



# An Integrated Approach To Tophaceous Gout With Special Reference To *Gambhir Vatarakta* : A Case Study

Prof. Dr. Sachinkumar Sahebrao Patil,<sup>1\*</sup>

Ph.D. (*Kayachikitsa*), M.D. (*Kayachikitsa*), M.B.A. (H.R.), M.A. (*Sanskrit*), P.G.D.E.M.S., D.Y.A.

Professor and H.O.D., Ph.D. Guide, M.D. Guide, Department of Kayachikitsa, M.A.M.'s Sumatibhai Shah Ayurveda Mahavidyalaya Malwadi, Hadapsar, Pune-411028, Maharashtra State, India.

Dr. Vaibhav Raju Badgujar,<sup>2</sup>

M.D. (*Kayachikitsa*) Scholar, Department of *Kayachikitsa*; M.A.M.'s Sumatibhai Shah Ayurveda Mahavidyalaya Malwadi, Hadapsar, Pune-411028, Maharashtra State, India.

## **Abstract :**

Gout is a metabolic disease that develops when the body's monosodium urate (MSU) and monohydrate crystals cause a pathological reaction in the joint or periarticular tissues. Mostly found in soft tissues like cartilage at different regions of the body or in the connective tissues around joints. The primary anomaly that causes gout is hyperuricemia. Analgesics, anti-inflammatory medications, glucocorticoids, therapy to decrease uric acid, Xanthine oxidase inhibitors, and uricosuric medications are the standard treatments for gouty arthritis. When renal insufficiency, gastrointestinal problems are present, these medications may be hazardous and poorly tolerated.

Gouty Arthritis of contemporary medical science, by its similarity in symptoms and etiological factors, can be correlated to *Vatapittadhika Vatarakta*, characterized by the symptoms like *Sandhi Shula* (joint pain), *Sopha* (swelling), *Raga* (Erythema), *Sparshasahatva* (Extreme tenderness in affected joints) and *Stambha* (Joint stiffness). So, it can be correlated to Gouty Arthritis.

Classics have reported a number of herbal and herbomineral formulations that are beneficial for gouty arthritis. In this study we describe the successful use of ayurvedic medications in a difficult case involving a 60 year old male patient who had disabling effects on his hands and feet due to polyarticular tophaceous gouty arthritis.

## **INTRODUCTION :**

Gout is a metabolic disorder where uric acid levels exceed its higher limit 6.8 mg/dL because uric acid excretion through kidney was impaired. The excess uric acid deposited in the joint and soft tissues as needle-shaped crystal of monosodium urate (MSU) known as tophus.<sup>(1,2)</sup> The most common sites are skin overlying joints and helix of the ears. Usually, the tophi are formed after a mean period of 10 years of disease duration. This may lead to nephrolithiasis and renal. These changes manifest certain radiologic

changes asymmetrical, erosive arthritis with preserved articular surface in gouty arthritis. Bone erosions may be seen in advance stage due to tophi deposition.<sup>(3)</sup>

In Tophaceous gout, there are deposits of monosodium urate in the skin around the joints, particularly those of the hand and the feet. Additional sites of tophi formation include the helix of the ear and the olecranon and prepatellar bursae.<sup>(3)</sup> The lesions are firm, yellow to yellow white in colour, and occasionally discharge a chalky material. Their sizes vary from 1 mm to 7 cm.<sup>(4)</sup>

## CASE REPORT :

A 60 years old male patient presented at Kayachikitsa O.P.D. at Sane Guruji Arogya Kendra, Malwadi, Hadapsar, Pune. by occupation the patient is a farmer.

He has long history of pain, swelling, and redness over bilateral small and large joints, with difficulty in walking and standing, as well as pain, swelling, and deformity of small and large joints of left hand and feet. He complains of burning sensation over the joints from approximately 6-7 years and wound over left feet and left hand due to pus formation in tophi of hand and feet. Initially, he consulted a local practitioner and was treated with NSAID'S giving him symptomatic relief for a short period of time. Subsequently, the patient developed recurring incidents of polyarthritis with painless nodules on left hand and feet. Then he consulted a rheumatologist and he was advised to take naproxen, colchicine and methyl prednisolone orally.

