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A Comparative Pharmaceutico Clinical Study of Kaisore Guggulu and Rasabhra Guggulu on Vatarakta

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Abstract: ***Vatarakta is a disease explained in Ayurveda involving Vata Dosha imbalance affecting Rakta Dhatu – blood tissue. Vatarakta is correlated with Gout in modern medical science. Gout is the true crystal deposition disease characterized by pain & swelling of first Metatarso-phalengeal joint initially followed by other joints with an abnormal elevation of Urate level in the body either due to over production or under excretion or sometimes both. As regards treatment a satisfactory cure is still limited. In this contest course of action indicating various remedies have been prescribed in Ayurvedic classics. The main objective of the study was to assess the comparative efficacy of Rasabhra Guggulu & Kaisore Guggulu mentioned in Samhitas with special reference to Vatarakta. The Sample size of the study was 60 divided into 2 groups, Group-1 i.e- 30 nos of patients were treated with Kaisore Guggulu and Group-2 i.e- 30 nos of patients were treated with Rasabhra guggulu. The result were analysed before and after treatment using student 't' test and other suitable statistical formulas. In all the symptoms of Vatarakta the paired 't' test has denoted that the result of both the groups were highly significant(p<0.001), which implies that both the drugs are effective in the treatment of Vatarakta.***

Keywords: *Vatarakta*, Gout, *Kaisore Guggulu, Rasabhra guggulu*

1. Introduction

Vatarakta is a disease explained in *Ayurveda* involving *Vata Dosha* imbalance affecting *Rakta Dhatu* – blood tissue. When a person takes excessive foods and exposes to lifestyle activities which aggravate *Vata* and also is used to long distance rides on animals like elephants, camels, horses, the vata gets severely aggravated by its own causes. On the other hand *Rakta* or blood gets vitiated by the consumption of *Lavana, Amla, Katu, Kshara* etc causes mentioned above. The vitiated *Rakta* quickly blocks the passages of *Vayu* and interferes with its smooth movements. The *Vata*, whose passages are blocked by *Rakta* further undergoes vitiation and further contaminates the *Rakta* or blood. The blood vitiated by *Vayu* later burns the whole blood in the body. The blood contaminated by vitiated *Vayu* leaves its place and gravitates towards the foot. This vicious amalgamation of vitiated *Vata* and *Rakta* is called *Vatarakta*. This is said to be a dangerous amalgamation which causes serious painful symptoms comprising of a disease called *Vatarakta*. Later the *Pitta* and *Kapha* join this amalgamation and make the clinical picture of the disease even more complicated.

Vatarakta is correlated with Gout in modern medical science. Gout is the true crystal deposition disease characterized by pain & swelling of first Metatarsophalengeal joint initially followed by other joints with an abnormal elevation of Urate level in the body either due to over production or under excretion or sometimes both. It can also be defined as the pathological reaction of the joint or periarticular tissues to the presence of non sodium urate monohydrate crystals, clinically this may present as inflammatory arthritis, bursitis, tenosynovitis, cellulites or as a nodular tophaceous crystal deposits. Although prolonged hyperuriceamia is necessary but is alone not sufficient for development of Gout.

Guggulu kalpana is an upgraded form of *kalka kalpana* in which *Guggulu* is the main ingredient and it is a part of *Vati Kalpana, Guggulu kalpas* are among some of the most familiar preparations in *Ayurvedic* pharmacopeia. Some of the *Guggulu kalpas*, which are used maximum by *Ayurvedic* fraternity of 20th century (due to its higher therapeutic importance), are *Kaisore Guggulu, Yogaraj Guggulu, Simhanada Guggulu, Triphala Guggulu, Amrutadi Guggulu, Trayodasanga Guggulu* etc. Even today most of the modern pharmaceutical industries have come up with formulations containing *Guggulu* and are also prescribed by physicians of other fraternities. Among these *Guggulu* preparations *Kaisore Guggulu and Rasabhra Guggulu* are two such preparations which are predominantly used in the disease *Vatarakta* (Gouty arthritis).

