

# A Randomized Controlled Clinical Trial of Earandadi Kwath and Kaishor Guggulu in the Management of Vatarakta

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## Abstract

*Vatarakta* is the major example of *Vata vyadhi*, caused due to *avarana* pathology. The scenario of *Utthana Vatarakta* occurred owing to the *margavarana* pathology, which can very well be correlated with atherosclerotic peripheral arterial disease. The literature enlists a number of *Guggulu prayogas* in the management of *Vatarakta*. An additional cavernous revise was indispensable to bring out the precise outcome of these products. Keeping these visions in mind, the particular comparative study was performed with *Kaishora guggulu* and *Amrita guggulu*, which are explained in the same context. This is a single-blind comparative clinical study. The 30 patients of group A were treated with Earandadi Kwath and 30 patients of Group B patients were treated with Kaishor Guggulu. The therapeutic effect of the treatment was assessed in both the groups based on specific subjective and objective parameters. The results obtained were analyzed statistically in both the groups and the comparative effect was assessed using the unpaired “*t*” -test. In both the groups, a statistically significant improvement was observed in all the criteria of assessment. The outcome of the study revealed an identical therapeutic efficacy of *Kaishor guggulu* and Earandadi Kwath in *Vatarakta*.

**Keywords** - *Vatarakta*, *Margavarana*, *Raktavahasrotas*, Atherosclerosis, Peripheral Vascular Diseases

## Introduction :

Vatarakta is described as Vata Shonita in Charaka Samhita, Vagbhat Samhita and Madhav Nidan. Sushruta has explained Vatarakta in Vatvyadhi. In Vatarakta, Vata Dosha and Rakta Dhatu are Vitiated with separate etiological factors and these travels is whole body and obstructs in to the Parva

Sandhi and symptoms starts as a Parva Sandhi Shula, Daha and Shotha in Parva Sandhi.

According to modern Vatarakta is known as Gout. It is an musculoskeletal inflammatory joint disorder in which joint becomes swollen and painful. It is a metabolic and heterogeneous disorder that results in the deposition of uric acid salts and crystals in and around joints and soft tissues or crystallization of uric acid in the urinary tract. It is debilitating disease in view of chronicity and complication. Therefore it has taken the foremost place among the joint

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disorder. It continues to pose challenge to physician due to sever morbidity and crippling nature and claiming the maximum loss of human power and sometime amputation may be as a complication.

According to surveillance and present era the incidence of Vatarakta is 2-26 per 1000 population. Vatarakta shows clinically Shotha, Dhah, Shool in Parv Sandhi so to cure these the choice of Kalpa selected here is Earandadi Kwath in which 6 drug are included. Among them Earand, Bula, Guduchi etc. acts as Raktashodhak. Gokshar the risk of renal calculi Kokilaksh act, as Vatapitta Shamak. Kaishor Guggulu is a controlled drug which is commonly, used in Vatavyadi and Vatarakta.

#### **Aim :**

To study the effects of Earandadi Kwath in the management of Vatarakta.

#### **Objectives :**

1. To study the Ayurvedic literature available on Vatarakta.
2. To study the effect of Earandadi Kwath in the management of Vatarakta.
3. To compare the effect of Earandadi Kwath and Kaishor Guggulu.

#### **Study Design :**

Open Randomised Controlled clinical study done. The patients were selected irrespective of sex, religion, socio-economic status. All the patients were examined by Trividha, Ashtavidha, Dashavidha pariksha. A separate case paper was designed with special consent. Follow up were taken at the interval of 15 days for 3 months.

All the aspects of trial explained to participating patients & after a written and informed consent were taken from the patients of both groups.

#### **Inclusion Criteria :**

- 1) Patients having textual signs & symptoms of vatarakta.
- 2) Age : 20 to 60 years.
- 3) Patient were selected irrespective of religion, sex & socioeconomic status.

#### **Exclusion Criteria :**

1. Aamavata, (SLE, Rheumatic arthritis etc.)
2. Sandhigataavata (Osteoarthritis)
3. Pregnancy
4. Any other major illness like Diabetis Mellitus, Tuberculosis, Leprosy HIV etc.
5. Patients below 20 years and above 60years old.

