

CLINICAL EVALUATION OF LANGALI GUTIKA WITH ASHWATH-TWAK KWATHA AS ANUPANA IN THE TREATMENT OF VATARAKTA W.S.R. TO GOUTY ARTHRITIS

Guru Prasad Sharma¹ Sakshi Sharma²

¹MD, *Kaya Chikitsa*, Jammu Institute of Ayurveda & Research, Jammu, J&K, India

²MD. Scholar 1st year, *Rog Nidan Avum Vikriti Vigyan*, RGGPG Ayurvedic College & Hospital, Paprola, Himachal Pradesh, India

Email: dr guru984@gmail.com

ABSTRACT

Gouty arthritis (*Vatarakta*) is a complex metabolic disorder of musculoskeletal system. It is mainly a disorder of protein metabolism which gives rise to inflammatory condition with pain and impairment of locomotors function. According to *Ayurveda*, the management protocol of any disease is based on *Srotoshodhan Chikitsa*, and *Tridosha Sidhanta*, therefore, *Langli gutika* with *Ashwath-twak kwatha* as *Anupana* was taken having *Srotoshodhan* and *Tridoshashaman* properties. Taking into consideration, the present study has been entitled “**Clinical Evaluation of *Langali Gutika* with *Ashwath Twak Kwath* as *Anupana* in the Treatment of *Vatarakta* w.s.r to Gouty Arthritis**” has been carried out to establish the efficacy of the treatment. In the present study minimum of 90 subjects diagnosed as *Vatarakta* were selected incidentally irrespective of caste, religion, sex, occupation & socioeconomic status and randomly categorised into 3 groups consisting of 30 patients in each group. **Group A:-** *Langali gutika*, **Group B:-** *Ashwath twak kwath*, **Group C:-** *Langali gutika* followed by *Ashwath twak kwatha* as *Anupana*.

The duration of trial was 30 days with follow up of 1 month. The observations obtained are analysed statistically and it is observed that *Langali Gutika* with *Ashwath-Twak Kwatha* as *Anupana* was found to be more effective than *Langali Gutika* and *Ashwath Twaka Kwatha* individually.

Keywords: *Langali Gutika*, *Ashwath Twak Kwatha*, gouty arthritis, *Vatarakta*.

INTRODUCTION

Modern era is an era of sedentary life style. Due to this altered life style and food habits, human beings are becoming more vulnerable

to many disorders. Out of these, *Vatarakta* (Gouty arthritis) is a common presentation. *Vatarakta* is a disease caused by vitiation of

Vata as well as Rakta. Aggravated Vata is blocked by vitiated Rakta in turn leading to further aggravation of Vata. Thus aggravated Vata vitiates whole Rakta leading to Vatarakta. Ayurvedic management of Vatarakta includes both internal and external administration of drugs. The Shodhana procedures for Vatarakta are Raktamokshana, Basti and Virechana. The Shamana method of treatment also has major role in the management of Vatarakta^{1,2}

Gouty arthritis is a complex metabolic disorder of protein metabolism. Uric acid is produced during break down of waste products called "purines". Purines are nitrogenous compounds which are essential part of many foods and body tissues. Uric acid thus formed is usually filtered by kidneys. Excess formation of uric acid or its abnormal excretion leads to increased level of uric acid in blood. This eventually leads to gout. It is the most common cause of inflammatory joint disease over 40 years old. Prevalence increases with age and increase in serum uric acid concentration.³

In modern medicine, available treatments for gout are anti inflammatory drugs such as Colchicines and NSAID'S. Both Colchicines and NSAID'S may be quite toxic in the elderly particularly in presence of renal insufficiency and gastrointestinal disorders.⁴ So, there is an urgent need of application of Ayurvedic drugs in Vatarakta.

MATERIAL AND METHODS

Present study was conducted in the Department of Kaya Chikitsa, Jammu Institute of Ayurveda & Research and Department of Medicine, Govt. Primary Health Center, Kotbhalwal, Jammu.

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AIM OF STUDY

1. To evaluate efficacy of *Langali Gutika* as *Shaman Aushadhi* in *Vatarakta*.
2. To evaluate efficacy of *Ashwath Twak Kwatha* in *Vatarakta*.
3. Conceptual and clinical studies on *Vatarakta* w.s.r. to Gouty arthritis

SOURCE OF MATERIALS

Raw materials were collected from the Department of *Rasa Shastra* and *Bhaishajya Kalpana*, JIAR, Jammu, prepared classically in the college pharmacy of JIAR.

