

A Comparative Study of Siravyadha and Kokilakshadi Kshayama in Vatarakta W.S.R to GOUT

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Abstract

The life style in modern era is responsible for so many diseases. The vatarakta (gout) is one of them. Firstly, it occurs in hand and foot then spreads in whole body. Gout is a true crystal deposition disease. It can be defined as the pathological reaction of the joint or periarticular tissues to the presence of monosodium urate monohydrate (MSUM) crystals which preferentially deposit in peripheral connective tissues in and around synovial joints, initially favouring lower rather than upper limbs and especially targeting the first metatarsophalangeal and small joints of feet and hands. Acharya Vangasena (name book writer) Vangasena Samhita (name of ancient book) advised to use Kokilakshadi Kshayama (decoction of *Asteracantha longifolia*, a medicinal plant) in the chapter vataraktaadhikara (name of chapter on gout). Acharya Sushruta (name of ancient Ayurvedic book writer) has described Siraviyadha (venepuncture) as 'Ardhchikitsa (half treatment) in Shalyatantra (surgery). The present study is comparative study of Siraviyadha and Kokilakshadi Kshayama in Vatarakta w.s.r. to gout. In Group A, Kokilakshadi Kshayama was given with pippali churna anupaana (powder of *Piper longum* used as vehicle). In group B, Siraviyadha was done. The results show that percentage improvement was statistically higher in group A as compared to group B.

Keywords: Vatarakta (gout), Siravyadha (venepuncture), Kokilakshadi kashayam (decoction of *Asteracantha longifolia* a medicinal plant)

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INTRODUCTION

Gout

Gout is a true crystal deposition disease. It can be defined as the pathological reaction of the joint or periarticular tissues to the presence of monosodium urate monohydrate (MSUM) crystals. Clinically, this may present as inflammatory arthritis, bursitis, tenosynovitis, and cellulitis or as nodular (tophaceous) crystal deposits. Prolonged hyperuricemia is necessary, but is alone not sufficient, for the development of gout [1].

Vatarakta

"Vataraktabhyanjanitovyadhivataraktam" (pathology of disease). The disease is due to vitiated *vata* and *rakta* (ayurvedic pathological factors) [2].

It is also known by the synonyms *Vatarakta*, *Khuda*, *Vatabalasa* and *Adhayaroga*.

1. *Vatarakta*—because vitiated *vata* and *rakta* as the main cause of *vatashonita* (gout).
2. *Khuda* (Joints)—indicates that which affects the *khuda*, i.e., joints.
3. *Vatabalasa*—indicates the *avarna* (covering or masking) of *vata* (a body humor) by the vitiated *rakta*.
4. *Adhayaroga*—points to the fact that people who live a sedentary life are mostly affected.

Due to the various *Aaharajanya hetu* (dietary factors) and *Viharajanya hetu* (life style related facts), *vata* and *rakta* are vitiated. Due to the *Sukshmattava* (minuteness), *Saaratava* (abstract), *dravatva* (liquidity), *vata* and *rakta* have the capacity to spread all over the body. While circulating through the body, *Avarana* (covering) of vitiated *vata* occurs by the aggravated *rakta* (blood). When they reach in

the *Asthisandhi* (bone Joint), they get accumulated there and progress the pathological changes.

Nidaana (etiological factors)

Factors which are responsible for the causation of the *vatashonita* (gout) may be classified as follows (Table 1).

I. Aaharajanya hetu (dietary causes)

II. Viharajanya hetu (lifestyle related causes)

Table 1: Hetu (Causative Factors) of Vatarakta (Gout).