Both the formulations are standardized with qualitative, quantitative analysis along with HPTLC finger prints. The trial drugs *Kaisore Guggulu* and *Rasabhra Guggulu* are explained in *Bhaisajya Ratnavali, Vatarakta adhikar* are orally administrable pharmaceutical combinations. The main objective of the study was to compare the efficacy of both the drugs in the management of Vatarakta.

2. Drugs Review

An ideal drug for any disease should posses the following criterias before it being declared the drug of choice, such as random availability, low cost, availabity to make the patient free symptoms establishing a cure, lack of toxicity and above all palatibility are basic components of a better

recepie. Both the trial drugs are Herbo-meneral formulations prepared in the Pharmacy attached to P.G. Department of Rasashastra & Bhaishajya Kalpana, Gopabandhu Ayurveda Mahavidyalaya, Puri, Odisha.

Kaisore Guggulu:- Ref: Vaisajya Ratna vali (Vata Rakta Adhikara)

Ingredients taken
Sudha guggulu – 2 Prasta (1532 gms)

Drugs for decoction
Tripahal churna (Coarse powder) - 3 prasta (4608 grms)
Guduchi Churna (coarse powder) - 2 Prasta (1532 grms)
Water for decoction – 3 drona (36.864 ltrs)

Prakshepa Drugs:-
Triphala Churna – 4 pala (192 grms)
Trikatu churna -2 tola (24 gms)
Vidanga – 2 pala (96 grms)
Danti – 2 Karasa (24 grms)
Trivrut (Sukhma churna) – 2 Karsa (24 grms)
Guduchi -2 tola (24 gms)
Ghrita – As required

Rasabhra Guggulu:- Ref: Bhava prakash / Vata Rakta Adhikara

Ingredients taken
Sudha Parada – 2 pala (96 gms)
Sudha Gandhaka -2 pala (96 gms)
Louha Bhasma -2 pala (96 gms)
Abhra Bhasma - 2 pala (96 gms)
Purified guggulu – 2 prastha (1532 gms)

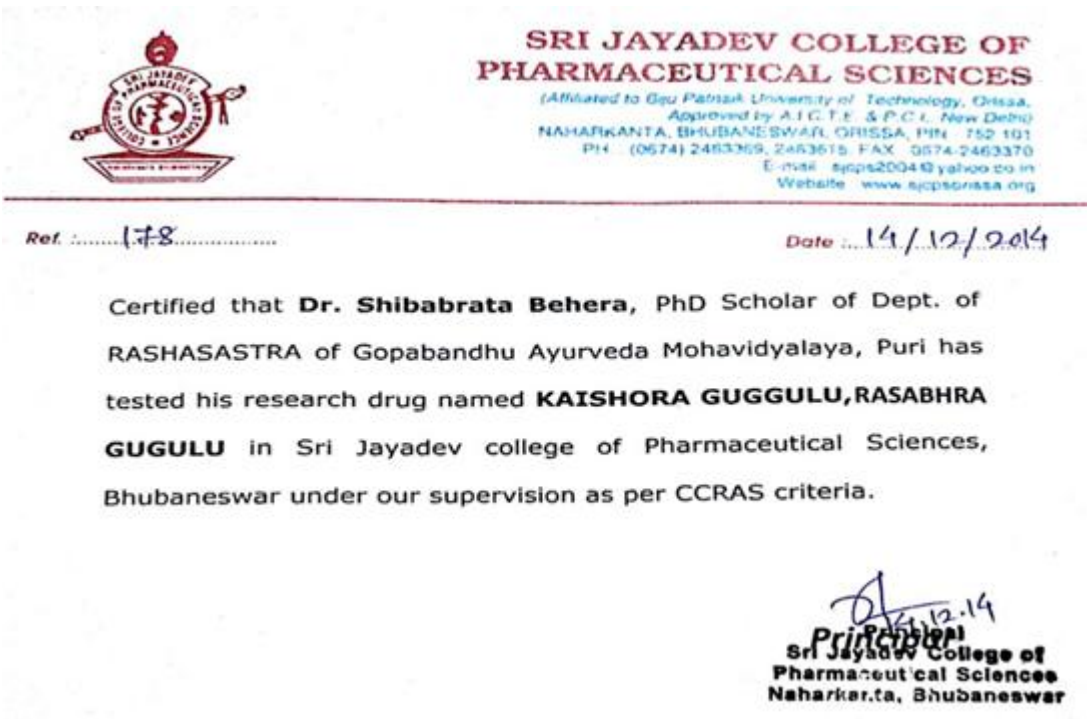
Drugs for decoction:
Guduchi - 3 prasta (2304 gms)
Triphala Churna (course powder) – 3 prasta (2304 gms)
Water for decoction – 3 drona (36.864 ltrs)

