



## CLINICAL EVALUATION OF ASHVATHA TWAK KWATHA WITH MADHU IN THE MANAGEMENT OF VATARAKTA W.S.R. TO GOUT

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### ABSTRACT

In the present era, disorders of musculoskeletal system are prevalent throughout the world, affecting all ages and ethnic groups. The principal manifestations are pain and impairment of locomotor function. Gout (*Vatarakta*) is one such musculoskeletal disorders. According to *Ayurveda*, the management protocol of any disease is based on *tridosha sidhanta*, therefore *ashvatha twak kwatha* with *madhu* was taken having all the *tridosha shamaka* properties. Taking this into consideration, the present study has been entitled “**Clinical evaluation of ashvatha twak kwatha with madhu in the management of vatarakta w.s.r. to gout**” has been carry out to establish the efficacy of the treatment. For the present clinical study, 30 patients were selected randomly from IPD and OPD of our hospital irrespective of Religion, Sex, Occupation and socio-economic status with sign and symptoms of *Vatarakta*. The patient was given 40ml two times in a day after meals with *madhu* as *anupana*. The observations obtained are analysed statically using Student Paired T test and p. The results showed that *Ashvatha twak kwatha* is significant in the management of *vatarakta*.

**KEYWORDS:** *Vatarakta, Kwatha, Tridhoshha, Gout, Ayurveda.*

### INTRODUCTION

*Ayurveda*, an ancient Indian science is not only a science of medicine but it is a perfect science of life and longevity.

Aspiring for the efficacious and safe drugs, man is keenly attracted towards *Ayurvedic formulation*. In the present era, disorders of musculoskeletal system are prevalent throughout the world, affecting all ages and ethnic groups. The principal manifestations are pain and impairment of locomotor function. Gout (*Vatarakta*) is one such musculoskeletal disorder which has increased in frequency in recent decades affecting approximately one to two percent of the Indian population at some point in their lives. It effects men in their 40s and 50s and is common in female after menopause.

*Vatarakta* is described in almost all *Ayurvedic classics* like *Brihatrayi* and *Laghutrayi*.

*Acharya Sushruta* has described it along with other *Vatavyadhies* but due to its specific *Nidana, Samprapti and Chikitsa*, The disease which is caused by both *Vata* and *Rakta Dushti* is called “*Vatarakta*”.

Excessive intake of saline, sour, pungent, hot and mutually contradictory food, alcohol, day sleep, persons

who are obese, lead to life of luxury, who travel more on horses or camels, – by these causes *Rakta* begins to cause burning sensation all over the body, accumulates in the feet and vitiated with *Vata* produces the disease called *Vatarakta*.

*Vatarakta* as mentioned in *Ayurvedic* texts have very close resemblance with Gout available in modern texts.

Gout is also called “metabolic arthritis”. It is derived from Greek word *pod Agra* (*pod* means foot and *agar* means trap). Gout can present in a number of ways, although the most usual is a recurrent attack of acute inflammatory arthritis (a red, tender, hot, swollen joint). The metatarsal-phalange joint at the base of the big toe is affected most often, accounting for half of cases. The initial aim of treatment is to settle the symptoms of an acute attack. Repeated attacks can be prevented by different drugs used to reduce the serum uric acid levels. Options for acute treatment include NSAIDs, colchicines and steroids, while options for prevention include allopurinol, febuxstat and probenecid.

But in *Ayurveda*, the Father of Medicine “The *Charaka*” has recommended *Ashvattha Twak Kwatha* with *Madhu* in *Vatarakta* Since *Ashvattha Twaka Kwatha* possesses qualities like *Kaphapitta Shamaka, Vednasthapna, Shothhara* and *Raktashodaka*. Besides that *Kashaya*,

*Madhura Rasa* and *Sheeta virya of Ashwatha* corrects *Pitta Dushti*. Similarly *Madhur Rasa* and *Guru Guna* of an *Ashvatha* will help in checking of *Vatta Dushti*. Thus by alleviating *Pitta* and *Vata Dushti* by virtue of its various qualities and *Rasa, Guna, Virya, Vipaka*, it is likely to break the *Dosh-Dusha Samurchana*.

Considering all above facts and extensive survey of the classical literature was performed in this context. We conclude that the need of an hour is to develop a satisfactory and safe *Ayurvedic* regimen for the management of *Vatarakta*. Thus an open trial of an *Ashvatha Twaka Kwatha* with *Madhu* has been selected in the management of Gout.

