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THERAPEUTIC POTENTIAL OF *NAVAKARSHIKA KWATHAM* IN HYPERURICEMIA: A SINGLE CASE STUDY

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Abstract: Hyperuricemia is defined as plasma saturated with mono sodium urate at a concentration > 6.8 mg/dL at 37°C. Over the past 20 years, hyperuricemia has become more common and still has a significant frequency, which can be correlated with the economic development and lifestyle changes like obesity, enhanced intake of sugar-sweetened drinks, purine-rich foods and alcohol intake. Epidemiological data further highlights the role as an independent risk marker for each 1mg/dL increase in serum uric acid, the risk of coronary heart disease mortality increases by approximately 20%. The evidence obtained suggests that it may contribute to chronic kidney disease and cardiovascular disorders by mechanisms including endothelial dysfunction, inflammation, vascular smooth muscle proliferation and activation of the renin–angiotensin system. Xanthine oxidase inhibitors such as allopurinol and febuxostat are commonly used for the management of hyperuricemia; however prolonged use has been reported to cause acute renal failure. According to Ayurveda, uric acid can be considered as existing in the form of *Pittadhika-Kapha Rupa Malabhava*. As the hyperuricemia may be due to *Pitta Pradhana Dosha Dushti* Which in turn leads to *Rasa Rakta Dhatwagnimandya* at *Rasa-Rakta Dhatu* level. *Navakarshika Kwatham* described in *Chakradatta Vataraktha chikitsa adhyaya* is a unique combination of *ama pachana, agni deepana, raktha prasadana and Kapha-Pittahara* drugs. A male patient, aged 55 years diagnosed with hyperuricemia 1 year back presented with pain and swelling over left big toe, left elbow joint,left shoulder joint,bilateral knee and ankle and generalised body pain was treated with Ayurvedic Formulation *Navakarshika Kwatham*. Aqueous extract of the formulation was administered for 30 days. At the end of the treatment marked reduction seen on the levels of S.Uric acid, ESR and on the signs and symptoms**.**

Keywords- Hyperuricemia, S. Uric acid, *Navakarshika Kwatham***.**

Introduction

Uric acid is the final byproduct of purine metabolism, which is produced by Xanthine Oxidase.(1) Within men & post-menopausal women the normal serum uric acid levels are typically 3.5-7 mg/dL & 2.6-5.7 mg/dL in pre- menopausal women.(2) According to estimates, hyperuricemia affects up to 21% of the general population and 25% of hospitalized patients. The prevalence incidents is 32.7% in India.(3) Uric acid acts as an antioxidant but shows a complex association with type 2 diabetes mellitus. Elevated uric acid levels are common in individuals with insulin resistance. It impairs nitric oxide production, causing endothelial dysfunction and reducing insulin sensitivity. Uric acid also promotes oxidative stress and inflammation in pancreatic β-cells, leading to their dysfunction and glucose intolerance. It contributes to adipogenesis through pro-inflammatory pathways such as NF-κB. Uric acid further causes endothelial dysfunction by reducing nitric oxide bioavailability, activates the renin–angiotensin system and promotes hepatic fat accumulation, increasing the risk of NAFLD.(4) These mechanisms play a key role in the development of hypertension, atherosclerosis and cardiovascular diseases.(5) Reduced nitric oxide synthesis leads to vasoconstriction, increased vascular

resistance and elevated blood pressure.[6] *Navakarshika Kwatham* is cited in *Chakradutta* under the management of *Vatarakta*. The formulation comprises nine herbal ingredients; *Hareethaki, Vibheethaki, Amalaki, Nimba, Manjishta, Vacha, Katukarohini, Vatsadhani, Daruharidra*.[7],[8] Each contributing therapeutic properties such as *Kapha-Pitta Samana, Deepana and Rakta Prasadana* making it beneficial in the treatment of *Vatarakta* with *Pitta* predominance. Most of the drugs having *Tiktha Kashaya rasa, Laghu ruksha gunas, Ushna veerya, Katu vipaka*.