Prakshepa dravya
Trikatu – 2 tola (24 gms)
Triphala – 2 tola (24 gms)
Danti mula – 2 tola (24 gms)
Guduchi - 2 tola (24 gms)
Indravaruni – 2 tola (24 gms)
Vidanga - 2 tola (24 gms)
Nagapuspa – 2 tola (24 gms)
Trivrut - 2 tola (24 gms)

All the drugs present in both the trial drugs having properties like-

1) Which can brinng reduction of uric acid level in blood through synthesis inhibition.
2) Expulsion of uric acid from the body through renal excretion as well as purgative .
3) Analgesic to bone and joint
4) Anti inflamatory -
5) Minimising burning sensation and to skin lesion

3. Analysis of Trial Drugs



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Certified that **Dr. Shibabrata Behera**, PhD Scholar of Dept. of RASHASASTRA of Gopabandhu Ayurveda Mohavidyalaya, Puri has tested his research drug named **KAISHORA GUGGULU, RASABHRA GUGULU** in Sri Jayadev college of Pharmaceutical Sciences, Bhubaneswar under our supervision as per CCRAS criteria.

14.12.14
Principal
Sri Jayadev College of Pharmaceutical Sciences
Naharkanta, Bhubaneswar

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Ref. ..... Date.
.....
Test Certificate

Sample 2

Tests		**Results**	**Protocol**
Organoleptic Characters			
Colour	:	Redish	
Smell	:	Characteristic	
Touch	:	Rough	
Solubility			
Water	:	6.61 %W/W	: API
Alcohol	:	8.27% W/W	
Acid Soluble	:	4.47% W/W	
Volatile Substance	:	1.391%W/W	
Resin	:	9.027 %W/W	
Loss on drying	:	23%	standards for
Ayurvedic.			
Total Ash	**:**	**8.211%**	
formulations			
			: MA - 3
			: IS: 1350 part 3

Remarks: Partly asked for the above tests only.

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Ref. ..... Date.
.....
Test Certificate

Sample 1

Tests		**Results**	**Protocol**
Organoleptic Characters			
Colour	:	Brownish	
Smell	:	Aromatic	
Taste	:	Bitter	
Touch	:	smooth	
Solubility			
Water	:	6.462%W/W	: API
Alcohol	:	7.09% W/W	
Acid Soluble	:	2.321% W/W	
Volatile Substance	:	1.133%W/W	
Resin	:	9.728%W/W	
Loss on drying	:	**27%**	standards for
Ayurvedic.			
Total Ash	:	**6.211%**	
formulations			
			: MA - 3
			: IS: 1350 part 3

Remarks: Partly asked for the above tests only.

4. Clinical Study

4.1 Materials and Method

This is study with comparison by a known standard drug, carried out. On 60 numbers of patients suffering from VATARAKTA will be selected from the OPD/IPD of Gopabandhu Ayurveda Mahavidyalaya and Hospital, following the selection criterias and were divided into two groups randomly viz.
GROUP-1-30 patients were treated with trial drug1 i.e Kaiosore guggulu.
GROUP-2-30 patients were treated with trial drug2 i.e Rasabhra guggulu
They were screened for their suitability to be included in the groups availing the criteria for selection.

4.2 Selection Criteria:

The selection is made referring to cardinal signs and Symptoms such as

- Swelling of joints(Toes,Inter phallengial joints,Big joints)
- Pain
- Tenderness
- Burning sensation
- Elevated serum uric acid
- Elevated E.S.R.

A single and multiphase sampling was adopted to divide the patient in the respective groups.