After few months patient visited Sane Guruji Arogya Kendra, Malwadi, Hadapsar, Pune. The initial assessments were made. He was afebrile, pulse was 98/minute, blood pressure was 130/80 mm of Hg. Respiratory system parameters were normal. In cardiovascular examination, there were no added sounds. Echocardiography showed Ejection Fraction (EF) 45% and ECG was suggestive of old ischemic changes. Locomotor system examination demonstrated muscular atrophy of left upper and lower limbs and multiple deformities of wrists, proximal interphalangeal joints (PIP), metacarpophalangeal joints of both hands, and metatarsophalangeal joints of feet. Non-inflammatory subcutaneous nodule of variable sizes (1 to 2 cm) were also present over the joints with purulent discharge.

Biochemical investigation shows haemoglobin 8.4 g/dL, WBC count 8610/ul Platelets Counts of 244000/ $\mu$ L, ESR of 64/mm, Uric Acid of 13.2 mg/dL, Creatinine of 2.84 mg/dL, negative rheumatoid factor, and C-reactive protein 12 mg/L. X-ray confirms the disease as joint space was reduced, subarticular cysts were present at PIP of middle finger of the left hand. Bilateral reduction of joint spaces and presence of subarticular cysts.

## DRUG AND TREATMENT PROTOCOL GIVEN

1. *Amruta Guggulu* 500 mg thrice a day,
2. *Eranda Sneha* 2 tsf once a day,
3. *Mahamanjishthadi Kashaya* 4 tsf twice a day,
4. *Ropan Taila* for local application over wound,
5. Tablet Zycolchine 0.5 mg twice a day for 10 days,
6. Tablet MP 4 mg once a day for 10 days and
7. Tablet Naprosyn SR 750 mg (Naproxen 750 mg) once a day for 10 days

Follow-up was done on every 7<sup>th</sup> day during the 1<sup>st</sup> month and later once in 15 days for next 2 months. Assessment was made on the basis of subjective and objective parameters both before and after treatment. After administration of drug by the end of 3<sup>rd</sup> week of the treatment, the patient reported relief from pain. He was able to do his day-to-day life work. He was instructed to strictly follow the prescribed diet regime and lifestyle. In next 20 days, improvement was seen Blood report revealed that uric acid was significantly reduced.

**Criteria for assessment-(Subjective & Objective) Table (a, b, & c):**

<b>(a):</b>	<b>Tenderness</b>
<b>Tenderness:</b>	
<b>Grade</b>	
<b>0</b>	No tenderness
<b>1</b>	Mild tenderness on palpation
<b>2</b>	Mild tenderness with grimace
<b>3</b>	Severe tenderness with withdrawal

**b): Visual Analogue Scale (0-10 Scale) Grade**

<b>0</b>	No pain
<b>1-3</b>	Mild pain
<b>4-7</b>	Moderate pain
<b>8-10</b>	Severe pain

**c): Criteria for assessment-objective Objective criteria**

- Hb
- ESR
- Serum Uric Acid

## DISCUSSION

*Guggulu*, a chief component of *Amrita Guggulu* has proven to have anti-inflammatory and anti oxidant properties. *Amrita Guggulu* also has action on alleviating the symptoms caused by the hyper immune reaction triggered by uric acid deposition in joints. *Guduchi* is described as the best drug for the disease *Vatarakta* and it has actions on *Rasavaha Srotas* and *Raktavaha Srotas* and it improves circulation in the affected joints also.<sup>(5,6,7)</sup>

In *Vatrakta* the main vitiated dosha is '*Vatadushti*' (Reference, *Ch. Su.* 20/19) & '*Rakta*' is associated with '*Pitta*', also according to *Pittaprakopa* treatment of choice is *Virechana*. Also, *Virechana* is highly effective in *Vatarakta* because it is caused by metabolic disturbance. Hence, *Erandsneha Virechana* has anti-inflammatory, analgesic, properties and effective in *Vatarakta*.

