Available online on 15.04.2025 at http://jddtonline.info

Journal of Drug Delivery and Therapeutics

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Case Report

Management of Gouty arthritis with hyperuricemia by herbal Unani formulation: A case report

Dr. Nasir Jamal [1], Dr. Mohd Anus Ansari [1]*, Dr. Naseem Akhtar Khan [2]

[1] Medical Officer (Unani), Directorate of AYUSH, Government. of National Capital Territory of Delhi, India.

[2] Head of Department, Department of Moalejat, Ayurvedic & Unani Tibbia College, Karol Bagh, University of Delhi, New Delhi, India.

Article Info:

Article History:

Received 09 Jan 2025
Reviewed 26 Feb 2025
Accepted 23 March 2025
Published 15 April 2025

Cite this article as:

Jamal N, Ansari MA, Dr. Khan NA, Management of Gouty arthritis with hyperuricemia by herbal *Unani* formulation: A case report, Journal of Drug Delivery and Therapeutics. 2025; 15(4):5-8 *DOI: http://dx.doi.org/10.22270/jddt.v15i4.7041*

*Address for Correspondence:

Dr. Mohd Anus Ansari, Medical Officer (Unani), Directorate of AYUSH, Government. of National Capital Territory of Delhi, India.

Abstract

Gout is a term representing a heterogeneous group of genetic and acquired diseases manifested by hyperuricemia with a characteristic acute inflammatory arthritis induced by the crystals of monosodium urate monohydrate. In Unani classical literature, Gouty arthritis has been described under the name of *Niqris*. According to *Ibn Hubal* (1122-1233 A.D), the word *Niqris* is obtained from the term *'Anqoroos'* which indicates 'the joint of great toe'. Since this disease classically affects the first metatarsophalangeal joint, hence it has been given this name *'Niqris'*. The prevalence of gout is 1-4% of the general population. The individuals affected with gout are at increased risk of Hypertension, Diabetes Mellitus, Metabolic Syndrome, Renal stones, Kidney and Cardiovascular disorders. Unani System of Medicine has an impressive role in the management of gouty arthritis through different drugs which have hypouricemic, anti-inflammatory, analgesic, purgative and diuretic properties. The present paper deals with a case report in which a 24 years old male patient having serum uric acid concentration of 7.8 mg/dL with severe pain, redness and swelling of left great toe and left knee was treated with formulation of different herbal drugs with the aim to evaluate the efficacy of these drugs and avoid complications. Patient has shown excellent and admirable results after the treatment.

Keywords: *Unani*, Gout, Hyperuricemia, *Niqris*, Uric acid.

1. Introduction:

Gout is a metabolic disease that most often affects middle-aged to elderly men and post-menopausal women. It results from an increased body pool of urate with hyperuricemia. It typically is characterized by episodic acute arthritis or chronic arthritis, caused by deposition of monosodium urate monohydrate crystals in joints and connective tissue, tophi and risk for deposition in kidney interstitium or uric acid nephrolithiasis.[1] Hyperuricemia is most logically defined as a plasma (or serum) uric acid concentration > 420 µmol/L (or 7.0 mg/dL).[1,2] Increased serum uric acid level above a specific threshold is a requirement for formation of uric acid crystals. Despite the fact that hyperuricemia is the main pathogenic defect in Gout, many people with hyperuricemia do not develop gout or even form uric acid crystals. So, it is thought that other factors such as genetic predisposition share in the incidence of Gout. Early presentation of gout is acute joint inflammation that is relieved by NSAIDs and colchicine. Renal stones and tophi are late presentation. [5,6]

Clinical stages of gout consist of asymptomatic hyperuricemia, acute gouty arthritis, chronic and inter-critical out. [4,7] **Risk factors** for hyperuricemia include obesity, hypertension, hyperlipidemia, insulin resistance, chronic alcoholism, intake of red and organ meat, renal insufficiency, and use of diuretics.[7] **The prevalence** of gout is about 1-2% of the western population with a strong male predominance (>10:1). Rates of gout approximately doubled between 1990 and 2010. This rise is believed to be due to increasing life expectancy, changes in diet, lack of exercise, increase incidence of obesity, metabolic syndrome and hypertension.[2,3,4,] Decreasing the sodium urate levels to lower than 6mg/dl is key to prevent recurrent attacks, acute flares and morbidity associated with chronic gout. Hyperuricemia can result from increased production of urate, decreased excretion of uric acid, or a combination of two processes.[2,3,4] The gout is characterized by rapid onset of pain primarily in first metatarso-phalangeal joint, reaching maximum severity in 2-6 hours i.e., *Podagra*. There is profound tenderness and marked swelling over the affected joint with overlying red and shiny skin.[1,2]

