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Original Article

EVALUATION AND COMPARE THE EFFICACY OF KAISHORA GUGGULU PLUS AMRITA GUGGULU IN THE MANAGEMENT OF UTTHANA VATARAKTA W.S.R. TO GOUT.

MANOJ KUMAR GUPTA[1] DINESH SING GAUR[2] VINOD KUMAR SINGH[3], NITIN URMALIYA[4]

1Lecturer, Department of Roga and Vikriti Vijnana,Government Ashtang Ayurvedic College and Hospital, Lokmanya Nagar, Indore, Madhyapradesh, India. 2Lecturer, Department of Shalakya, Government Ashtang Ayurvedic College and Hospital, Lokmanya Nagar, Indore, Madhyapradesh, India.3Reader, Department of Kaya Chikitsa, Gaur Brahaman Ayurvedic College and Hospital, Rohtak, Haryana, India.4Lecturer, Department of Agad Tantra, government Ashtang Ayurvedic College and Hospital, Lokmanya Nagar, Indore, Madhyapradesh, India.

Email: drmanoj.gupta505@gmail.com

ABSTRACT

Evaluate the synergistic effect of Kaishora guggulu plus Amrita guggulu and compare with placebo group in patients suffering from Vatarakta or Gout.

Methods

The patients, who attended the OPD and IPD of the Govt Ayurvedic College with signs and symptoms of Vatarakta, were screened. Among these, 90 patients who fulfilled the criteria of inclusion, mentioned a little later in the text, were included in the study. The selected patients were randomly categorized into two groups, with each group consisting of 45 patients. The study was a single-blind, comparative, clinical study with a pre-test and post-test design. Where in a minimum of 90 patients of either sex, suffering from Vatarakta, in an age limit of 25 to 80 years, were selected and randomly categorized into two groups. The 45 patients of group A were treated with oral administration of Tab Kaishora guggulu 2 gm plus Amrita guggulu 2 gm thrice a day and the group B patients with Tab PLACEBO in 2gm of the dose pattern with anupana of lukewarm water.

Results

The therapeutic effect of the treatment was assessed in both the groups based on specific subjective and objective parameters on grading scales. The results obtained were analyzed statistically in both the groups and the comparative effect was assessed using the unpaired "t" -test. In the present study, 80% of the patients from both the groups had madhumeha (Diabetes mellitus), shonita mada (Hypertension) or both. 70 percent of the patients in group A and nearly 60% of the patients in group B, suffering from Vatarakta, had the habit of smoking. In group A statistically significant improvement was observed in all the criteria of assessment. The outcome of the study revealed therapeutic efficacy of Kaishora guggulu plus Amrita guggulu in Vatarakta. The use of Kaishora guggulu plus Amrita guggulu as shamana Aushadhas was a perfect selection in the management of rakta margavaranajanya Vatarakta.Patients of groups A showed marked remission of the symptom of pain after intervention. The results are shown in Tables 2–4. The comparison of effect of therapy is shown in Figures 1–4. In group A, the initial mean score was 2.66, which came down to 1.39 after treatment, exhibiting a statistically, highly significant improvement, with $P < 0.001$ and about 78.9% relief. At the same time, group B patients also showed no marked improvement, with reduction in the initial mean score of 1.26 to 1.06 after intervention. This was statistically, insignificant, with $P < 0.1$ and about 23.14% relief. When compared, through the unpaired "t" -test, the difference between the two groups was significant statistically. Burning sensation was one of the cardinal symptoms of Vatarakta, which was relieved by 76% in group A patients and by 15% in group B patients. This improvement, when compared using the unpaired "t" -test, show big difference between the two groups. Seventy-six percent improvements were observed in the symptom of 'malaise' in group A patients, while Group B patients showed 23% relief. This improvement after the treatment was found to be highly significant ($P < 0.001$) in the groups A as per the paired "t" -test. When given for the unpaired "t" -test, this difference was not statistically significant.

Conclusion

The outcome of the study reveals the therapeutic efficacy of Kaishora guggulu plus Amrita guggulu in Utthana Vatarakta. The use of Kaishora guggulu plus Amrita guggulu as Shamana Oushad has is a perfect selection for the management of Rakta Margavaranajanya Vatarakta or gout..

Keywords : Vatarakta, Margavarana, Raktavahasrotas, Atherosclerosis,Peripheral Vascular Diseases.