### AIMS AND OBJECTIVES

1. To evaluate the effect of *Astvatha twaka kwatha* in the management of *Vatarakta* patient.
2. To provide a better life to the patients of *Vatarakta*.
3. To provide reliable, without side effects, simple, cost effective and cheap management to problem.
4. Conceptual and clinical studies on *Vatarakta vis-à-vis* Gout.

### MATERIAL AND METHODS

#### Selection of Patients

(A) Patients will be selected from OPD & IPD of P.G faculty of *Kaya chikitsa* department of *JJAR, Jammu*.

(B) All clinically diagnosed cases will be properly registered. Details of examination & investigations will be recorded in the performa.

#### Inclusion Criteria

1. Patients having sign & symptoms of *Vatarakta* mentioned in *Ayurvedic* texts like *Shoola, Saruk Shotha, Raga, Kandu, Sparshasahishnutha*.
2. Belonging to age group 18-60 years.
3. Chronicity less than 10 years.
4. Uncomplicated cases of Gout.
5. Patients whose Uric Acid level is in excess of 3-6 mg/dl.

#### Exclusion Criteria

1. Uncontrolled Diabetes mellitus.
2. Pregnancy
3. Rheumatoid Arthritis or Osteoarthritis.
4. History of Tubercular joints /Blood cell disease
5. History of Leprosy or Psoriasis /Malignancy.

#### Diagnostic Criteria

1. Patients having signs and symptoms of *Vatarakta* as described in *Ayurvedic* classics were included in study.
2. Detailed history was taken and physical examination was done on the basis of a special performa incorporating all signs and symptoms of the disease.
3. The routine hematological investigations and serum Uric acid were carried out in selected patients to

exclude any other pathology as well as to assess the present condition of the patient.

#### Design of group

Total 35 patients were registered for the clinical study. Out of which 5 patients were dropped out. Hence the trial was performed on 30 patients, as follows:

- Number of patients registered: 35
- Left against medical advise: 5
- Patients completed course: 30
- Course: *Ashvattha Twak Kwatha*
- Dose: 40 ml BD after meals.
- Anupana: *Madhu*

#### Criteria of Assessment

The results were assessed with regard to improvement recorded in clinical findings & laboratory investigations. Changes observed in sign & symptoms were assessed by adopting suitable scoring methods & objective signs by using appropriate clinical tools. The indoor patients were examined daily & outdoor patients weekly. The detailed assessment of cardinal signs and symptoms are discussed below: to establish the results, each sign and symptom was given score as.

#### 1. Cardinal Symptoms

##### 1. Shoola (Pain)

- 0 - No sign of Shoola.
- 1 - Slight shoola after heavy work, relieved by rest.
- 2 - Slight shoola on slight exertion like walking.
- 3 - Very severe shoola and requires medication.

##### 2. Saruk Shotha (Swelling with pain)

- 0 - No Saruk Shotha
- 1 - Slight Saruk Shotha after heavy work, relieved by rest.
- 2 - Slight Saruk Shotha on slight exertion like walking.
- 3 - Very severe Saruk Shotha and requires medication.

##### 3. Raga (Redness)

- 0 - No Raga
- 1 - Raga during attack and persists for a week after attack.
- 2 - Raga very often without attack.
- 3 - Raga always persisting.

##### 4. Kandu (Itching)

- 0 - No Kandu.
- 1 - Kandu along with attack.
- 2 - Kandu without attack but relieved by Anti-histamines.
- 3 - Always present.

##### 5. Vidaha (Burning)

- 0 - No Vidaha
- 1 - Vidaha along with attack.
- 2 - Vidaha without attack but relieved by medicine.
- 3 - Always present.

### 6. Sparshasahishnutha (Tenderness)

- 0 - No sparshasahishnutha
- 1 - Only at night, not required medicine.
- 2 - At night and occasionally during day time.
- 3 - Tenderness throughout the day and requires medicine.

### 2. Laboratory Investigations

**Serum Uric Acid level-** Serum uric acid test is done before treatment and after every 15 days interval of treatment. Other investigations that were carried out before & after treatment are-

#### Heametological Findings (others)

- a) Haemoglobin (gm%)
- Total Leucocyte Count (TLC)
- Erythrocyte Sedimentation Rate (ESR).

