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Ayurvedic Approach to Managing Hyperuricemia: A Case Study

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ABSTRACT

Hyperuricemia is a metabolic disorder that occurs due to elevated serum uric acid levels, a byproduct of purine metabolism. This condition may affect individuals across different age groups and is commonly associated with gout, a form of inflammatory arthritis characterized by intense joint pain. In Ayurvedic literature, such presentations align closely with Vatarakta, a condition arising from the vitiation of Vata and Rakta Doshas.This case involves a 66-year-old male who presented with persistent bilateral knee discomfort, along with severe pain, swelling, and redness localized to the right great toe. The symptoms were present for approximately three years and significantly impacted his mobility and quality of life.He was administered a classical Ayurvedic regimen from April 28, 2024, to May 23, 2024, consisting of Kaishora Guggulu, Samshamani Vati, Kokilakshadi Kwatha, and Sarivadyasava. Over the course of the treatment, notable symptomatic relief was observed. Inflammation, pain, and tenderness gradually subsided, and his serum uric acid levels reduced from 8.50 mg/dl to 5.83 mg/dl.This case highlights the potential of Ayurvedic formulations in effectively managing gouty arthritis, offering both symptomatic relief and biochemical improvement

Keywords: *Ayurveda, Vatarakta*, Gout, Hyperuricemia.

1. INTRODUCTION

Uric acid is the final metabolic product formed from the breakdown of purine compounds. When its concentration rises beyond normal physiological levels, a condition known as hyperuricemia occurs, which is a primary risk factor for developing gout [1Elevated serum uric acid levels may result in the accumulation of monosodium urate crystals in joints and tissues, contributing to inflammatory conditions such as gout.[2]. Globally, gout has become increasingly prevalent, with an estimated 41.2 million people affected, 7.4 million new cases annually, and nearly 1.3 million disability-adjusted life years (DALYs) recorded in 2017 alone [3]. Current epidemiological data suggest that the condition affects 1–4% of the adult population, with rates on the rise due to factors such as poor dietary habits, frequent consumption of high-purine foods, lack of physical activity, obesity, and associated metabolic disorders [4].

Given the limitations and side effects of long-term use of conventional pharmacological treatments, Ayurveda may offer a holistic and safer therapeutic approach. In Ayurvedic medicine, gout is often identified with Vatarakta, and traditional formulations aim to detoxify the system, balance the doshas, and provide symptomatic relief.

2. CASE PRESENTATION

A 62-year-old male presented to the Outpatient Department (OPD) of Panchakarma, Government Ayurvedic College & Hospital, Patna, with chronic complaints of bilateral knee joint pain and severe pain in the right toe, accompanied by redness, swelling, and tenderness persisting over the past three years. The patient reported no significant musculoskeletal issues prior to the onset of symptoms. However, he recalled that the discomfort began insidiously around three years ago, initially localized to the right toe and progressively affecting both knees.

He had previously sought treatment from allopathic practitioners, where he was prescribed analgesics and anti-inflammatory medications. While these provided temporary relief lasting approximately four months, the symptoms subsequently recurred and worsened over time.

The patient followed a non-vegetarian diet and had a normal appetite. His bowel movements and urination were regular, and he reported no allergies or addictions. Additionally, he had been suffering from hypertension for the past ten years. During consultation, his blood pressure was recorded as 130/90 mmHg. He had been taking amlodipine 5 mg daily but had not been on any antihypertensive treatment for the past 2 months.

3. CLINICAL FINDINGS

The patient exhibited severe pain in the right toe, marked by recurrent episodes of redness, localized tenderness, warmth, and swelling, consistent with inflammatory joint involvement. A comprehensive diagnosis was made based on the patient's medical history, detailed clinical examination, and relevant laboratory investigations, including serum uric acid levels and inflammatory markers.

TIMELINE OF EVENTS

The sequence of events is detailed in Table 1.