Exclusion Criteria:

- Cardio / Renal pathology
- Hypertension
- Osteoarthritis
- Rheumatoid arthritis
- Pregnant & lactating mother
- Diabetis mellitus, tubercular and any other complications.
- Below 20 years of age were also not included.

Study Design

The total numbers of patients i.e. 60 have been selected applying multiphase random sampling techniques and were divided into two groups as follows –
G1 = Group 1 = constituting 30 patients

G2 =Group 2 = constituting 30 patients

Duration of Study
Both the groups covers 45 days of treatment.

Drug and Dose:
Group 1 – Kaisore guggula was given in 3gms tablet at 6 A.M. and 6 P.M. at divided doses.
Group 2 – Rasabhra guggula was given in 3 gms tablet at 6 A.M. and 6 P.M.at divided doses.

Diet and Advised:
The patients were categorically advised to avoid exposure to excess hot and air with restriction in spicy, sour, heavy and other textual prescription.

Examination of the Patients:
For each patient a specially designed program was filled up to note various aspects of disease and patients along with assessment of clinical relief and radiological changes.

Clinical Assessment of Cases:
The clinical assessment was made depending upon the changes in subjective and objectives features as mentioned in assessment scale.

Subjective Criteria

1) Pain
G0- Absent or no Pain
G1- Mild- Perception of pain but not interfering his normal activities.
G2- Moderate- Perception of pain, interfering his normal activities and painful activities.
G3- Severe- Excruciating of pain associated with painful crises and agonizing look.

2) Swelling
The affected joint and particular normal joint of the patient was measured. The difference between the two was taken. When there was incidence of both side joint afflictions then a normal person of same height and weight was considered. The difference between the measurements of the particular joint of the affected person with that of the normal individual was taken and grouped as mild, moderate and severe.

3) Burning sensation
G0- Normal
G1- Mild- Feeling of burning sensation
G2- Moderate- Feeling of burning sensation on extremities as well as on forehead
G3- Severe- Feeling of burning sensation all over the body

Objective Criteria

1) Blood ESR -
   G0- Normal- 5- 7 mm of fall/ 1st hour
   G1- Mild- 7- 20 mm of fall/ 1st hour
   G2- Moderate- 20- 50 mm of fall/ 1st hour
   G3- Severe- > 50 mm of fall/ 1st hour
2) Blood serum Uric Acid Level -
   G0- Normal- 5- 7 mg/dl
   G1- Mild- 7- 8 mg/dl
   G2- Moderate- 8- 9 mg/dl
   G3- Severe- > 9 mg/dl

Statistical assessment of cases: The mean +/- S.D. before treatment has been compared with mean+/- S.D. after treatment.

Assessment Scale: The effectiveness of trail and control drug has been assessed through the p – value applying paired t – test for test of significance.

5. Observation

Table 1: Showing Sex of the patients

Sl. No	Sex	No of Patients	Percentage (%)
1	Male	36	60.00
2	Female	24	40.00

Table 2: Showing age of the patients

Sl. No	Age Group in Years	No of Patients	%
1	21-30	7	11.67
2	31-40	14	23.33
3	41-50	18	30.00
4	51-60	13	21.67
5	61-70	8	13.33

Table 3: Showing occupational status of the patients

Sl. No.	Occupation	No of Patients	%
1	Executive	8	13.33
2	Official	23	38.33
3	Worker	12	20.00
4	Others	17	28.33

Table 4: Showing Economic status of the patients

Sl. No.	Socio-economic Status	No. of Patients	%
1	Poor	14	23.33
2	Middle Class	24	40.00
3	Rich	22	36.67

Table 5: Showing Addiction of the Patients

Sl. No	Addiction	No. of Patients	%
1	Alcohol	22	36.67
2	Drugs	0	0.00
3	Opium	4	6.67
4	No Addiction	34	56.67

Table 6: Showing Chronicity of the patients

Sl. No	Chronicity of Disease	No of Patients	%
1	Uttana	38	63.33
2	Gambhira	22	36.67

Table 7: Showing Nature of work of the patients

Sl. No.	Nature of Work	No. of Patients	%
1	Sedentary	18	30
2	Sitting	27	45
3	Over Standing	15	25