#### **Criteria for Assessment :**

##### **Subjective Parameters :**

**Joint Score :** The no. of clinically active joints were determined on the basis of tenderness on pressure or painful passive movements.

Score 3	:	More than 5 joints.
Score 2	:	Joints between 3-5.
Score 1	:	At least 2 joints.
Score 0	:	Less than 2 joints.

##### **Episode of Numbness :**

Score 3	:	Above 60 min.
Score 2	:	For 30-59 min.
Score 1	:	For 0-29 min.
Score 0	:	No numbness

##### **Severity of Pain : (By VAS Scale)**

Score 3	:	Severe
Score 2	:	Moderate
Score 1	:	Mild
Score 0	:	Nil

##### **Tenderness :**

Score 3	:	Severe
Score 2	:	Moderate
Score 1	:	Mild
Score 0	:	Nil

**Objective parameters :****Swelling :**

Score 3	:	Severely present
Score 2	:	Markedly present
Score 1	:	Slightly present
Score 0	:	Absent

Swelling of interphalangeal joints with rings of various diameters to assess increase or decrease in swelling. Swelling of big joints by measuring their circumference.

**Local Temperature of affected joints :**

Score 3	:	Severe
Score 2	:	Moderate
Score 1	:	Mild
Score 0	:	Normal

**Grip Strength :**

Measured by recording the pressure of that patients can exert by squeezing a partially inflated bag (at a starting of 20 mm of Hg) of a standard sphygmomanometer.

Score 3	:	Poor (below 40 mm of Hg)
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**Grouping and Randomization of Patients :-**

60 patients of vatarakta were randomly selected and divided by odd –even method into two groups i.e.

Group A & Group B of 30 patients each.

Group A had been given trial drug Erandadi kwath.

Group B had been given controlled drug Kaishor guggulu.

Score 2 : Moderate (40-140 mm of Hg)

Score 1 : Mild (142-280 mm of Hg)

Score 0 : Normal (above 282 mm of Hg)

**Functional Score :**

Score 3 : Unable to joint movement

Score 2 : With the help of other person or device

Score 1 : Able to do with difficulty

Score 0 : Able to do without any difficulty

**Overall Score :**

1 – 8 - Mild - Grade I

9 – 16 - Moderate - Grade II

17 – 24 - Severe - Grade III

**Relief of Symptom :**

Patient will be assessed during treatment and result will be assessed.

Good Results : No any complaints.

Moderate Results : 2 steps down.

Mild Results : 1 steps down.

No Results : No change in complaints.

	Group A	Group B
<b>Trial drug</b>	Erandadi Kwath	Kaishor Guggulu
<b>Number of Patients</b>	30	30
<b>Age</b>	20 to 60 years	20 to 60 years
<b>Duration of Treatment</b>	3 Months	3 Months
<b>Dose</b>	40 ml (BD)	750 mg 2 tab BD
<b>Anupan</b>	Sukshoshna Jala	Sukshoshna Jala
<b>Follow up</b>	Every 15 <sup>th</sup> day up to 3 months	Every 15 <sup>th</sup> day up to 3 months

**Methods :**

पानीयं षोडशगुणं क्षुण्णे द्रव्यपलेक्षपेत । मृतपात्रे क्वाथयेत ग्राह्यमष्टमाशावशेषतमं ॥

(शा.सं.म. २/१)

- Mixture of Bharad churna (coarse powder) of all the 6 constituent drugs (each in 1:1 proportion w/w) of the trial formulation.
- 20 gm of the above mixture coarse powder + 320 mL water (i.e. 1:16 proportion / ratio w/v)
- Boiling till 1/8<sup>th</sup> part (by volume i.e. 40 ml) remains
- Filtration
- The solid remnants discarded.
- Per oral administration of the filtered decoction (Kwatha)
- For each & every drug dosage the kwatha/decoction was freshly prepared and given to the patients imedeatly.