The description of Gout in *Unani* system of medicine is available from the very beginning. According to *Ibn Hubal* (1122-1233 A.D), the word *Niqris* is obtained from the term '*Anqoroos*' which indicates 'the joint of great toe'. Since this disease classically affects the first metatarsophalangeal joint, hence it has been given this name '*Niqris*'.[8,9,10,11] It was known among the *Egyptians* as *Podagra* (foot pain), typically of big toe, as early as 2640 BC. *Hippocrates* (Buqrat, 460-377B.C), the father of medicine, described *Niqris* as "the disease of kings" due to its alliance with a rich diet and wealthy men who overindulged in food and drinks (Alcohol).[13,14,18] *Ibn Hubal* (1122-1233 A.D), in his famous book "*Kitab Al Mukhtarat Fit Tibb*" said that *Niqris* is a type of *Waja-ul-Mufasil* and commonly involve both feet. According to him, *Niqris* especially affects great toe joint and due to which it becomes red, inflamed and painful.[8] According to *Hakeem Ajmal Khan* (1868-1927 A.D); "pain of all the joints of body is called *Waja-ul-Mufasil* and pain of great toes of feet is called *Niqris*.[12] Etiology of Gout described in classical *Unani* literature comprises of *Sue' mizaj maddi* (Imbalance of temperament due to change in matter) [8,18], weakness of joints, which result in accumulation of causative matter (*Maddah-e-Niqris*) in the joint and thus leading to the development of *Niqris.* [8,9.13,18] The important predisposing factors responsible for the development of *Niqris* are excessive eating, excessive drinking (Alcohol), excessive intercourse particularly just after meals, sedentary lifestyle, heredity, luxurious living and lack of exercise. [8,9,11,18,19] Gouty matter (*Maddah-e-Niqris*) is basically a by-product of liver metabolism, *Niqris* is one of those diseases, which is related to the hepatic and tissue metabolism (*Hazm-e-Kabidi* or *Hazm-e-Chaharum*).[9]

In *Unani* system of medicines certain drugs are being used such as *Majoon Suranjan*, *Habb-e-Suranjan*, *Safoof-e-Suranjan*, *Habb-e-Niqris*, *Habb-e-Sibr, Majoon-e-Chobchini* etc for the treatment of gout.[9,13,18,19]

In conventional system, the treatment presently available for gout consists of NSAIDs (e.g., Indomethacin, Diclofenac, Naproxen etc), Oral colchicine, Glucocorticoids, Xanthine oxidase inhibitor (Allopurinol, Febuxostat) and Uricosuric agents (Probenecid, benzbromarone etc).[1,15,16] Although a large number of above said drugs are available for the treatment of gout in Modern system of medicine but recurrence of the disease and side effects of the medicine are very troublesome.

The principle of treatment of gout as described in classical *Unani* text is *Mudirat* (Diuretics), *Mus'hilat* (Purgatives) & *Moariqat* (Diaphoretics).[9] According to Modern Physiology, the excretion of uric acid takes place through urine, faeces and perspiration.[17] Hence, the principle of treatment for Gout in *Unani* is at par with the scientific explanation given in modern physiology. Based on this *Usool-e-Ilaj*, five herbal drugs are selected from the list of classical *Unani* drugs.

2. Case report:

2.1 Presenting concern: A 24-year-old male patient visited Ayurvedic & Unani Tibbia College on 19/12/2021 for treatment. The patient complained of pain, redness, swelling and restriction of movement in left great toe and left knee for two days. The pain was severe in nature causing difficulty in movement of affected joints. The pain was so much excruciating that awoke the patient up at night from sleep and he could not even wear socks easily. Earlier he had developed similar pain several times and consulted an orthopedic who advised him to go for Non-steroidal anti-inflammatory drugs, xanthine oxidase inhibitors, and steroids but the patient was not interested in such therapy, so he approached us in search of alternative remedy. His personal history revealed that he had reduced appetite, regular bowel, disturbed sleep and normal micturition.

2.2. Clinical findings: The vitals of the patient revealed that he was afebrile, having blood pressure; 120/80 mm of Hg, heart rate; 76/minute and respiratory rate; 14/minute. His abdominal examination showed no organomegaly and non-tenderness. His left knee and great toe elicited tenderness, redness, swelling and difficulty in mobility of joints.