Table 8: Showing Habituation of the patients

Sl. No	Habituation	No. of Patients	%
1	Tea	29	48.33
2	Coffee	3	5.00
3	Tobaco	6	10.00
4	Smoking	22	36.67

Table 9: Showing the percentage of change w.r.t. sign and symptoms after treatment

S. No.	Sign & Symptoms	Group-I (RG)			GROUP-II(KG)		
		AT1 %	AT2 %	AT3 %	AT1 %	AT2 %	AT3 %
1	Joint Pain	33.33	65.59	96.77	24.44	40	60
2	Swelling	32.26	64.52	97.85	14.44	40.56	56.11
3	Burning Sensation	33.33	65.59	97.85	25.56	47.78	70
4	E.S.R.			98			42.2
5	Serum Uric Acid			98			38.83

% - Percentage in changes of sign and symptoms
AT1- After 15 days of treatment
AT2- After 15 days of treatment
AT3- After 15 days of treatment
Group-I (RG) - Rasabhra Guggulu
Group-II (KG) - Kaisore Guggulu

Table 10: Showing Ststistical Analysis of B.T. & A.T.

Sign & Symptoms	Treatment Group	Duration of Treatment	Mean ± S.D.	df (n-1)	t- value	P-value	Remark
Joint Pain	Gr-I (RG)	BT	3.00 ± 0.00	29			***
		AT1	2.03 ± 0.18		29	< 0.001	
		AT2	1.03 ± 0.18		59	< 0.001	
		AT3	0.10 ± 0.31		52.05	< 0.001	
	Gr-II (KG)	BT	3.00 ± 0.00				***
		AT1	2.27 ± 0.45		8.93	< 0.001	
		AT2	1.80 ± 0.41		16.15	< 0.001	
		AT3	1.20 ± 0.48		20.36	< 0.001	
Swelling	Gr-I (RG)	BT	3.00 ± 0.00	29			***
		AT1	2.03 ± 0.18		29	< 0.001	
		AT2	1.07 ± 0.25		41.73	< 0.001	
		AT3	0.07 ± 0.25		63.32	< 0.001	
	Gr-II (KG)	BT	2.97 ± 0.18				***
		AT1	2.53 ± 0.51		4.7	< 0.001	
		AT2	1.77 ± 0.43		16.15	< 0.001	
		AT3	1.30 ± 0.47		19.03	< 0.001	
Burning Sensation	Gr-I (RG)	BT	3.00± 0.00	29			***
		AT1	2.00 ± 0.26		20.85	< 0.001	
		AT2	1.03 ± 0.18		59	< 0.001	
		AT3	0.07 ± 0.25		63.32	< 0.001	
	Gr-II (KG)	BT	3.00 ± 0.00				***
		AT1	2.23 ± 0.50		8.33	< 0.001	
		AT2	1.57 ± 0.50		15.57	< 0.001	
		AT3	0.90 ± 0.55		29	< 0.001	
E.S.R	Gr-I (RG)	BT	3.00 ± 0.00	29	63.33	< 0.001	***
		AT	0.07 ± 0.25				
	Gr-II (KG)	BT	2.08 ± 0.41		14.29	< 0.001	***
		AT	1.67 ± 0.48				
Serum Uric Acid	Gr-I (RG)	BT	3.00 ± 0.00	29	63.32	< 0.001	***
		AT	0.07 ± 0.25				
	Gr-II (KG)	BT	2.08 ± 0.41		16	< 0.001	***
		AT	1.73 ± 0.45				

BT- before Treatment
AT- after treatment
AT1- After 15 days of treatment
AT2- After 15 days of treatment
AT3- After 15 days of treatment
*** - Significant at 0.1% level (<0.001)
Gr-I (RG) - Rasabhra Guggulu
Gr-II (KG) - Kaisore Guggulu