The following materials were utilized for clinical trial:

1. *Langali Gutika*
2. *Ashwath Twak Kwatha*

The ingredients of *Langali Gutika*⁵ are as follows:-

1. *Langali kandha*
2. *Amrita*
3. *Triphala*
4. *Loha bhasam*
5. *Trikatu*
6. *Guggulu*
7. *Draksha*

Langali kanda and *amrta* both equal in quantity are mixed with *Triphala*, *Loharaja* and *Trikatu* all equal quantity, *Guggulu Amrtavalli* and *Draksha* are macerated in the juice of *matulunga* or decoction of *Triphala* and made into pills of 500 mg each.

Preparation of *Ashwath Twak Kwatha*:-

Collection of *Ashwath* :- As per *Charak Samhita*, the raw material was collected after going through the Religious Rituals. *Ashwath Twak* was dried in sun and then made into small

pieces for further grinding in the grinder to bring it *Yavakut* form. Then this *Yavakut* form of *Ashwath Twak* was packed in small packets according to the desired dose.

Method of Preparation:- *Ashwath Twak* was added to water in the ratio 1:8 and *Kashaya* was prepared by reducing it to ¼ th .

CRITERIA OF SELECTION

Inclusion criteria

- Subjects presenting with clinical features of *Vatarakta* (gouty arthritis).
- Subjects of either sex between the age group of 20 -70 years.
- Subjects fit for adopted treatments.

Exclusion criteria

- Subjects with infection and communicable diseases.
- Subjects suffering with systemic disorders such as diabetes and hypertension.
- Subjects having chronicity of *Vatarakta* for more than 5 years.
- Subjects having any marked deformity.

PLAN OF STUDY

- Diagnosis was made on the basis of special proforma prepared in relation to *Vatarakta*.
- A special Performa was prepared regarding the disease and the patient including demographic profile, clinical profile, *Ash-tavidha Pariksha*, *Dashvidha Pariksha*
- Patients were monitored and observations were recorded before and after the drug schedule.

Sample Size:-

Minimum of 90 subjects diagnosed as *Vatarakta* were selected incidentally and randomly categorised into 3 groups consisting of 30 patients in each group.

GROUP A:- *Langali Gutika*

GROUP B:- *Ashwath Twak Kwath*

GROUP C:- *Langali Gutika* followed by *Ashwath Twak Kwatha* as *Anupana*.

Laboratory Investigation:

Haemogram – Blood Uric acid.

Drug schedule:

Table 1:

DRUG	<i>Langali Gutika</i>	<i>Ashwath Twak Kwatha</i>	<i>Langali Gutika</i> with <i>Ashwath- Twak Kwatha</i>
Dose	1 gm B.D with water	20 ml B.D.	1 gm with 20 ml B.D
Route	Oral	Oral	Oral

Duration of trial:

The duration of trial was 30 days

Follow up:

1 month

Study Design:

A clinical study

CRITERIA FOR ASSESSMENT

Subjective Criteria:

Assessment of the therapy was done according to the relief observed in the signs and symptoms, with the help of scoring pattern.

Objective Criteria:

Based on investigations like blood uric acid done before and after treatment.

The details of the scores adopted for the chief signs and symptoms in the present study were as follows –

Table 2:

PARAMETER	FINDING	SCORING
1.SANDHI SHULA	None	0
	Mild	1
	Moderate	2
	Severe	3
2.SANDHI GRAHA	None	0
	Mild	1
	Moderate	2
	Severe	3
3.SANDHI SHOTHA	None	0
	Mild	1
	Moderate	2
	Severe	3
4.VAIVARNYA	None	0
	Mild	1
	Moderate	2
	Severe	3

CRITERIA FOR THE TOTAL EFFECT OF THERAPY

For the assessment of the total therapy following four categories were taken into considerations.

Cured – 76% to 100%

- Complete relief in subjective signs and symptoms.

Markedly Improved -51% to 75%

- Relief in subjective signs and symptoms.

Improved – 26% to 50%

- Relief in sign and symptoms.

Unchanged- up to 25%

- Relief in some subjective sign and symptoms only.

INTERPRETATION OF RESULT

The statistical analysis was done to interpret the results. It was carried out by using Wil-

coxon Signed Ranks Test and Kruskal-Wallis Test was used to compare the results of 3 groups.

OBSERVATION AND RESULTS

During the clinical study on *Vatarakta*, through *Langali gutika* and *Ashwath Twak Kwatha*, a maximum number of study subjects *i.e.* 36 (40.00%) subjects were of 41-50 year Age, 31 subjects (34.45%) were between 51-60 years, 13 subjects (14.44%) were between 31-40 years, 06 subjects (6.67%) were between 61-70 years, 04 subjects (4.44%) were between 20-30 year age.

A Maximum number of study subjects *i.e.* 53 males (58.89%) and 37 females (41.11%) were registered.

A Maximum number of study subjects *i.e.* 68 (75.56%) were *Hindus*, 13 subjects (14.44%) were *Muslim* and 09 subjects (10.00%) were *Sikh*.