INTRODUCTION

Hyperuricemia is defined as a serum uric acid concentration above 7 mg per dL (420 µmol per L). This concentration is also the limit of solubility for monosodium urate in plasma. At levels of 8 mg per dL (480 µmol per L) or greater, monosodium urate is more likely to precipitate in tissues. At a pH of 7, more than 90 percent of uric acid exists as monosodium urate.

Uric acid, the end product of purine metabolism, is a waste product that has no physiologic role. Humans lack uricase, an enzyme that breaks down uric acid into a more water-soluble product (allantoin), thus preventing uric acid accumulation. Increased serum uric acid concentration is a result of either overproduction or underexcretion of uric acid. In 90 percent of patients, gout is caused by the underexcretion of uric acid. [2]

Although hyperuricemia is a risk factor for the development of gout, the exact relationship between hyperuricemia and acute gout is unclear. Acute gouty arthritis can occur in the presence of normal serum uric acid concentrations. Conversely, many persons with hyperuricemia never experience an attack of gouty arthritis. [3]

Hyperuricemia can have many causes. Serum uric acid levels become elevated in any disorder that results in the proliferation of cells or the excessive turnover of nucleoproteins. Hyperuricemia can also occur with decreased renal function and in genetic disorders that increase the production or limit the excretion of uric acid. Several medications

increase the serum uric acid concentration through modification of the filtered load of uric acid or one of the tubular transport processes.

Hyperuricemia has been associated with hypertriglyceridemia and diabetes mellitus,[5] and it may be a risk factor for the development of coronary artery disease.[6] Gout and rheumatoid arthritis do not appear to be associated.[7,8]

OVERPRODUCTION OF URIC ACID

Purines, which are later metabolized to uric acid, enter a common metabolic pathway by which either nucleic acid or uric acid is produced. Normal production of uric acid is considered to be 600 mg per day in men with normal renal function on a purine-free diet.[4]Overproduction of uric acid may occur because of an abnormality in the enzymes that regulate purine metabolism. Two such abnormalities have been documented. An increase in the activity of phosphoribosylpyrophosphate synthetase results in increased uric acid synthesis. A deficiency of hypoxanthine-guanine phosphoribosyltransferase also increases serum uric acid levels.[9]

A practical approach is to obtain a 24-hour uric acid determination without dietary restriction. A patient on a regular diet who excretes more than 800 mg of uric acid per 24 hours is considered an overproducer.[4]

UNDEREXCRETION OF URIC ACID

About two thirds to three fourths of all uric acid produced daily are excreted by the kidneys. The gastrointestinal tract eliminates the other one third to one fourth. Under normal conditions, uric acid is filtered in the glomeruli of the kidney, reabsorbed in the proximal tubule and secreted distally. Tubular secretion is almost entirely responsible for the excretion of uric acid. Renal management of uric acid is defective in approximately 98 percent of patients with primary hyperuricemia and gout. [4]

Gout is a disease resulting from the deposition of urate crystals caused by the overproduction or under excretion of uric acid. The disease is often, but not always, associated with elevated serum uric acid levels. Clinical manifestations include acute and chronic arthritis, tophi, interstitial renal disease and uric acid nephrolithiasis. The diagnosis is based on the identification of uric acid crystals in joints, tissues or body fluids. Treatment goals include termination of the acute attack, prevention of recurrent attacks and prevention of complications associated with the deposition of urate crystals in tissues. Pharmacologic management remains the mainstay of treatment. Acute attacks may be terminated with the use of nonsteroidal anti-inflammatory agents, colchicine or intra-articular injections of corticosteroids. Probenecid, sulfinpyrazone and allopurinol can be used to prevent recurrent attacks. Obesity, alcohol intake and certain foods and medications can contribute to hyperuricemia. These potentially exacerbating factors should be identified and modified.Gout is a common arthritis caused by deposition of monosodium urate crystals within joints after chronic hyperuricaemia. It aff ects 1–2% of adults in developed countries, where it is the most common inflammatory arthritis in men. Epidemiological data are consistent with a rise in prevalence of gout. Diet and genetic polymorphisms of renal transporters of urate seem to be the main causal factors of primary gout. Gout and hyperuricaemia are associated with hypertension, diabetes mellitus, metabolic syndrome, and renal and cardiovascular diseases. Non-steroidal anti-inflammatory drugs and colchicine remain the most widely recommended drugs to treat acute attacks. Oral corticosteroids could be an alternative to these drugs. Interleukin 1β is a pivotal mediator of acute gout and could become a therapeutic target. When serum uric acid concentrations are lowered below monosodium urate saturation point, the crystals dissolve and gout can be cured. Patient education, appropriate lifestyle advice, and treatment of co morbidities are an important part of management of patients with gout. Ayurvedic texts judge Vata as the most significant in the midst of the tridoshas, due to its six-fold distinguishing features like spreading, quick action, vigor, capability to vitiate other doshas, autonomy, and the power to create the maximum number of diseases.[11] At the same time, it is also assumed that the life of living beings absolutely depends on Rakta.[12] Vatarakta is an illness where both vata and rakta are afflicted by distinct etiological factors.[13] The occurrence of Vatarakta is also possible when the customary gati of the vata is hindered by the morbid kapha dosha and medas.[14]