Table 11: Showing Clinical Assessment after Treatment

Clinical Assessment	AT1				AT2				AT3			
	Gr I(RG)		Gr II(KG)		Gr I(RG)		Gr II(KG)		Gr I(RG)		Gr II(KG)	
	f	%	f	%	f	%	f	%	f	%	f	%
Maximum Improvement (>75%)	00	00	00	00	00	00	00	00	30	100	00	00
Moderately Improvement (>50%)	00	00	00	00	30	100	6	20	00	00	21	70
Mild Improvement (> 25%)	28	93.33	03	10	00	00	24	80	00	00	09	30
Unsatisfactory (< 25%)	02	6.67	27	90	00	00	00	00	00	00	00	00

f- No of patient
AT1- After 15 days of treatment
AT2- After 15 days of treatment
AT3- After 15 days of treatment
% - Percentage in changes of sign and symptoms
Gr-I (RG) - Rasabhra Guggulu
Gr-II (KG) - Kaisore Guggulu

Table 12: Showing Ststistical Analysis of R.G –vrs K.G.

Sign & Symptoms	Duration of Treatment	Treatment Group	Mean ± S.D.	df (N-1)	t- value	P-value	Remark
Joint Pain	AT1	RG	1.00 ± 0.00	59	3.3	< 0.01	**
		KG	0.73 ± 0.45				
	AT2	RG	1.97 ± 0.18		9.58	< 0.001	***
		KG	1.20 ± 0.41				
	AT3	RG	2.90 ± 0.30		10.72	< 0.001	***
		KG	1.80 ± 0.48				
Swelling	AT1	RG	0.97 ± 0.18	59	5.55	< 0.001	***
		KG	0.43 ± 0.50				
	AT2	RG	1.94 ± 0.25		8.54	< 0.001	***
		KG	1.20 ± 0.41				
	AT3	RG	2.94 ± 0.25		13.02	< 0.001	***
		KG	1.69 ± 0.48				
Burning Sensation	AT1	RG	1.00 ± 0.26	59	2.28	< 0.05	*
		KG	0.77 ± 0.50				
	AT2	RG	1.97 ± 0.18		5.55	< 0.001	***
		KG	1.43 ± 0.50				
	AT3	RG	2.94 ± 0.25		7.7	< 0.001	***
		KG	2.10 ± 0.55				
E.S.R.	BT	RG	2.94 ± 0.25	59	19.95	< 0.001	***
		KG	1.13 ± 0.43				
Serum Uric Acid	BT	RG	2.94 ± 0.25	59	23.39	< 0.001	***
		KG	1.07 ± 0.37				

BT- before Treatment
AT- after treatment
AT1- After 15 days of treatment
AT2- After 15 days of treatment
AT3- After 15 days of treatment

*** - Significant at 0.1% level (<0.001)
Gr-I (RG) - Rasabhra Guggulu
Gr-II (KG) - Kaisore Guggulu

6. Discussion

The patients are selected applying multi phase random sampling technique and divided into two groups, Group-I, Kaisora Guggulu. Group II Rasabhra Guggulu. The duration of the study was 45 days and the dose was 3gm in divided does (twice a day i.e. 6am and 6pm) for Kaisora Guggulu and Rasabhra Guggulu.

The clinical assessment was made according to the changes in subjective and objective sign and symptoms which are mentioned in assessment criteria. The effectiveness of the trial drugs have been assumed through the "p-value" applying the paired "t-test" for the test of significance.
For assessment of pain four gradation was set Grade 0 (G0) – absent or no pain, Grade I – mild perception of pain but no interfering his normal activities and painful activities, Grade II – moderate perception of pain interfering his normal activities and painful activities, Grade III - severe excruciating associated with painful cries and agonizing look, normal activities are interfered.

For swelling the effected joints and particular normal joints of the patient was measured. The difference between the two groups was taken, while there was incidence of both side joint afflictions, and then a normal person of same height and weight was considered. The difference between the measurements of the particular joints of the affected person with that of the normal individual was taken and grouped as mild, moderate and severe.

For tenderness, joint line tenderness was evaluated on the basis of standard criteria of R.A.I. as G0-absent or no tender, G1-mild tender, G II-moderate tender and winced, G III-severe-tender winced and withdrawn.

Daha (burning sensation) here also four gradations was taken i.e. G0-normal, G I-mid-feeling of burning sensation on extremities, G II-moderate-feeling of burning sensation on extremities as well as on the forehead, G III-severe-feeling of burning sensation all over the body.

