteria

Symptoms	Before treatment	After treatment
Range of motion	1	0
Tenderness	2	1
Functional mobility	1	0