The status of Utthana vatarakta is often compared with the atherosclerotic ischemic limb disease in the allied sciences due to the outstanding similarities. Atherosclerosis is a generalized phenomenon that can occur in any of the large- to medium-sized arteries. Atherosclerosis habitually does not present with any symptom until it brutally narrows an artery or blocks it completely. The type of artery and the location of the plaque vary from person to person. If either happens and blocks a blood vessel that feeds the heart, it can result in a heart attack. If it blocks the blood vessel that supplies blood to the brain, it results in a stroke. Furthermore, if the blood supply to the extremities is reduced, it can cause a complexity in walking and ultimately lead to gangrene. Peripheral arterial disease can impair physical health and diminish the ability to walk. If left untreated, it is the leading cause of foot or leg amputation. A person with peripheral arterial disease has six to seven times greater risk of death from coronary artery disease, heart attack, and stroke than the rest of the population.[5]

The same thought has been highlighted in Ayurvedic literature under the designation of Margavarana. It is a widespread observable fact that ends up in a variety of disorders based on the site of the affliction. A reference of Margavarana involved in the pathogenesis is accessible in the contexts of Hridroga, Gulma, Vatavyadhi, Vatarakta, and so on. When the process of Margavarana takes place in the rakta marga due to the abnormal and excessive accumulation of morbid kapha and medas in the srotas, it ends up in the manifestation of Vatarakta.

As it is an Avaranajanya Vyadhi, different preparations with drugs having Srothosudhikaraka and Vyadhi Hara Rasayana-properties like Guggulu are exclusively indicated in the management of Vatarakta. The herbal preparations like Kaishora guggulu and Amrita guggulu, consisting mainly of ingredients like Guggulu (Commiphora mukul), Triphala (Terminalia chebula Retz, Terminalia bellerica, Emblica officinalis), Gudoochi (Tinospora cordifolia).[20] and so on, are said to be useful in curing the illness.[21]

Thus, getting immensely inspired by the above-mentioned data, the present study was carried out with a target to hit upon a better efficacious Shamana Oushada in stipulation of Margavarana Janya Vatarakta**.**

Materials and Methods

Source of the data

The patients, who attended the OPD and IPD of the Govt Ayurvedic College with signs and symptoms of Vatarakta, were screened. Among these, 90 patients who fulfilled the criteria of inclusion, mentioned a little later in the text, were included in the study. The selected patients were randomly categorized into two groups, with each group consisting of 45 patients.

Inclusion criteria

Patients within the age group of 25 – 80 years, presenting with Pratyatmaka Lakshana of Vatarakta and also with the symptoms of peripheral atherosclerotic disease were included in the study.

Exclusion criteria

Patients with severe toxicity, ulceration, progressive gangrenous changes, and suffering from diseases of immunological basis and syphilis were excluded from the study.

Investigations

Following are the investigations carried out on all 90 patients for the conduction of this study:

Hb%, ESR, RBS, and lipid profile.

Design

The study was a single-blind, comparative, clinical study with a pre-test and post-test design.

Intervention

Group A: 45 patients with oral administration of Tab Kaishora guggulu plus Amrita guggulu in a dose of 4 gm (2gm of each guggulu) twice a day.

Group B: 45 patients with oral administration of Tab PLACEBO in a dose of 2 g twice a day with lukewarm water.

The study had received prior approval from the Institutional Ethical Committee.