ESR was also placed under four gradation, G0-normal-5-7mm, G I - mild- 7-20mm, G II - moderate -20-50mm, G III-severe- >50 mm.

Uric acid too was graded accordingly G0-normal-5-7mg/dl,G I – mild -7-8mg/dl, G II -moderate-8-9mg/dl,G III-severe – >9 mg/dl.

Toxicity – Due care was given to note the development of any adverse effect on both group of trial drugs.

For the purpose of assessment of result I have used some points considering the severity of different sign and symptoms. The responses were highlighted through different tables and graphs.

7. Discussion on Materials and Methods

As regards selection criteria, the age incidence is 20 years and above as per the textual reference. All the clinical varieties have been included and the possible determination of bio-chemical variation like estimation of Serum uric acid has been adopted. The dose of trial drug has been fixed as per the therapeutic and the period of trial is limited to 45 days.

An involvement of deeper tissues like bone and nature of chronicity of the disease usually warrants of reasonable time

span for satisfactory effect. The children age group has been deleted from the trail since the age group usually does not suffer from a disease like Vatarakta. It is declared that the disease beyond chronicity of 1 year is said to be difficult to cure while modern reference never says the disease being curable rather a palliative responded, moderate respond, mild responded, such a language has been determined under influence of Ayurvedic reference.

8. Discussion on Observation

Sex: Table 1 : As regards sex, the incidence in females in higher than male (Sushruta). The output of my study revealed the female victim 60.00% and their counterpart were 40.00%. The higher incidence of men may be due to excess intake of purin product along with addiction to alcohol (Harrison).

Age: The incidence in the age group of 40-50 years was higher noted among 18 cases, amounting to 30%, which is higher comparing to other age groups. This is very proximal under textual exposure, which is 40-60 years. About 58 years being the prone age for Gouty Arthritis.

Habitat: In my study the percentage of habitation belonging to the urban area is 80% which may be due to sedentary life style.

Occupation:
During observation regarding occupation the higher classes working in the officer were more. Both modern and Ayurvedic reveals that the disease is prone to higher classes, over weight etc. In short this disease is a "disease of rich people". Thus it is named as "Addhya Vata"

Economic Status:
Observation reveals more cases from both the middle and rich economic status may be due to their sedentary life style.

Addiction:
Patients having the addiction of to alcohol are observed more in the study which relates the description both the modern and Ayurvedic classic. Alcohol increases uric acid.

Dietary Habbit:
In the trial patients, non-veg. diet were 83.33% and veg diet patients were 16.67% Non veg diet supplements the purin input thus increases the uric acid which helps in precipitating the diseases Gouty Arthritis. The main causes were having ingestion of excess Katu, Amla and Ushna, aggravates vata & Rakta described under Ayurvedic classics.

Chronicity:
This study reveals the chronicity being more than six months which also establish (textual description) which may be due to a complexity to nidana, which cannot be treated easily, again another factor may be due to non availability to adequate treatment so far.

9. Discussion on Clinical Response

In regarding to sign and symptoms there were having pain, swelling, burning sensation (Daha). Involvement of skin depicted in modern literature pruritus, discoloration of skin has been overlooked in the study.

Before the treatment the sign and symptoms including laboratory investigation were also observed ESR in Group I -98% and Group II-42% respectively and Uric acid in Group I-98% and Group II-38.83%.

Regression swelling of finger joints comparing the other joints were higher the reason may be the upper limb joints are most mobile and free from having a tendency of dependent edema.

Uric acid level was found decreased among both the groups, significantly in Group-I (98%) and Group-II (38.83%) respectively. The reason may be both drugs Rasabhra Guggulu and Kaisora Guggulu ceased the synthesis of uric acid in course of metabolism and also excretion of the uric acid was better.

Decrease of burning sensation (Daha) was in both Group-I (97.85%) and in Group-II (70%) respectively. This may be due to predominance of Tikta rasa, Madhura Vipaka,

ESR level of both the groups decreases in Group-1 (98%) and Group-II (42.2%). The high response may be due to the drug highly effective in sedimentation of RBC's.