S. No.	Aharajanya hetu (causative factors related to food)	
1.	Rasa (taste)	Kshaya (astringent), katu (pungent), tikta (bitter), lavana (salty), amla (acidic), Kshaara (alkaline)
2.	Guna (properties)	Tikshana (sharp), snigdha (unctuous), guru (heavy)
3.	Vidahi Anna (burning food)	Kulattha, Maasha, Nishpava, Pinayaka, (types of cereals) Mulaka (reddish), Dadhi (curd), Shushkamansa (dry meat), Anupamaansa (watery meat).
4.	Vidahi Paana (burning liquids)	Madyavarga, (alcoholic drinks) Sidhu, Varuni, Asava, Arishta (ayurvedic liquid medicine type), Sura (alcohol based medicine). Suktavarga, Sirka, Tushodaka, Sauveera, Kaanji (medicated sour liquids).
5.	Rakta prakopaka hetu (blood vitiating factors)	Kulattha (a cereal), Maansa (flesh), Nishpava (type of food), Pinyaka, Mulaka (redish), Dadhi (curd), Klina.
6.	Vatalaahaara (vata vitiating food)	Tikta, Kashaya, Katurasa Bhojana (bitter, astringent, pungent food consumption), Alpabhojana (less food consumption), Abhojanata (no food consumption).
7.	Abhishayanda Ahara (food causes coating of body channels)	Dadhi (curd), Lavana (salt), Kshara (alkaline)
8.	Atimatraashana (excessive food consumption)	Ajiranaashana & Adhyashana (consumption of food before digestion of previously consumed food), Savidahashana, Virudhaashana (simultaneous use of opposite foods)
9.	Hinamatraashana (less food consumption)	Abhojana (no food consumption), Langhana (fasting).

	Viharajanya hetu (causative factors related to lifestyle)	
1.	Svapnaviparyaya (wrong sleep habits)	Divasvapana (day time sleeping habit), ratrijagarana (night awakening habits)
2.	Viyayamrupavihara	Atichankaramana (excessive walking), Ambukrida (water sports), Plavana, Ativyayama (excessive exercise), Avyayaam (no exercise), Ushtra and Ashwarohana (camel and horse riding).
3.	Veganigraha (delaying natural urges)	Vata (wind), mutra (urine), purishadiveganigraha (Stool), avyavya (avoiding sexual intercourse)
4.	Manasika hetu (psychological causes)	Krodha (anger), Shoka (sadness).
5.	Anyahetuhetu (other causes)	Shodhana (biopurification) sneha vibhrama (excessive use of unctuous foods), vyadhikarshana (weakened due to disease), sukumaratva (person having delicate body)

Treatment

Basti (medicated enema), *Virechan* (induced purgation) and various formulation and single drugs have been described in the treatment of *vatarakta*. Acharya Sushruta has advocated *raktamokshana* [3]. Acharya Vangasena has advocated the use of *kokilaksha kashayama* with *pippali churna* as an efficient remedy for *vatarakta* [4].

NEED OF STUDY

Illness has been human heritage from the beginning of his existence, and search for remedies to combat is perhaps equally old. There are many adverse effects of drugs used to treat gout and the treatment is very costly. The drugs *Kokilakshadi Kashayama* and *Siravyadha* seem to be cost effective and safe as compared to the allopathic medicines.

AIMS AND OBJECTIVES

- To study the efficacy of trial drugs in the management of *vatarakta* w.s.r. to gout.
- To establish a safe and cost effective medicine for the management of *vatarakta*.
- To study the other associated effects of the trial drugs if any.

MATERIAL AND METHODS

Selection of Cases

About 60 patients were selected from Government Ayurvedic Dispensary, Nijran, Jalandhar, Government Ayurvedic Hospital, Urban estate phase-1, Jalandhar, and Rajiv Gandhi Govt. Post Graduate Ayurvedic College Paprola, Himachal Pradesh. These were divided into two groups. Each group consists of 30 patients.

In Group A: Patients were treated with *Kokilakshadi Kashayama* orally in a dose of 20 ml b.i.d. with *Pippali churna* for 30 days.

In Group B: *Siravyadha* on the dorsum of hand/foot, 2 *Angula* (Fingers-approx. 4 cm) above the *kshipramarma* is planned. Approx. 100 ml of bloodletting was planned in each sitting. Two sittings were planned at an interval of 15 days.

Duration of trial: Patients were treated for a period of 30 days.

Inclusion Criteria

- Patients with signs and symptoms suggestive of *vatarakta*.
- Patients of either sex with in age group of 16–70.
- Patients willing for the trial.