Assessment criteria

The assessment criteria is shown in

Subjective criteria	**Scoring**
1-PainNo Pain	0
Mild Pain	1
Moderate Pain	2
Severe Pain	3
2-Burning sensation	
No Burning sensation	0
Mild Burning sensation	1
Moderate Burning sensation	2
Severe Burning sensation	3
3-Malaise	
No Malaise	0
Mild Malaise	1
Moderate Malaise	2
Severe Malaise	3
Objective Criteria	**Scoring**
4-Tenderness	
No Tenderness	0
Patients complain of pain	1
Patients complain of pain and winces	2
Patients complain of pain and withdraw	3
5-Oedema	
No swelling	0
Mild swelling	1
Moderate swelling	2
Gross swelling	3
6-Local colour changes in skin	
No colour changes	0
Mild colour changes	1
Moderate colour changes	2
Severe colour changes	3
7-Walking Abilities	
Walk easily	0
With mild difficulty	1
With moderate difficulty	2
With mark difficulty	3
Impossible	4
8-Peripheral Pulses	0
Absent	1
Feeble	2
Less Volume	3
Full Bounding	

Assessment of overall effect

Complete remission

100% relief.

Marked improvement

Reduction in the mean symptom score by 75 – 99% of the initial score.

Moderate remission

Reduction in the mean symptom score by 50 – 74%.

Average remission

Reduction in the mean symptom score by 25 – 49%.

Unchanged

Reduction in the mean symptom score by < 24% of the initial score**.**

Observations

The patients, who attended the OPD and IPD of the Govt Ayurvedic College with signs and symptoms of Vatarakta, were screened. Among these, 90 patients who fulfilled the criteria of inclusion, mentioned a little later in the text, were included in the study. The selected patients were randomly categorized into two groups, with each group consisting of 45 patients. The study was a single-blind, comparative, clinical study with a pre-test and post-test design. Where in a minimum of 90 patients of either sex, suffering from Vatarakta, in an age limit of 25 to 80 years, were selected and randomly categorized into two groups. The 45 patients of group A were treated with oral administration of Tab Kaishora guggulu 2 gm plus Amrita guggulu 2 gm thrice a day and the group B patients with Tab PLACEBO in 2gm of the dose pattern with anupana of lukewarm water.

Results

The therapeutic effect of the treatment was assessed in both the groups based on specific subjective and objective parameters on grading scales. The results obtained were analyzed statistically in both the groups and the comparative effect was assessed using the unpaired "t" -test. In the present study, 80% of the patients from both the groups had madhumeha (Diabetes mellitus), shonita mada (Hypertension) or both. 70 percent of the patients in group A and nearly 60% of the patients in group B, suffering from Vatarakta, had the habit of smoking. In group A statistically significant improvement was observed in all the criteria of assessment. The outcome of the study revealed therapeutic efficacy of Kaishora guggulu plus Amrita guggulu in Vatarakta. The use of Kaishora guggulu plus Amrita guggulu as shamana Aushadhas was a perfect selection in the management of rakta margavaranajanya Vatarakta.Patients of groups A showed marked remission of the symptom of pain after intervention. The results are shown in Tables 2–4. The comparison of effect of therapy is shown in Figures 1–4. In group A, the initial mean score was 2.66, which came down to 1.39 after treatment, exhibiting a statistically, highly significant improvement, with $P < 0.001$ and about 78.9% relief. At the same time, group B patients also showed no marked improvement, with reduction in the initial mean score of 1.26 to 1.06 after intervention. This was statistically, insignificant, with $P < 0.1$ and about 23.14% relief. When compared, through the unpaired "t" -test, the difference between the two groups was significant statistically. Burning sensation was one of the cardinal symptoms of Vatarakta, which was relieved by 76% in group A patients and by 15% in group B patients. This improvement, when compared using the unpaired "t" -test, show big difference between the two groups. Seventy-six percent improvements were observed in the symptom of 'malaise' in group A patients, while Group B patients showed 23% relief. This improvement after the treatment was found to be highly significant ($P < 0.001$) in the groups A as per the paired "t" -test. When given for the unpaired "t" -test, this difference was not statistically significant.

Conclusion

The outcome of the study reveals the therapeutic efficacy of Kaishora guggulu plus Amrita guggulu in Utthana Vatarakta. The use of Kaishora guggulu plus Amrita guggulu as Shamana Oushad has is a perfect selection for the management of Rakta Margavaranajanya Vatarakta or gout.