### Overall assessment of the therapy

To assess the overall effect of the therapies, results are classified into 5 groups as listed below:

- Grade – 1 Complete Remission (75%-100%), More than 75% relief in all the cardinal symptoms of Gout.
- Grade – 2 Marked Improvement (50%-75%), 50% - 75% relief in all the cardinal symptoms of Gout.
- Grade – 3 Moderate Improvement (25% - 50%), 25% - 50% relief in all the cardinal symptoms of Gout.
- Grade – 4 Mild Improvement (0 – 25%), 0 – 25% relief in all the cardinal symptoms of Gout.
- Grade – 5 Unimproved (0%), No notable changes with or without undiminished cardinal symptoms of Gout.

### Statistical Analysis

In case of Serum Uric Acid level, statistical analysis of data was carried out by one way repeated measure Anova test.

Non parametric test for K-related samples was carried out using Friedman test to compare 4 groups (BT,AT1,AT2,AT3).

Paired “t” test for comparing means of cardinal symptoms, Hb, TLC ESR & serum uric acid level was carried out at  $P < .05$ ,  $P < .01$ ,  $P < .001$  significance level.

The obtained results were interpreted as

- Insignificant  $P > 0.05$
- Significant  $P < 0.05$
- Highly Significant  $P < 0.01$ ,  $P < 0.001$

### Presentation of data

- The results are presented under the following section:
- The first part expands the general observation like age, sex, religion etc.
- The second section deals with the results of Therapies evaluated on the basis of previously given criteria.

### OBSERVATIONS

**Table No. 1: Age Wise Distribution of 30 patients of Vatarakta.**

Age group in years	Total Patients	Percentage
21-30	3	10.0%
31-40	13	40.33%
41-50	9	30.0%
51-60	5	16.67%

Age:- In present study, Maximum 40.33% of patients were in 31-40 years age group followed by 30.0% patients in 41-50 years age groups, 16.67% of patients in 51-60 year & the minimum 10.0% patients were in 21-30 age group respectively.

**Table No. 2: Sex Wise Distribution of 30 patients of Vatarakta.**

Sex	Total Patients	Percentage
Male	22	73.33%
Female	08	26.67%

Sex: In the present study, majority of patients i.e. 73.33% were males where 26.67% of patients were females.

**Table No. 3: Religion Wise Distribution of 30 patients of Vatarakta.**

Religion	Total Patients	Percentage
Hindu	27	90%
Muslim	03	10%

Religion: As per this table shows maximum no. of patients i.e. 90% were from Hindu Community where as 10% were from Muslim Community.

**Table No. 4: Marital Status Wise Distribution of 30 patients of Vatarakta.**

Marital Status	Total patients	Percentage
Married	22	73.33%
Unmarried	08	26.67%

Marital Status: In this study, maximum no. of patients i.e. 73.33% were married while 26.67% patients were unmarried.

**Table No. 5: Distribution of 30 patients of Vatarakta according to Occupation.**

Occupation	Total Patients	Percentage
Housewife	08	40.0%
Labourer	3	3.33%
Service Class	5	6.67%
Businessmen	12	26.67%
Retiredperson	2	23.33%

Occupation: In this study, maximum no. of patients i.e. 40% were House wives followed by businessman class i.e. 26.67%. Retiredperson were of 23.33% strength. Service class and Labourer class were of low percentage i.e. 6.67% and 3.33% respectively.

**Table No. 6: Distribution of 30 Vatarakta patients according to Socio Economic Status.**

Socio economic status	Total Patients	Percentage
Poor	5	16.67%
Rich	16	53.33%
Middle	09	30.0%

Socio Economic Status: The above table shows that maximum no. of patients i.e. 53.33% were belonging to rich class followed by patients of middle class 30.0%. 16.67% of patients were belonging to poor class.

**Table No. 7: Distribution of 30 patients of Vatarakta according to Dietary Habits.**

Dietary Habit	Total patients	Percentage
Vegetarian	12	40%
Mixed	18	60%

Dietary Habit: In this study, 60% of patients were having mixed diet and 40% of patients were having vegetarian diet.

**Table No. 8: Distribution of 30 patients of Vatarakta according to Agni.**

Kostha	Total Patients	Percentage
Krura	20	66.67%
Madhyama	3	10.0%
Mridu	7	23.33%

Kostha: In this study, 66.67% of patients were having Krura kostha. 23.33% of patients were having Mridu kostha followed by 10.0% of patients of Madhyama kostha.

**Table No. 9: Distribution of 30 patients of Vatarakta according to Addiction.**

Addiction	Total Patients	Percentage
Tea/Coffee	6	20%
Tobaccochewing	12	40%
Smoking	10	33.33%
No addiction	2	6.67%

Addiction: Various modalities of addiction encountered in the groups have been analysed in above table. In this study, 33.33% patients were having smoking habit while 40% patients were having only tobacco chewing followed by 20% patients which were addicted of tea/coffee taking. Rest of patients 6.67% had no addiction.