Date	Clinical Finding	Intervention
28.04.2024	Severe pain in the right toc (VAS 10) with Erythema (Grade 2), Oedema (Grade 2), Tenderness (Grade 2) WOMAC Score-53.96%	Advised for Blood investigation (Serum Uric acid Blood urea, FBS, PP, Sr. Creatine).
29.04.2024	1. Serum Uric acid-8.50 mg/dl 2. Blood urea-18.6 mg/dl 3. FBS-122 mg/dl 4. PP-161 mg/dl 5. St creatine-1.4 mg/dl	1. *Kaishora Guggulu* 500mg two times with warm water Before food 2. *Samshamani Vati* 500 mg two times with water. Before food. 3. *Sarivadyasava* 20 ml two times with an equal amount of water. After food 4. *Kokilaksha Kwatha* 20 ml two times with an equal amount of lukewarm water before food 5. Avoid: Nov-veg food and pulses (Arhar) and including protein reach foods/lentils/pulses
2.05.2024	Reduction in the severity of symptoms. Pain VAS 8), Erythema (Grade-1), Oedema (Grade 1), Tenderness (Grade 1)	1. *Kaishora Guggulu* 500 mg two times with warm water Before food 2. *Samshamam Vati* 500 mg two times with water. Before food. 3. *Sarivadvasava* 20 ml two times with an equal amount of water. Afler food 4. *Kokalaksha Kwatha* 20 ml with an equal amount of lukewarm water 5. Avoid: Nov-veg food and pulses (Arhar) and including protein reach foods/lentils/pulses
07.05.2024	Reduction in the severity of symptoms. Pain (VAS 7), Erythema (Grade-0), Oedema (Grade 0), Tenderness (Grade 1)	1. *Kaishora Guggulu* 500mg bd with warm water. Before food 2. *Samshamani Vati* 500 mg bd with water Before food. 3. Sarivadyasava 20 ml bd with an equal amount of water. After food 4. *Kokilaksha Kwatha* 20 ml with an cqual amount of lukewarm water 5. Avoid: Nov-veg food and pulses (Arhar) and including protein reach

		foods/lentils/pulses
	Reduction in the severity of symptoms. Pain (VAS 6), Erythema (Grade (0), Oedema (Grade 0), Tenderness (Grade 0)	1. *Kaishora Guggulu* 500mg two times with warm water. Before food 2. *Samshamani Vati* 500 mg two times with water. Before food. 3. *Sarıvadyasava* 20 ml two times with an equal amount of water. After food 4. *Kokilaksha Kwatha* 20 ml two times with an equal amount of lukewarm water 5. Avoid Nov-veg food and pulses (Arhar) including protein reach foods/lentils/pulses.
10.05.2024	Reduction in the seventy of symptoms. Pain (VAS 3), Erythema (Grade 0), Oedema (Grade 0), Tenderness (Grade 0) WOMAC Score-22.91%	Stop medication Advice for investigation Serum Uric acid, Blood urea, FBS, PP, Sr. Creatine
17.05.2024	1. Scrum Uric acid-3.4 mg/dl 2. FBS-101 mg/dl 3. PPBS-133 mg/dl	-
23.05.2024	1. Scrum Uric acid-5.83 mg/dl 2. Blood urea-15.4 mg/dl 3. FS-111 mg/dl 4. PPBS-121 mg/dl 5 Sr creatine-1.2 mg/dl	-

DIAGNOSTIC ASSESSMENT

In Ayurvedic texts, Vatarakta—a condition closely resembling gout—is broadly categorized into two types: Uttana (superficial) and Gambhira (deep-seated). Uttana Vatarakta primarily affects the Twak (skin) and Mamsa (muscle tissues). It manifests with characteristic symptoms such as Akunchana (muscular contraction), Ayama (vascular dilation), Bheda (piercing pain), Daha (burning sensation), Gaurava (heaviness), Kandu (itching), Rakta Twak (reddish skin discoloration), Ruja (pain), Shyava Twak (bluish or dusky skin), Sphurana (throbbing), Suptata (numbness), and Toda (pricking sensation).

In contrast, Gambhira Vatarakta is considered a more severe and deep-seated manifestation of the disease, involving deeper Dhatus (such as Rasa, Rakta, Mamsa, and Asthi). This form is characterized by a more intense clinical presentation, including Shwayatu Grathita (hard, nodular swelling), Paka (suppuration), Daha (intense burning sensation), Kanjata (limping or lameness), Shyava (cyanotic discoloration), Pangu (restricted mobility or paraplegia), Bhrisharti (severe pain), Vidaha (deep internal burning), Tamra Twak (coppery discoloration of the skin), Ruja (persistent pain), Sphurana (throbbing sensation), Adhika Purvaruk (exacerbated prodromal pain), Toda (sharp, pricking pain), Vatasya Sarvasharira Charana (systemic vitiation and movement of Vata throughout the body), and Angasya Vakrikarana (limb deformities or contortions).[5].

Many of these *Ayurvedic* descriptions closely align with the symptoms of gouty arthritis. Furthermore, *Ayurvedic* treatment approaches for *Vatarakta* have demonstrated positive results in managing gouty arthritis. From the perspective of modern medical science, the final diagnosis for the patient was gouty arthritis or hyperuricemia.

DIAGNOSIS AND TREATMENT APPROACH

In this case, symptoms compatible with *Sandhivata* seem to have developed from the accumulation of aggravating *Vata Dosha* in the joints (*Sandhi*). But given the episodic character of the disorder and the great pain, redness, and inflammation in the right toe joint, *Vata* and *Rakta Dhatu* seem to be more deeply involved. These clinical traits are quite similar to the Ayurvedic condition known as *Vatarakta*, which is customarily described as a disorder involving vitiation of Vata and Rakta, typically corresponding with gout in modern terms. Consequently, the disease was classified as *Vatarakta* following careful

evaluation of the patient's presenting symptoms and indications, and medication was designed accordingly.