**Observations And Results****Joint Score :-**

Joint score	Day-0		Day-90		% Relief	Unpaired t test	P
	Mean score	Sd	Mean score	Sd			
Group-A	2.367	0.5561	1.067	.86	54.9	3.488	<0.0009 HS
Group-B	2.27	.74	1.833	.83	19.4		

**Duration of Numbness :-**

Duration of Numbness	Day-0		Day-90		% Relief	Unpaired t test	P
	Mean score	Sd	Mean score	Sd			
Group-A	1.633	0.4901	0.5667	0.7279	66%	2.936	<0.0048
Group-B	1.6	0.4983	1.067	0.5833	33%		

**Severity of Pain :-**

Severity of Pain	Day-0		Day-90		% Relief	Unpaired t test	P
	Mean score	Sd	Mean score	Sd			
Group-A	2.3	0.4661	0.7667	0.4302	66	7.279	<0.0001 HS
Group-B	2.0	0.2626	1.633	0.4901	18		

**Tenderness :-**

Tenderness	Day-0		Day-90		% Relief	Unpaired t test	P
	Mean score	Sd	Mean score	Sd			
Group-A	2.167	0.379	0.6667	0.5467	69.2	4.642	<0.0001 HS
Group-B	2.033	0.1826	1.267	0.4498	37		

**Swelling :-**

Joint score	Day-0		Day-90		% Relief	Unpaired t test	P
	Mean score	Sd	Mean score	Sd			
Group-A	2.1	0.4026	0.7333	0.4498	65	6.757	<0.0001 HS
Group-B	2.033	0.1826	1.567	0.504	23		

**Local Temperature :-**

Local Temperature	Day-0		Day-90		% Relief	Unpaired t test	P
	Mean score	Sd	Mean score	Sd			
Group-A	2.067	0.4498	0.8333	0.4611	60	2.238	0.0291
Group-B	2.0	0.3714	1.133	0.5713	43		

**Grip Strength :-**

Grip Strength	Day-0		Day-90		% Relief	Unpaired t test	P
	Mean score	Sd	Mean score	Sd			
Group-A	0.9	0.3051	0.4	0.4983	55	2.112	0.039
Group-B	0.8667	0.3457	0.6667	0.4795	25		

**Functional Score :-**

Functional Score	Day-0		Day-90		% Relief	Unpaired t test	P
	Mean score	Sd	Mean score	Sd			
Group-A	0.8333	0.379	0.3667	0.4901	56	2.107	
Group-B	0.8667	0.3457	0.6333	0.4901	27		

**Total score:-**

Total score	Day-0		Day-90		% Relief	Unpaired t test	P
	Mean score	Sd	Mean score	Sd			
Group-A	14.37	1.402	5.4	1.923	62	9.585	<0.0001 HS
Group-B	13.67	1.516	9.767	1.591	28		

**ESR :-**

ESR	Day-0		Day-60		Unpaired t	P
	Mean	Sd	Mean	Sd		
Group-A	21.5	4.569	16.96	4.358	31.994	<0.001 HS
Group-B	20.53	3.502	17.93	3.433	16.656	<0.001 HS

**Uric Acid :-**

Uric acid	Day-0		Day-60		Unpaired t	P
	Mean	Sd	Mean	Sd		
Group-A	7.813	0.758	7.753	0.708	4.539	<0.001 HS
Group-B	7.65	0.763	7.59	0.741	4.039	<0.001 HS

**Discussion :****Discussion on effect of treatment -**

The comparative relief obtained by each therapy on individual group is discussed here. The effects of both drug was assessed on the basis of changes observed in the assessment criteria.

- **Joint Pain** : -The response in joint pain by Group- A (Erاندadi kwath) was (54.9%) Statistically it was **highly significant** ( $p < 0.001$ ). The response in joint score by Group-B (kaishor guggulu) was (19.4%) obtained Statistically it was **significant**. (Comparing both group ( $p < 0.001$ ) which is **highly Significant result**.)
- **Duration of Numbness**: -The response in joint numbness by Group- A (Erاندadi kwath) was (66%), while the response in joint numbness

score by Group-B (Kaishor guggulu) was (33%) obtained. Statistically both were **significant** ( $p < 0.001$ ). (Comparing both group P value shows **Significant result**.)