**Table No. 10: Distribution of 30 Vatarakta patients according to Sleep Pattern.**

Sleep Pattern	Total Patients	Percentage
Sound	9	30.0%
Disturbed	21	70.0%

Sleep Pattern: In present study, 70.0% of patients complained disturbed sleep and rest of patients i.e. 30.0% were having sound sleep.

**Table No. 11: Distribution of 30 patients of Vatarakta according to Deha Prakriti.**

Deha Prakriti	Total patients	Percentage
Vata-Pitta	21	70.0%
Pitta - Kapha	6	20.0%
Kapha-Vata	3	10.0%

**Table No. 12: Cardinal features found in 30 patients of Vatarakta.**

Cardinal symptoms	Total Patients	Percentage
Shoola (Pain)	29	96.67%
Saruk Shotha (Swelling with pain)	26	86.67%
Raga (Redness)	25	83.33%
Kandu (Itching)	18	60.0%
Vidaha (Burning)	20	66.67%
Sparshasahishnutha (Tenderness)	24	80.0%

Cardinal Symptoms: Maximum 96.67% & 86.67% of patients reported Shoola & Saruk Sotha. Raga & Kandu was found in 83.33% & 60% of patients. 66.67% & 80% of patients presented with Vidaha & Sparshasahishnutha.

## RESULT

### Overall assessment of the trial regimen on both the subjective & objective parameters

#### 1. Subjective Parameters

Cardinal symptoms	% relief	Overall treatment effect
Shoola	72.72%	Marked improvement
Saruk Shotha	68.18%	Marked improvement
Raga	76.19%	Marked improvement
Kandu	64.98%	Marked improvement
Vidaha	67.30%	Marked improvement
Sparshasahisnutha	69.38%	Marked improvement

#### 2. Objective Parameters

Objective parameter	% relief	Overall treatment effect
Seum uric acid level	46.66%	Complete remission
	20.00%	Marked improvement
	10.00 %	Moderate improvement
	16.66%	Mild improvement
	6.66%	Unimproved

\*result has been formed keeping the reference range for both the genders in view i.e M=3.5-7mg/dl and F= 3-6 mg/dl. Slight Changes in reference range are liable according to different laboratory standards.

Hence, it shows that *Ashvatha Twak Kwatha* with *Madhu* is highly Significant in the management of *Vatarakta*.

## CONCLUSION

Conclusion is that prediction which can be done on the basis of results and discussions which are obtained from the present study. Conclusions that were drawn after systematic open clinical trial on 30 patients are as follows:- .

Maximum number of patients of *Vatarakta* were reported in 3<sup>rd</sup>-4<sup>th</sup> decade of life. Most of them were Males & maximum number of these male patients were having occupation of being businessmen.

Different types of *Nidanas* of *Vata Dosha & Rakta Dhatu* separately cause the *Vikruti* of *Vata Dosha & Rakta Dhatu* which in turn leads to *Vatarakta*.

Among all the *Nidanas* of *Vatarakta*, sedentary lifestyle is the main one.

*Vatarakta* in *Ayurveda* is compared with that of Gout. The similarity of Gout with that of *Vatarakta* is very well cleared from the *Nidana, Purvarupa, Rupa, Samprapti & the site of Vatarakta* as described in our classics.

Basically, being disorder of the musculoskeletal system the principal manifestations of Gout are pain & impairment of locomotor function. This is because of the pathological reaction of the joint or periarticular tissue to the presence of Monosodium urate crystals.

It has two stages i.e. *Uttana* and *Gambheera*. *Uttana Vatarakta* mainly affects superficial tissue whereas *Gambheera Vatarakta* involves the deeper tissue.

The very attainment of the stage of morbid transformation of vitiated *Vayu & Rakta* involves both *Vatahara & Rakta Prasadaka* remedies as *Chikitsa*.

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

Psychological factors like anger, depression etc have influence on the *Vatarakta* condition.

Mainly *Rakta, Asthi* and *Majja Vaha Srotas* and *Vata* and *Pitta Dosha* are vitiated.

In the present study as per the clinical data, *Ashvatha Twak Kwatha* with *Madhu* is definitely more effective in the management of *Vatarakta*.

#### Scope of Further Study

In future, further scientific study is necessary.

The study needs to be conducted separately on *Uttana & Gambhira Vatarakta* with different combinations, alteration in doses & the estimate duration of treatment in which uric acid levels may be under controlled

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