Exclusion Criteria

- *Vatarakta* patients having other associated arthropathies.
- Patients taking uricosuric/xanthine oxidase inhibitor drugs.
- Patients having age below 16 and above 70 year of age.
- Patients not willing for trial.

- Patients suffering from bleeding disorders, anemia, pregnancy, diabetes, and asthma were excluded from the study.

Collection of Data

The case history of each patient was recorded as per the case performa as designed for the study. A thorough examination was carried out for each patient and symptoms like *Shula* (pain), *Shotha* (swelling), *Daha* (burning sensation), *Raktavarntaa* (redness), *Sparsha-asashnuta* (touch sensitivity) were recorded and suitable scores were given. Statistical analysis was done by student t-test and Wilcoxon signed ranks test.

Assessment

All the registered patients were assessed on the following parameters before initiation of the trial on day 1st day and after 30 days.

Clinical Evaluation: Assessment was done on the basis of subjective and objective criteria. Various signs and symptoms were graded according to severity. Patients were assessed on the basis of Patient global Visual Analogue Scale (VAS). Effect of therapy on symptoms of *Vatarakta* was the main criteria of assessment. All the patients selected for the study had been subjected to various investigations according to the need before the initiation of trial and after the completion of the study.

Laboratory Tests: Hb, TLC, DLC, FBS, Uric acid.

Statistical Analysis of Results: Observation documented during the study was analyzed and findings were evaluated by using statistical analysis to establish the efficacy of the therapy (Table 2).

Table 2: Observations and Result in Group A.

S. No.	Observations	Mean		Mean Diff.	Mean Diff. in %	S.D. ±	t Value	Z value	P Value
		BT	AT						
1	<i>Shula</i> (pain)	2.56	1.83	0.73	28.57	22.96		-3.72	0.0001
2	<i>Shotha</i> (swelling)	2.56	1.8	0.76	29.87	21.12		-3.62	0.0001
3	<i>Sparsha-asahshnuta</i> (touch sensitivity)	2.56	1.83	0.73	28.57	22.96		-3.72	0.0001
4	<i>Daha</i> (burning sensation)	2.1	1.6	0.5	23.80	11.25		-2.93	0.001
5	<i>Raktavarnata</i> (redness)	2.1	1.6	0.5	23.80	11.25		-2.93	0.001
6	Patient Global Visual Analogue Scale (VAS)	2.56	1.83	0.73	28.57	22.96		-3.72	0.0001
7	Uric acid	8.08	7.63	0.45	5.56	0.94	2.61		0.013

Table 3 Observations and Result in Group B.

S. No.	Observations	Mean		Mean Diff.	Mean Diff. in %	S.D. \pm	t Value	Z value	p Value
		BT	AT						
1	Shula (pain)	2.63	2.26	0.37	14.06	9.81		-2.80	0.002
2	Shotha (swelling)	2.53	2.2	0.33	13.04	9.81		-2.80	0.002
3	Sparsha-asahshnuta (touch sensitivity)	2.63	2.26	0.37	14.06	9.81		-2.80	0.002
4	Daha (burning sensation)	1.83	1.5	0.33	18.18	9.81		-2.80	0.002
5	Raktavarnata (redness)	1.83	1.5	0.33	18.18	9.81		-2.80	0.002
6	Patient Global Visual Analogue Scale (VAS)	2.63	2.26	0.37	14.06	9.81		-2.80	0.002
7	Uric acid	8.5	8.4	0.13	1.55	0.41	1.76		0.08

Table 4: Percentage Improvement in Both the Groups.

Improvement		Group A		Group B	
% age	Grade	No. of Patients	%age	No. of Patients	%age
0	No relief	10	33.33	10	33.33
up to 34 %	Mild	9	30	17	56.66
35–67 %	Moderate	10	33.33	3	10
68–99 %	Marked	0	0	0	0
100%	Complete Cure	1	3.33	0	0
	Deteriorated	0	0	0	0
	Total	30	100	30	100

Table 5: Percentage Improvement in Symptoms.