2.3. Investigations: The investigations like Serum Uric acid, inflammatory markers such as CRP and ESR were carried out at baseline, on 7th day, 28th day and on 42nd day at the time of termination of treatment. The results of these investigations are as:

Investigations	Baseline	7th day	28th day	42nd day
Serum Uric Acid	7.80	6.8	6.1	5.4
CRP	8	0.9	0.9	1.2
ESR	14	12	10	10

2.4. Therapeutic intervention: The patient was given 50% hydro-alcoholic extracts of *Suranjan* (Colchicum luteum), *Elva* (Aloe barbadensis), *Qurtum* (Carthamus tinctorious), *Halaila Zard* (Terminalia chebula) and *Zanjabeel* (Zingiber officinalis) procured from Vital Herbs, Uttam Nagar, Delhi-110059. The identity and authenticity of the extracts were further rechecked and certified by Dr. Sayeed Ahmad, Associate professor, Research Natural Product Laboratory, Department of Pharmacognosy and Phytochemistry, School of Pharmaceutical Education and Research, Jamia Hamdard, New Delhi. The patient took this drug in the dose of 1 capsule (300mg) orally twice daily with plain water for 42 days.

3. Results:

In this case, the prognosis of the disease was explained to the patient and consent was taken that if any emergency occurs, then he would be shifted to the higher center. The treatment was then started and the patient was observed for improvement of signs & symptoms and uric acid level on different intervals. Serum uric acid decreased from 7.80 at the baseline to 6.8 on 7th day, 6.1 on 28th day and 5.4 at the end of treatment. C-Reactive protein values observed were 8

the baseline, 0.9 on 7th day, 0.9 on 28th day and 1.2 on 42nd day. Values of E.S.R reduced from 14 at the baseline to 12 on 7th day, 10 on 28th day and 10 at the termination therapy. There was significant improvement in pain, swelling, tenderness and redness of affected joints.

4. Conclusion:

The use of herbal medicines dates back to our earliest civilizations. The undesirable effects of contemporary medications have already drawn attention of the public to herbal remedies. There is an urgent need to foster faith and trust towards the safer indigenous system by proving its efficacy in the treatment of various ailments in order to build acceptance and awareness among the people. The herbal therapy can play a crucial role in reducing hyperuricemia, inflammatory markers such as ESR and CRP, pain, tenderness and swelling of joints affected as the drugs have *Mudirat* (Diuretics), *Mus'hilat* (Purgatives), *Moariqat* (Diaphoretics), *Muhallil awram* (Anti-inflammatory) and Musakkin alam (Analgesic) properties. The case study revealed that the aforementioned formulation is secure and efficient in treating gouty arthritis with hyperuricemia. The efficacy of the formulation is proved as the patient showed complete recovery after the treatment.

Conflict of interest: Nil.

Funding: Nil.

Acknowledgement: The authors are highly thankful to Dr. Mohd. Khursheed Alam (Assistant Professor, Department of ENT, Hayat Unani Medical College & Research Centre, Lucknow) for his valuable advice and thoughtful evaluation.

Author Contributions: All authors have equal contribution in the preparation of manuscript and compilation.

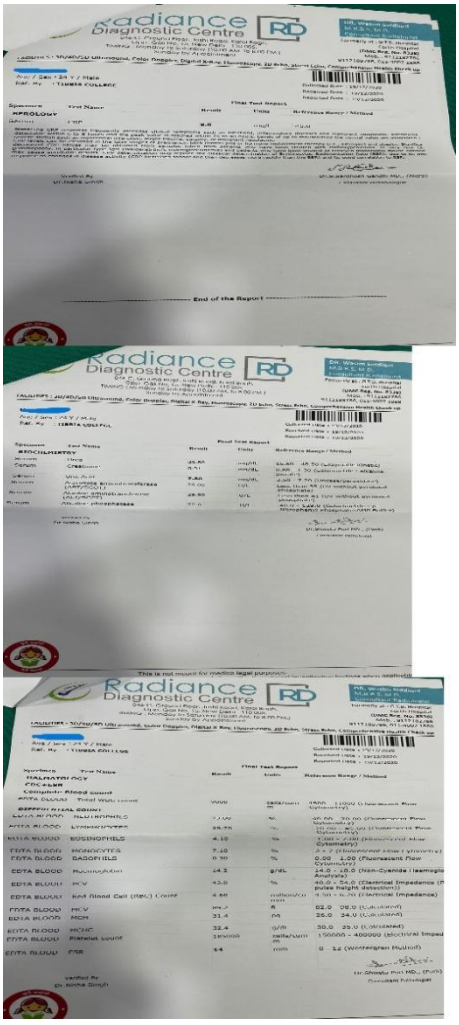
Source of Support: Nil

Informed Consent Statement: Informed consent was obtained from subject involved in the study.