A Maximum number of study subjects *i.e.* 33 subjects (36.67%) were had higher secondary Education, 24 subjects (26.66 %) were Graduate, 22 subjects (24.44%) were middle educated. 06 subject (6.67%) was had Primary Education and 05 subjects (5.56%) were uneducated.

A Maximum number of study subjects *i.e.* 34 subjects (37.78%) were service class, 21 subjects (23.33%) were House wives, 14 subjects (15.56%) were in Agriculture, (each) , 13 subjects (14.44%) were having business, 06 subjects (6.67%) were labour class and 02 subjects (2.22%) were students.

A Maximum number of study subjects *i.e.* 86 (95.56 %) were married, and 04 subjects (4.44%) were unmarried

A Maximum number of study subjects *i.e.* 55 subjects (61.11%) was taking mixed diet and 35 subjects (38.89%) were vegetarian.

A Maximum number of study subjects *i.e.* 45 & 46 subjects (50% & 51.11%) were consuming *Katu Rasa* and *Lavana Rasa* , 41 subjects (45.56%) were consuming *Amla Rasa*, 36 subjects (40%) were consuming *Madhura Rasa* and 34 subjects (37.78%) were consuming *Kashaya Rasa* (each), while 31 subjects (34.44%) were consuming *Tikta rasa*.

A Maximum number of study subjects *i.e.* 48 subjects (53.33%) were having *Alpa Nidra* while 35 subjects (38.89%) were having *Prakruta Nidra* and 07 subject were with *Ati Nidra*. (7.78%).

Maximum number of study subjects *i.e.* 82 subjects (91.11%) were addict to tea/coffee, 33 subjects (36.67%) were addict to smoking, 20 subjects (22.22%) were addict to Alcohol, 17 subjects (18.89%) were addict to tobacco chewing.

A Maximum number of study subjects *i.e.* 36 subjects (40%) registered were having *Vishama Agni*, where as 30 subjects (33.33%) had *Sama Agni* and 16 subjects (17.78%) were having *Mandagni* where as 08 subjects (8.89%) had *Teekshna Agni*.

A Maximum number of study subjects *i.e.* 40 subjects (44.44%) were having *Krura Kostha*, 35 subjects (38.89%) were having *Madhyama Kostha* and 16 subjects (16.67%) were having *Mridu Kostha*

A Maximum number of study subjects *i.e.* 55 subjects (61.11%) were of *Vata-Pitta Prakriti*, 23 subjects (25.56%) were of *Vata-Kapha Prakriti*, 12 subjects (13.33%) had *Pitta-Kapha Prakriti*.

A Maximum number of study subjects *i.e.* 78 subjects (86.67%) were belonging to *Madhyama Sara*, 10 subjects (11.11%) had *Avara Sara* while 02 subjects (02.22%) had *Pravara Sara*

A Maximum number of study subjects *i.e.* 78 subjects (86.67%) were having *Madhyama Samhanana*, 10 subjects (11.11%) had *Avara Samhanana* and 02 subjects (2.22%) had *Pravar Samhanana*

A Maximum number of study subjects *i.e.* 56 subjects (62.22%) had *Madhyama Satva*, 32 subjects (35.56%) were of *Avara Satva* and 2 subjects (2.22%) were of *Pravara Satva*.

Maximum number of study subjects *i.e.* 52 subjects (57.77%) were having chronicity of <1 year, 37 subjects (41.11%) had a chronicity of 1 to <=3 years, 11 subjects (12.22%) had a chronicity of 3 -5 =yr.

A Maximum number of study subjects *i.e.* 64 subjects (71.11%) were affected with Metatarsophalangeal joint, 58 subjects (64.44%) were affected with Ankle and Knee joints, 51 subjects (56.67%) were affected with Metacarpo-

phalangeal and Wrist joints, 42 (46.67%) subjects were affected with interphalangeal joints (hand), 53 subjects (58.89%) were affected with Interphalangeal (feet) whereas 29 subjects (32.22%) were affected with Elbow.

A Maximum number of study subjects i.e. .90 subjects (100%) were reported with *Sandhishoola and Sandhishotha*, 78 subjects (86.67%) were reported with *Sandhigraha*, 68 subjects (75.56%) were reported with *Vaivarnyata*.