THERAPEUTIC FOCUS AND TREATMENT TIMELINE

Emphasizing both Dosha pacification and Rakta purification, the therapeutic strategy in this case was grounded on traditional Ayurvedic management techniques for Vatarakta. These formulas were chosen since their proven effectiveness in treating Vatarakta:

• **Kaishora Guggulu**, advised for blood purification and Vata-Rakta vitiation [6] .

• **Kokilakshadi Kwatha**, usually consumed for Vatarakta [7]

• **Sarivadyasava** lowers inflammatory symptoms and helps cool Rakta Dhatu [8].

Apart from these, Samshamani Vati was included for its Jwara Ghana and Ama Pachana qualities, hence facilitating systematic detoxification and immunological control. The drugs were given according to traditional dosages, and the patient's reaction was under continuous observation.

Table 1 lists the methodically recorded development of clinical symptoms and treatment procedures.

ASSESSMENT CRITERIA

SUBJECTIVE ASSESSMENT

Pain, tenderness, edema, and erythema were evaluated using a **grading system** (Visual Analogue Scale - VAS) [9]. (Table 2).

Sr.No.	Investigation	29.04.2024	10.05.2024	23.05.2024
1.	Serum Uric Acid	8.5 mg/dl	6.4 mg/dl	5.83 mg/dl
2.	Blood Urea	14.6 mg/dl	-	11.1 mg/dl
3.	FBS	112 mg/dl	101 mg/dl	101 mg/dl
4.	PPBS	151 mg/dl	130 mg/dl	121 mg/dl
5.	Sr. Creatine	1.2 mf/dl	-	1.1 mg/dl

OBJECTIVE ASSESSMENT

Serum uric acid levels were measured.

Follow-up and Treatment Outcome

Throughout the therapy period, the patient was routinely watched in the OPD for both subjective and objective assessments. The presenting symptoms show a clear improvement. Significant declines in pain, discomfort, edema, and erythema:

• Bilateral knee joint soreness totally disappeared.

• Grade 0 was assigned for tenderness, edema, and erythema.

• Visual Analogue Scale (VAS) measurements of pain severity dropped from 10 to 3.

• Serial uric acid levels dropped from 8.5 mg/dL to 5.8 mg/dL.

Over the period of treatment—which lasted till 23.05.2024—no negative consequences or problems were recorded. All drugs were stopped when therapy ended. According Ayurvedic recommendations, the patient was instructed to follow Pathya Ahara (dietary plan) and Vihara (lifestyle changes) exactly.

For a further one month, follow-up observations were conducted during which no new complaints or recurrence of symptoms were recorded, so indicating continuous therapy efficacy.

4. RESULTS AND DISCUSSION

Modern treatment mostly uses febuxostat (a non-purine analogue) and allopurinol (a purine analogue) to control hyperuricemia by lowering xanthine oxidase activity, hence lowering serum uric acid levels [10]. While febuxostat may cause side effects like dizziness, dry mouth, and, in some circumstances, cardiovascular issues, allopurinol is well recognized to cause hazards including renal impairment and hypersensitivity events. These restrictions have spurred growing interest in Ayurvedic treatment strategies for Vatarakta (gout), which provide a complete, dosha-based approach with a rather minimal side effect risk. Currently under intensive investigation in clinical research as possible long-term gout management

alternative or complementary tactic are Ayurvedic treatments.

AYURVEDIC MEDICINES USED IN VATARAKTA TREATMENT

Kaishora Guggulu [11]

Widely recommended in the management of Vatarakta (gout), Kaishora Guggulu is a conventional polyherbal formulation consisting of 11 components with anti-inflammatory, antibacterial, antiallergic, and Rakta-shodhaka (blood-purifying) activities. The therapeutic effectiveness of the formulation is ascribed to the cooperative actions of its main components:

• The foundation is Guggulu (Commiphora mukul), known for its strong anti-inflammatory and lipid-lowering properties.

• Comprising Haritaki (Terminalia chebula), Bibhitaki (Terminalia bellerica), and Amalaki (Emblica officinalis), triphala provides a mix of analgesic, rejuvenative, and antioxidant effects. With its immunomodulating, antipyretic, and anti-inflammatory effects, guduchi (Tinospora cordifolia) makes a major contribution.

• Trikatu, a combination of Shunthi (Zingiber officinale), Maricha (Piper nigrum), and Pippali (Piper longum)—enhances absorption of the formulation and delivers efficient pain-relieving and deepana-pachana (digestive stimulant) activities.