Aims and Objectives

To evaluate the effectiveness of *Navakarshika Kwatham* in reducing Serum Uric acid levels in Hyperuricemia.

Case Report

A 55 year old male patient came to OPD of *Kayachikitsa*, Government Ayurveda College, Thiruvananthapuram on 07 December 2024 with complaints of pain over left elbow, shoulder, bilateral knee and ankle associated with burning sensation, redness and pain with swelling over left big toe and generalised body pain since 2 years aggravated since 1year. He was diagnosed with Hyperuricemia 1 year ago and took Febuxostat for one month. Then discontinued the medicine as he got symptomatic relief.
Later patient started experiencing similar complaints along with difficulty in walking.

Past History

K/C/O Systemic Hypertension since 20 years
T2DM since 5 years
Varicose Vein since 5 years
Grade 2 Fatty liver Diagnosed since 1 year

Drug History

Amlokind 5 -1-0-0 (A/F) Since last 5 years
Glimepiride and Metformin Hydrochloride prolonged release tablets IP-1-0-0 (A/F) Since last 5 years

Family History

No relevant Family History

General Examination

Pulse Rate :70/min (Right arm)
Heart Rate : 70/min ,S1 and S2 heard
Respiratory rate: 18/min
Blood Pressure: 130/90 mm Hg (Right arm, Sitting)
Temperature : Afebrile
Height :172 cm
Weight:85 Kg
BMI:28.7 Kg/m^2 (Over weight)
Prakrithi:*Pitta-Kapha*

Samprapthi Ghataka

Dosha	*Pitta*	*Pachaka*	*Arochakam,avipakam*
	Kapha	*Kleda*	*Sandhi sphutanam and sandi suulam*
	Vata	*Samana*	*Arochakam, avipakam,admanam*
		Vyana	Affects *gati, akunjanam and prasaranam of joints*
Dushya	*Rasa, Rakta,Medas, Asthi*		
Mala	*Mutra*		
Agni	*Jatharagni,Rasa–Rakta Dhatwagni , Bhootagni*		
Ama	*Rasa–Rakta Dhatwagnimandya janita ama*		
Srothodushti	*Rasavaha, Raktavaha, Medovaha, Asthivaha, Mutravaha Srothas*		
Srothodushti Prakara	*Ati-pravṛtti, Vimargagamana, Saṅga*		
Utbhava Sthāna	*Yakṛit / Rasa Dhātu*		
Sanchara Sthana	*Rasavaha and Raktavaha Srothas*		
Roga Mārga	*Madhyama*		

Diagnosis

Hyperuricemia

Intervention

Medicine	**Dosage Form**	**Dosage**	**Duration**	**Dosing Schedule**
Navakarshika Kwatham	*Kashayam* Aqueous Extract	3g sachet	30 days	one sachet (3gm) each in the morning and evening with 96 ml lukewarm water, 45 minutes before food

Observation

Subjective Criteria

Subjective Parameters	**Before Treatment**	**After Treatment**
Sandhi Shulam	VAS Score -9/10	VAS Score-2/10
Sandhi Shopham	Swelling occasionally (5-6 times in a month)	Swelling absent
Redness over bigtoe	Present	Absent

Objective Criteria

Objective criteria	**Before Treatment**	**After Treatment**
Serum Uric acid	9.1 mg%	5.8mg%
ESR	41mm/Hr	15mm/Hr

Result

After 30 days of treatment, Patient felt complete relief from previous complaints and drop down was seen in Serum Uric acid and ESR levels.

Discussion

Navakarshika Kashayam is mentioned in various classical Ayurvedic texts such as *Bhaishajya Ratnavali, Bhavaprakasha, Chakradutta, and Sharangadhara Samhita*, where it is referred to as *Laghu Manjishtadi Kashayam*.