There are three phases to wound healing: the inflammatory phase, the proliferative phase, and the remodeling phase. Each phase requires specific conditions for wound healing. Most of the plants in the formulation are having predominance of *Katu*, *Tikta* and *Kashaya Rasa Tikta* and *Katu Rasa* have the *Krimighana* action (anti-bacterial and anti-fungal action). Wound healing is aided by antibacterial activity. Additionally, *Katu Rasa* has an antiinflammatory effect known as *Shothahara*. *Tikta*, *Kashaya Rasa Dravyas* also have the property of drying which aids in wound healing and reduces the period of inflammation that causes wounds to take longer to heal. Due to its haemostasis property, *Sheeta Veerya* plays a more significant role during the inflammatory phase of the clotting process. The analysis of *Vrana Ropana* herbs indicates predominance of *Madhura*, *Kashaya Rasa* having *Madhura Vipaka* and *Sheeta Veerya*. It could be because *Madhura Rasa* aids in *Dhatu Poshana* (tissue regeneration) and *Kashaya Rasa Dravyas* aid in wound closure through their *Sandhanakarma* (tissue binding) actions. The majority of wound-healing herbs are said to also have antimicrobial properties. The plant's anti-inflammatory, antioxidant, and antimicrobial properties enhances wound healing.<sup>(8,9)</sup>

All drugs in composition of *Mahamanjisthadi Kwatha* works as *Varnya*, *Kapha-Pitta Shamak* & *Srotoshodhak* property due to *Tikta-Katu-Ruksh Guna*, *Ushna Veerya*, *Katu Vipak*. Its's *Rasa*, *Guna*, *Veerya*, *Vipak* & *Prabhava* all these qualities works together and help in *Samprapti Vighatana* (i.e. break the pathogenesis of disease). Majority of the drugs are *Tridosha hara* (pacify aggravated dosa). In *Mahamanjisthadi Kwatha*, *Manjistha* works as *Rakta-Prasdaka* (blood purifier), *Varnya* (complexion). It has anti-inflammatory property also.

The treatment approaches toward gouty arthritis has been changed a lot in recent years. The pharmacological measures NSAIDs, Colchicine, and Steroids should not be used for a longer period due to their side effects. Hence, the use of *Ayurvedic* medicine in case of arthritis increases day by-day. Medicinal plants and mineral drug from *Ayurveda* science is very helpful in the treatment of hyperuricemia and gout. *Ayurveda* encourages incorporation of lifestyle modification along with specific herbs and minerals to cure various diseases. The effects of such *Ayurvedic* drugs are purely based on observation. Hence an integrated approach towards the management of *Vatarakta* proves to be more beneficial.

## CONCLUSION

This case showed significant improvement during and after the combined therapeutic intervention. From the above case, it can be clearly concluded that *Chikitsa* mentioned in *Vatarakta* by *Acharyas* can clearly bring down the Symptoms as well as the serum uric acid level.

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Author's short biography:



Dr Sachinkumar Sahebrao Patil M.D. (Kayachikitsa) Medicine, Ph.D. (Kayachikitsa) Medicine, M.B.A. (H.R.), M.A. (Sanskrit), P.G.D.E.M.S., D.Y.A. Professor and H.O.D., Ph.D. Guide, M.D. Guide, Department of Kayachikitsa, M.A.M.'s Sumatibhai Shah Ayurved Mahavidyalaya, Malwadi, Hadapsar, Pune – 411028, Maharashtra State, India. He is working as an Ayurved Physician and Panchakarma Specialist since last 18 Years. He is a BOARD OF STUDIES MEMBER for Paraclinical Ayurved Board of Maharashtra University of Health Sciences (M.U.H.S.), Nashik. He is a FACULTY MEMBER for Post Graduate Paraclinical Ayurved Board of M.U.H.S., Nashik. He is working as a Research Faculty for Research Methodology and Medical Statistics for M.U.H.S., Nashik. He is a Ph.D. GUIDE for 08 Ph.D. Kayachikitsa (Medicine) students and M.D. GUIDE for 28 M.D. Kayachikitsa (Medicine) students out of which 21 M.D. Kayachikitsa (Medicine) students have been already passed out. His research experience is 15 Years. His research interests in Anxiety disorder, Diabetes Mellitus, Obesity, Hyperacidity, Diarrhoea, Anaemia, Infertility etc.