Other ingredients with detoxifying, laxative, and nephroprotective properties include Vidanga (Embelia ribes), Trivrit (Operculina turpethum), and Danti (Baliospermum montanum), thereby helping to clear accumulated toxins and lower the likelihood of uric acid stone development. Pharmacologically, Guggulu, Guduchi, Shunthi, and Trivrit's anti-inflammatory properties help to lower joint swelling and pain. While Bibhitaki improves renal protection, which is vital in patients with raised serum uric acid levels, Amalaki and Shunthi are especially helpful in treating Toda (pricking pain), Sparsha Asahyata (tenderness), and Sandhi Shula (joint pain). Pippali's immunomodulating action helps to strengthen systemic immunity even more [13]. Positive results using Kaishora Guggulu in cases of Uttana Vatarakta (superficial gout) were reported in a 2010 clinical study by P. Ramachandran et al.; symptoms including pain, burning sensation, tiredness, tenderness, edema, skin discoloration, and limited joint mobility were significantly improved [14].

Role of *Samshamani Vati*

Made from Guduchi (Tinospora cordifolia), Samshamani Vati is a generally utilized formulation in the treatment of metabolic and inflammatory diseases. In disorders involving Ama and Vata-Rakta vitiation especially, it is helpful. Modern pharmacological research supports the major immunomodulating and anti-inflammatory properties of both aqueous and alcoholic Guduchi extracts. These actions serve to reduce systemic uric acid accumulation's consequences including joint inflammation [15]. Furthermore, acting as a Rasayana, guduchi's regenerative and tissue-protective qualities help to prevent repeated inflammation and swelling [16].

***Sarivadyasava*[17]**

Sarivadyasava is traditionally used for *Prameha* (urinary disorders/diabetes) and *Vatarakta*(gout). Its key ingredients include:

- *Sariva* (Hemidesmus indicus), *Musta* (Cyperus rotundus), *Lodhra* (Symplocos racemosa), *Nyagrodha* (Ficus benghalensis), *Ashwattha* (Ficus religiosa), *Ushira* (Vetiveria zizanioides), *Guduchi* (Tinospora cordifolia), *Haritaki* (Terminalia chebula)

Targeting the Mutravaha Srotas (urinary system), Sarivadyasava is a classical Ayurvedic fermented formulation especially useful in reducing Pitta Dosha and therefore helps to balance Vata Dosha. It helps eliminate metabolic pollutants by urine, therefore supporting the detoxification process and improving renal performance. Herbs with cooling and diuretic effects that help to eliminate aggravating Doshas via the urinary system include Nyagrodha (Ficus benghalensis), Ashwattha (Ficus religiosa), and Ushira (Vetiveria zizanioides). Furthermore acting as moderate purgatives, Svarnaparni (Desmodium gangeticum) and Haritaki (Terminalia chebula) help the gastrointestinal pathway of toxin excretion to be supported and help to facilitate systemic detoxification.

Kokilakshadi Kwatha

Because of its uricosuric, anti-inflammatory, antioxidant, and diuretic actions, kokilakshadi katha is a commonly used herbal decoction in the treatment of Vatarakta (gout [18]). Key components in the formulation are:

•Guuduchi (Tinospora cordifolia) has strong immunomodulating and anti-inflammatory action;

•Kokilaksha (Asteracantha longifolia) is a well-known diuretic that helps uric acid be excreted.

• Pippali (Piper longum) lowers Ama (toxins) and improves absorption of active components.

Working together, these herbs lower joint inflammation, increase uric acid excretion, and stop hyperuricemia's consequences and recurrence [19]. These formulations taken together help Ayurvedic management of Vatarakta complement Shodhana (detoxification) and Shamana (palliative) approaches.

5. CONCLUSION

Ayurveda defines Vatarakta (gout), a disorder marked in this case as involving the simultaneous vitiation of Vata Dosha and Rakta Dhatu. Aimed at systemic detoxification and Dosha removal, the treatment program for Vatarakta historically consists of Shodhana therapies including Raktamokshana (therapeutic bloodletting), Virechana (purgation), and Basti (medicated enema). In this case, however, ancient Ayurvedic medicines were used in a conservative Shamana manner—that is, palliative care. This approach produced notable lower serum uric acid levels and considerable relief in clinical complaints.

The good clinical result in this case emphasizes Ayurvedic pharmacotherapy's possibilities for gout management. For more general integration into evidence-based clinical practice, it also emphasizes the need of thorough, large-scale clinical trials establishing the efficacy, safety, and standardizing of Ayurvedic therapies.

Conflict of interest: None

Source of support: None

Declaration of Patient Consent

The authors confirm that they have obtained a patient consent form, in which the patient or caregiver has granted permission to report the case, including images and clinical details, in the journal. They acknowledge that the patient's name and initials will remain undisclosed, and all possible measures will be taken to ensure anonymity. However, absolute confidentiality cannot be guaranteed

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