Ingredients	***Rasa***	***Guna***	***Veerya***	***Vipaka***	***Doshakarma***
Hareethaki	*Kashaya pradhana Pancha rasa*	*Laghu ruksha*	*Ushna*	*Madhura*	*Tridosha samana*
Vibheethaki	*Kashaya*	*Ruksha – laghu*	*Ushna*	*Madhura*	*Kapha-pitta samana*
Amalaki	*Amla pradhana pancha rasa except Lavana*	*Guru*	*Seetha*	*Madhura*	*Tridosha Samana*
Nimba	*Tiktha- kashaya*	*Laghu*	*Seetha*	*Katu*	*Kapha- pitta samana*
Manjishta	*Kashaya-Tiktha Madhura*	*Guru*	*Ushna*	*Katu*	*Kapha-pitta samana*
Vacha	*Katu- tiktha*	*Laghu, teekshna*	*Ushna*	*Katu*	*Vatha-pitta samana*
Katurohini	*Tiktha*	*Ruksha laghu*	*Seetha*	*Katu*	*Kapha-pitta samana*
Guduchi	*Tiktha kashaya –*	*Laghu*	*Ushna*	*Madhura*	*Tridosha samana*
Daruharidra	*Tiktha kashaya*	*Laghu ruksha*	*Ushna*	*Katu*	*Kapha-pitta samana*

Navakarshika Kwatham is attributed with multiple therapeutic actions. It promotes *Ama pachana* and *Deepana*, while also exerting Pitta – Kapha effects by balancing deranged doshas. Additionally, it supports *Rakta prasadana* and *Soshana*. Beyond these actions, the formulation also functions as a *Rasayana,* thereby improving overall vitality, strengthening tissues, and preventing disease progression. *Triphala* and *Guduchi* have *Rasayana* effect especially *Guduchi* and *Hareethaki* has *Shophahara , Vedanasthapana* property which helps in reducing pain inflammation and prevents oxidative damage. *Guduchi's* therapeutic potential is particularly evident in alleviating and modifying the major complication associated with this condition. It is *Pitta samanam*; because of its *Tiktha Rasa*. *Rakta prasadanam* due to *Asraya- Asrayi Bhavam*. *Katurohini*, endowed with *katu rasa, tīkṣṇa guṇa* and *deepana*, is an *agneya* drug that helps correct *Dhatwagnimandya*. By promoting *amapachana* and exerting a specific action on the *yakṛt , Katurohini* can be rationally placed to act across *koṣṭhagni, bhootagni and dhatwagni* levels. Picrorhiza's constituents (picroliv/picrosides) show hepatoprotective and antioxidant actions and suppress inflammatory signaling consistent with reducing hepatic oxidative stress that accompanies purine catabolism. Nimba is *Pitta-Kapha samaka, Rakta prasadanam* and have *Daha prasamana* action and the flavonoids in the neem have inhibitory action on the biosynthesis of prostaglandins -associated with the inflammatory process. Vacha is known for its *ama pachana, srothoshodhana*, *Deepana* and *lekhana* properties beneficial in metabolic disorders like hyperuricemia. Hence *Navakarshika Kwatham* is a good option of drug for hyperuricemia.

Conclusion

In Ayurveda, hyperuricemia can be interpreted as a *purvarupa* that may progress to a pathological condition. The condition arises due to *agnimandya* at the level of *rasa* and *rakta dhatwagni*, leading to improper metabolism and formation of *sara* and *kitta bhaga*. This results in *kapha-pitta vriddhi* and accumulation of ama, causing *rasa-raktavaha, asthivaha* and *mutravaha srotodushti*. The vitiated *rakta* dhatu circulates in the body, correlating with the pathological features of hyperuricemia. Therefore, management should focus on *deepana, pachana, rukshana, srotoshodhana, kapha-pittahara*, and *raktaprasadana* therapies. Beyond the primary metabolic marker, also investigated the impact of these treatments on systemic inflammation, using the erythrocyte sedimentation rate (ESR) as a surrogate marker. The deposition of monosodium urate crystals in joints triggers a potent inflammatory cascade, and a reduction in systemic inflammation is a key therapeutic goal. *Navakarshika Kwatham* is found to be effective in alleviating pain, swelling, and inflammation associated with Hyperuricemia.

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