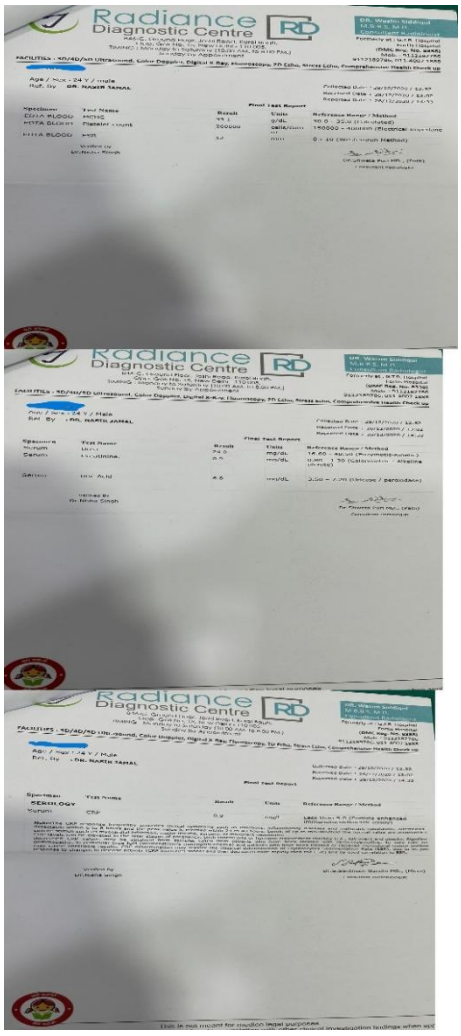
Data Availability Statement: The data presented in this study are available on request from the corresponding author.

Ethical approval: Not applicable

Laboratory investigations at various intervals:



Baseline



7th day

28th day

42nd day

References:

1. Isselbacher, Braunwald, Wilson, Martin, Fauci, Kasper, Harrison's Principles of Internal Medicine (Volume-2), 13th edition, 1995, McGraw-Hill Professional, Pp: 2079-2085. https://doi.org/10.1097/00024382-199601000-00019
2. Boon A. Nicholas, Colledge R. Nicki, Walker R. Brian, Davidson's Principles and Practice of Medicine, 20th edition, 2006, Churchill Lingstone, Elsevier, Pp: 1111-1115.
3. Wyngaarden, Smith, Baneth, Cecil Textbook of Medicine, 19th edition, 1992, Elsevier Sauders, Pp: 1107-1114.
4. Weatgerall DJ., Ledingham JGG, and Warrel D. A, Oxford Textbook of Medicine (International edition complete unabridged), Oxford Medical Publications, Pp: 9.70-9.79.
5. Dalbeth N, Merriman TR, Stamp LK. Gout. Lancet. 2016 Oct 22;388(10055):2039-2052. doi: 10.1016/S0140-6736(16)00346-9. Epub 2016 Apr 21. PMID: 27112094. https://doi.org/10.1016/S0140-6736(16)00346-9 PMid:27112094
6. Emmerson BT. The management of gout. N Engl J Med. 1996 Feb 15;334(7):445-51. doi: 10.1056/NEJM199602153340707. PMID: 8552148. https://doi.org/10.1056/NEJM199602153340707 PMid:8552148
7. Sainani GS., A.P.I. Textbook of Medicine, 6th edition, 1999, Association of Physicians of India.
8. Baghdadi IH, Kitab Al Mukhtarat Fit Tibb, (Urdu Translation by C.C.R.U.M) Volume-IV, 2007, New Delhi, Ministry of Health and Family Welfare, 79-95.
9. Kabeeruddin M, Tarjuma-e-Kabeer, (Sharah Asbab wa Alamat), Part III, Hyderabad, Hikmat Book Depot, Pp: 846-191.
10. Khan MA, Akseer-e-Azam, (Urdu Translation by Hakeem Kabeeruddin), YNM, New Delhi, Idara Kitab-ul-Shifa, Pp: 846-847.
11. Qarshi MH, Jami-ul-Hikmat, Volume-I & II, Idara Kitab-ul-Shifa, New Delhi, Pp: 1025-1027.
12. Khan A, Hazique, 2002, Idara Kitab-ul-Shifa, New Delhi, Pp: 532-538.
13. Mansoor-ul-Hasan, Gina Muna, 2008, C.C.R.U.M., New Delhi, Pp: 272-275.
14. Razi, Z., Kitab-ul-Hawi (Urdu Translation) Volume- XI, (2004), C.C.R.U.M., New Delhi, Pp: 71-72.
15. Kumar P, Clark M, Kumar & Clark's Clinical Medicine, Seventh edition (2009), Saunders Ltd.
16. Chatterjee A. & Pakrashi, SC., 1997. The Treatise on Indian Medicinal Plants, Vol. V. CSIR, New Delhi, Pp. 145-146.
17. Wyngaarden, Smith, Baneth, Cecil Textbook of Medicine, 19th edition (1992), Elsevier Sauders, Pp: 1107-1114.
18. Majoosi AA., Kamil-al-Sana (Urdu Translation by Ghulam Hussain Kantoori), 2010, Idara Kitab-ul-Shifa, New Delhi, Pp: 51-514.
19. Razi Z, Kitab-ul-Hawi, 2004, Volume- XI, C.C.R.U.M., New Delhi, Pp: 73-77.