- **Severity of Pain** - The response of pain by Group A (Erاندadi kwath) was (66%), while the response in pain by Group B (Kaishor guggulu) was (18%) obtained. Statistically both were **highly significant** ( $p < 0.001$ ). (Comparing both group ( $p < 0.001$ ) which is **highly Significant result**.)
- **Tenderness** - The response in Tenderness by Group- A (Erاندadi kwath) was (69.2%), while the response in Tenderness by Group-B (Kaishor guggulu) was (37%) obtained. Statistically both were **highly significant**

( $p < 0.001$ ). (Comparing both group P value shows **significant result**.)

- **Swelling** - The response in swelling by Group- A (Erاندادي kwath) was (65%), while the response in swelling by Group-B (kaishor guggulu) was (23%) obtained. Statistically both were **highly significant** ( $p < 0.001$ ). (Comparing both group ( $p < 0.001$ ) which is **highly Significant result**.)

- **Local temperature** – The response in local temperature by Group- A (Erاندادي kwath) was (60%), while the response in local temperature by Group-B (kaishor guggulu) was (43%) obtained.

Statistically both were **significant** ( $p < 0.001$ ).

Comparing both group P value shows **Significant result**.

- **Grip strength** - The response in grip strength by Group- A (Erاندادي kwath) was (55%). Statistically it was **significant** ( $p < 0.001$ ). The response in local temperature by Group-B (kaishor guggulu) was (25%) obtained. Statistically it was **significant**.

Comparing both group P value shows **Significant result**.

- **Functional score**- The response in functional score by Group- A (Erاندادي kwath) was (56%) Statistically it was **significant**. The response in functional score by Group-B (kaishor guggulu) was (27%) obtained. Statistically it was **significant**.

Comparing both group P value shows **Significant result**.

- **Total score**- The response in Total score by Group- A (Erاندادي kwath) was (62%) Statistically it was **highly significant** ( $p < 0.001$ ). The response in Total score by Group-B (kaishor guggulu) was (28%) obtained. Statistically it was **highly significant**. (Comparing both group ( $p < 0.001$ ) which is **highly Significant result**.)

- **E.S.R.**-The response in E.S.R. by Group- A (Erاندادي kwath) was (63.9%) Statistically it was **highly significant** ( $p < 0.001$ ). The response in E.S.R. by Group-B (Kaishor Guggulu) was (27.6%) obtained. Statistically it was **highly significant**. (Comparing both group ( $p < 0.001$ ) which is **highly Significant result**.)

- **Uric Acid**- The response in Uric Acid by Group- A (Erاندادي kwath) was statistically it was **significant** ( $p < 0.001$ ). The response in Uric Acid by Group-B (Kaishor Guggulu) was obtained. Statistically it was **significant** ( $p < 0.001$ ). (Comparing both group which is **Significant result**.)

In this my clinical study project I had treated all patients of both groups with fresh medicine daily up to 3 months. So the results to the patients were very good in all patients. Looking at my previous results assessment, statistical and clinical tables. I found that all the contains of Erاندادي Kwath were properly working as I had thought in my mind.

So I can definatly says that the Erاندادي Kwath drug which has told in Bhaishajy Ratnavali is a very good drug for pacifyint the Vatarakta especially it is a very usefull in destroying the Samprapti of Vatarakta. But I got in average 60% results in all subjectives and objectives criteries.

It required more duration to pacifying the totally 100% Vatarakta disease or it required another supporting medicine along with this drug.

### Conclusion :

- The Erاندادي Kwath having the definatly pacifying the property of Vatarakta.
- In comparision to Kaishor Guggulu it has found that Erاندادي Kwath is Significant than Kaishor Guggulu to pacifying the Vatarakta Samprapti.
- As etiological study the non-veg diet, alcohol addiction having the grate importance to develop the pathogenesis of Vatarakta than the other etiological factor.

- On the basis of the statistical result assessment of this study I conclude that the 3 months duration for the treatment is insufficient.
- Erandadi Kwath and Kaishor Guggulu both drugs working properly without any complication.
- It has found that Erandadi Kwath having the significant role to reduce the ESR level in the Vatarakta patients.
- Erandadi Kwath has the significant role to reduce the uric acid level into the Vatarakta patients.

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