Symptom	Group A		Group B	
	No. of Patients	%age Improvement	No. of Patients	%age Improvement
Shula	18	60	11	36.66
Sparsha-asahshnuta	18	60	11	36.66
Shotha	17	56.66	10	33.33
Daha	11	50	10	45.45
Rakta vaivarnya	11	50	10	45.45

OBSERVATIONS

The data shown in Tables 2 to 5 shows that patients treated in group A showed 28.57% improvement in *Shula*, *Sparsha-asahshnuta* and VAS while 29.87% improvement in *Shotha*, patients showed 23.80% improvement in *Daha* and *Raktavarnata*. All these changes observed were statistically significant at the level $p = 0.001$. There was 5.56% improvement in serum uric acid which was statistically significant at $p = 0.01$.

The data shows that patients treated in group B showed 14.06% improvement in *Shoola*, *Sparsha-asahshnuta* and VAS while 13.04% improvement in *Shotha*. Patients showed 18.18% improvement in *Daha* and

Raktavarnata. All these changes observed were statistically significant at the level $p = 0.002$. There was 1.55% improvement in Serum uric acid which was statistically insignificant at $p > 0.05$.

The data shows that *Shula* and *Sparsha-asahshnuta* was improved in 60% and 36.66% patients, respectively in group A and B. *Shotha* was improved in 56.66% and 33.33% patients, respectively in group A and B. *Daha* and *Rakta vaivarnya* were improved in 50% and 45.45% patients in group A and B, respectively.

The data shows that in both the groups 33.33% patients did not get any relief. 30% patients in

group A got mild relief while this percentage in group B was 56.66%. In group A, 33.33% patients got moderate relief in symptoms while in group B this percentage was only 10%. In group A, one patient was completely cured whereas not a single patient was completely cured in group B.

DISCUSSION

The statistically significant results obtained in group A may be due to the *Kokilaksha*, *Amrita* (*Tinospora cardifolia*) and *Pippali* used in group A. All these three drugs possess anti-inflammatory, antioxidant and diuretic properties. *Kokilaksha* is *Vatapittashamaka* (pacify vata and pitta body humors), *Shothhara* (oedema reducing) and *mutrala* (diuretic). *Amrita* is *Tridoshashamaka* (pacify all the three body humors), *Mutrajanana* (urine forming), *Rakta shodhaka* (blood purifier), *Dahaprashamana* (pacify heat) and *Pippali* is *Kaphavataashamaka* (pacify kapha and vata the body humors), *Shulaprashamana* (pacify pain), *Shothahara* (anti-inflammatory), *Mutral* (diuretic) and *Raktashodhaka* (blood purifying) [5].

The decrease in serum uric acid concentration may also be attributed due to *Mutral* (diuretic), hepatoprotective, diuretic effect of *Kokilaksha* and *Mutrajanana* (diuretic), *Raktashodhaka* (blood purifying), hepatoprotective action of *Amrita* [5].

The significant results obtained may be attributed to the removal of *Avarana* (covering) and *Margaavrodha* (blockage) and reduction of *Rakta Dushti* (impurities of blood) by *Siraviyadha*.

The better results obtained in group A may be due to the anti-inflammatory, antioxidant and diuretic properties of *Kokilaksha*, *Amrita* and *Pippali* used in group A [6]. These drugs were used regularly for 30 days while in group B, *Raktamokshana* (bloodletting) was performed twice in a period of 30 days. This may also have created the difference.

CONCLUSION

This was a pilot study conducted to see the effect of *Siraviyadha* and *Kokilakshadi Kshayama* in *vatarakta* the w.s.r. to gout. From this study it may be concluded that *Kokilakshadi Kshayama* is better in managing the symptoms of *vatarakta* and inducing uricosuric effects by virtue of anti-inflammatory, antioxidant and diuretic properties of *Kokilaksha*, *Amrita* and *Pippali*. However, to draw more concrete conclusions study must be carried forward and conducted in larger groups and for a longer duration of time and along with a follow up study.

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Cite this Article

Mehta Chetan, Bhardwaj Anil, Bhatia Yogesh. A Comparative Study of Siravyadha and Kokilakshadi Kshayama in Vaatarakta W.S.R to GOUT. *Research and Reviews: A Journal of Ayurvedic Science, Yoga and Naturopathy*. 2017; 4(3): 6–10p.