Acceptability of Trail Drug
Acceptability of any drug rest on its fitness including safety. The effect of both Kaisora Guguulu & Rasabhra Guggulu on Vatarakta may be viewed that as treatment there is a recommendation of virechana, asthapana and Rakta Mokshana furnished by veteran pioneers such as to win over pitta Vata dosha. Usually virechana is advocated against Vatarakta. As per modern layout control of uric acid is possible through cessation of uric acid synthesis and excretion through urine.

The former effectiveness only possible through maintenance of proper metabolism as explained in Ayurveda. Defining to the pharmacological effect and physico-chemical analysis the drug Kaisora guggulu and Rasabhra guggulu are upto the requirement as desired.

In maintenance Gouty Arthrities pain killers are usually prescribed as an adjuvant therapy. However this substitute as Vata samana and Vedana sthapan in Ayurveda. Most of the ingredients of Kaisora Guggulu and Rasabhra Guggulu are vedana sthapaka and increases the threshold of pain. The correction of metabolism is also carried out through the drug like Sodhita parada, Sodhita Gandhak, Lauha Bhasma, Abhrak bhasma, Sunthi, Pippali, Maricha and Vidanga which can be simulated with the principles of cessation of uric acid synthesis.

An overall clinical implement and statistical assessment are also witnessed in favor of trial drugs in a significant manner. Correction in laboratory investigation is also another benefit favor of drugs in a significant manner. Correction in laboratory investigation is also another benefit in favor of drug appended. The question of acceptability of the trail

drug for the treatment of Vatarakta is no more remains apprehended rather it can be safely used for the purpose.

10. Conclusion

The study shows that as described in ancient Ayurveda literature Vatarakta is a disease characterized by pain, burning, swelling, and itching at particular site of the joints especially in meta-tarso-phalangeal joint and knee joints which is also described in case of Gout by contemporary literature. Vatarakta is purely Shakha-gata disease which is caused by vitiation of Vata with disordered property of Rakta hence it is called Vata and Rakta-vikara.

Rasabhra Guggulu and Kaishora Guggulu both have significant effect on the symptoms of Vatarakta as described in our texts and this study has proved the same.

Both the Guggulu are also very significant effect on the level of serum uric acid, which is a prominent marker of diagnosis and prognosis of Vatarakta with special reference to disease Gout. Although the formulations, Rashabhra Guggulu and Kaisora Guggulu- have minor differences in its ingredients yet played almost same role on disease Vatarakta which got proved by clinical study. Study reveals that on the basis of Percentage of relief Rasabhra guggulu is more effective in the treatment of Gouty arthritis particularly reducing the frequency of the attacks and severity of the attack after the onset of the disease.

In Vatarakta treatment mostly three varieties of Guggulu preparation were extensively used by Ayurvedic physician, they are Kaisore Guggulu,Amrutadi Guggulu and Rasabhra Guggulu. While going through the ingredients, Kaisore Guggulu and Amrutadi Guggulu are mostly contains same drugs and both are purely herbal medicines,while Rasabhra Guggulu is a Herbo-mineral preparation containing drugs like Kajjali,Louha bhasma, Abhra bhasma and herbs like Indravaruni, Nagakesar, Chitraka mula etc. Hence percentage of relief is more compared to Kaishore Guggulu due to the presence of extra Minerals and Herbs.This rightly validate the hypothetical description of Rasa Aousadhi in different Rasa text of seers such as ***" Alpamatra upayogitwat …….. aruchet aprasangata"***

Hence I am satisfied with the objective of my study that even both the trial drugs are indicated in disease Vatarakta due to the ingredients Minerals and Metal to that of pure herbal ingredients Kaisora Guggulu is more effective. This study will definitely give a message to the Ayurvedic fraternity that in case of severe Vatarakta Rasabhra Guggulu is more appropriated and in case mild Vatarakta Kaisora Guggulu may be suggested.

11. Scope of Further Study

- Clinical study of these two Guggulu preparations with large no of patients and in particular with specific symptoms separately can be carried out, in order to assess more specific action of these drugs.
- Vast Toxicity study may be carried out for the safety profile of Rasabhra Guggulu through experimental study.
- One comparative study can be carried out taking any Guggulu preparation of the above to that one modern medicine.

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