EFFECTS OF TRIAL DRUG

Comparative results of 3 groups

Table 3: Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
<i>Sandhi_Shool</i>	90	1.73	.632	1	3
<i>Sandhi shoth</i>	90	1.48	.502	1	2
<i>Sandhi_Graha</i>	90	1.19	.538	0	2
<i>Vaivarnya</i>	90	.94	.588	0	2
Uric_Acid	90	.7744	.42202	.20	3.40
Grouping_variable	90	2.00	.821	1	3

Table 4: Kruskal-Wallis Test

Ranks			
	Grouping variable	N	Mean Rank
<i>Sandhi_Shool</i>	<i>Gutika</i>	30	41.85
	<i>Kwatha</i>	30	38.20
	Mix	30	56.45
	Total	90	
<i>Sandhi shoth</i>	<i>Gutika</i>	30	40.50
	<i>Kwatha</i>	30	40.50
	Mix	30	55.50
	Total	90	
<i>Sandhi_Graha</i>	<i>Gutika</i>	30	47.37
	<i>Kwatha</i>	30	39.25
	Mix	30	49.88
	Total	90	
Vaivarnya	<i>Gutika</i>	30	43.73
	<i>Kwatha</i>	30	43.98
	Mix	30	48.78
	Total	90	
Uric_Acid	<i>Gutika</i>	30	45.35
	<i>Kwatha</i>	30	38.05
	Mix	30	53.10
	Total	90	

Table 5:

Test Statistics					
	<i>Sandhi Shool</i>	<i>Sandhi-shoth</i>	<i>Sandhi-Griha</i>	<i>Vaiyvarnya</i>	Uric-Acid
Chi-Square	10.272	8.808	4.041	1.007	5.036
Df	2	2	2	2	2
Asymp. Sig.	.006	.012	.133	.604	.081

DISCUSSION

Effect of **Group A i.e. Langali Gutika** on the selective parameters of *Vatarakta* was found statistically effective. *Katu Rasa* and *Laghu Tikshna Guna* remove the obstruction and dilate the passage and allay *Kapha*. In this way they help in *Sroto shodhana*. *Madhura Rasa* and *Sheeta Vir ya* aggravates the vitiated *Vata & Rakta*. In this way, *Srotas Sanga* is removed and this acts on symptoms of *Vata rakta*. One thing was noted that some patients' complaint of gastritis, diarrhoea and it may be due to its *Ushna virya* and *Tikshna guna*. The probable effect of the drug on the selective symptoms could be due to the Anti inflammatory, Anti-oxidant, Analgesic, Anti-rheumatic properties of drug. Hence, it shows that Group A is **Significant**.

Effects of **Group B i.e. Ashwath Twak Kwatha** on the selective parameters of *Vata Rakta* was found statistically effective. *Kashaya, madhura rasa* and *Sheet virya* of *Ashwath* corrects *Pitta Dushti*. Similarly, *Madhura rasa* and *Guru guna* of *Ashwath* helps in checking *Vata dushti*. *Ashwath twak* possess anti-inflammatory and analgesic properties. *Ashwath twak kwath* was found highly efficacious for *Vatarakta* as it decreases inflammation and pain. Hence it shows that Group B is **Significant**.

Effect of **Group C i.e. Langali Gutika with Ashwath Twak Kwatha** on all the selective parameters of *Vatarakta* was found statisti-

cally effective. One thing was noted that some patients' complaint of nausea it may be due to its bitter taste. The probable effect of the drug on the symptoms could be due to the Anti inflammatory, Antioxidant, Analgesic, Anti-rheumatic properties of drug and also stabilizing the nervous system which prohibits the vitiated *Vata* and *Rakta*. Hence, it shows that Group C is **Highly Significant**.

CONCLUSION

Conclusions that were drawn after systematic clinical trial on 90 patients are as follows: - Distinct etiological factors of *Vata dosha* and *Rakta dhatu* separately cause the *Vikruti* of *Vata dosha* as well as *Pradushti* of *Rakta dhatu*. The abnormal *Rakta dhatu* by the way of *Margavarana* in turn inhibits the movement of *Vata dosha* leading to severe morbidity of *Vata dosha*. Thus the illness *Vatarakta* clinically manifests.

Vatarakta in modern view has similarity with Gouty Arthritis. The similarity of gouty arthritis with that of *Vatarakta* is multidimensional. The cause, site of origin, signs and symptoms match with the *Vatarakta* description in our classics.

Occurrence of *Vatarakata* is one of the outcomes of the modifications in dietary habits, social structure and life style. The simultaneous vitiation of *Vata* and *Rakta* at *Sandhi* produces a slow pathology which involves *Vatahara* and *Rakta Prasadaka* remedies as

Chikitsa. Reoccurrence of *Vatarakta* is very common; so long term treatment is essential for cure of the disease.

In the present study as per the clinical data, *Langali Gutika* and *Ashwath Twak Kwatha* are definitely effective in the management of *Vatarakta*, but '*Langali gutika with Ashwath Twak Kwatha* as *Anupana* was more effective than *Langali Gutika* and *Ashwath Twak Kwatha* individually.

However, this study is a pilot study. The efficacy of this drug compound needs further exploration, so the new vistas can be opened by further research on large number of cases. The study may also be conducted with varying doses, combinations and duration of treatment.

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