Results

Table 2: Effect of therapy on the subjective and objective parameters in patients of group A

Parameter	Mean score		Mean difference	% of Relief	SD	SE	t	Value
Pain	1.40	0.4667	0.93	66.6	0.46	0.12	7.89	<0.001
Burning sensation	1.20	0.40	0.80	66.65	0.41	0.11	7.49	<0.001
Malaise	1.13	0.27	0.87	76.52	0.35	0.09	9.54	<0.001
Tendern	1.0	0.20	0.80	80	0.4	0.1	7.4	<0.0

ess	0				1	1	8	01
Oedema	1.0	0.53	0.53	49.9	0.5	0.1	4.0	<0.0
	7			5	2	3	0	01
Local	1.0	0.93	0.13	12.4	0.3	0.0	1.4	0.16
Colour	7			6	5	9	7	4
Changes								
Walking	1.4	0.80	0.67	45.4	0.4	0.1	5.5	<0.0
Ability	7			5	9	3	0	01
Peripher	1.4	1.00	0.40	28.5	0.5	0.1	3.0	0.00
al Pulses	0			7	1	3	6	9

BT=Before Treatment AT=After Treatment SD=standard Deviation SE=Standard Error.

Table 4 Comparison of the effect of treatment in both groups using the unpaired t-test

Parameter	Group A Mean±SE	Group B Mean±SE	t	p	Remark
Pain	0.93±0.12	0.80±0.11	0.84	0.41	NS
Burning sensation	0.80±0.11	0.53±0.13	1.56	0.13	NS
Malaise	0.87±0.09	0.73±0.12	0.89	0.38	NS
Tenderness	0.80±0.11	0.73±0.12	0.42	0.68	NS
Oedema	0.53±0.13	0.53±0.13	0.00	1.00	NS
Local Colour Changes	0.13±0.09	0.00±0.00	1.47	0.15	NS
Walking Ability	0.67±0.13	0.60±0.13	0.37	0.72	NS
Peripheral Pulses	0.27±0.12	0.20±0.11	0.42	0.68	NS

BT=Before Treatment AT=After Treatment SD=standard Deviation SE=Standard Error.

Figure 1

Comparison of the effect of treatment on pain

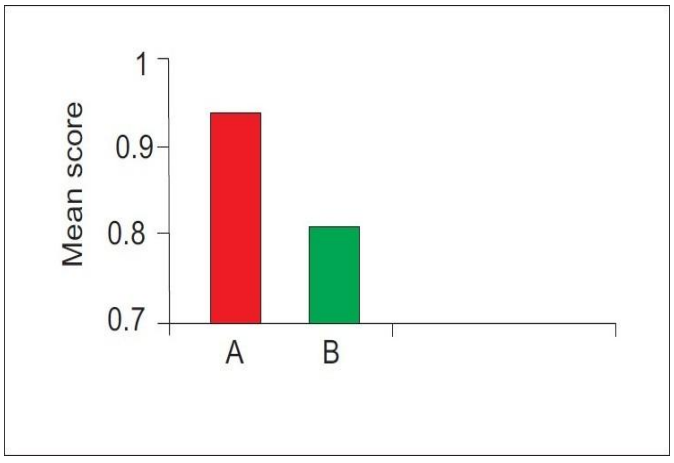


Figure 4

Overall effect of treatment

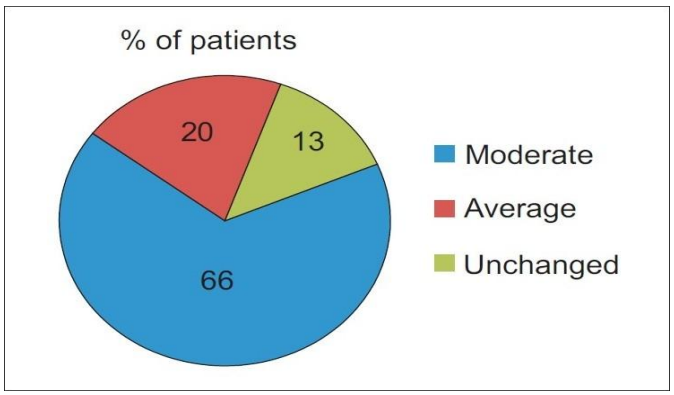


Table 3

Effect of therapy on the subjective and objective parameters in patients of group B

Parameter	Mean score BTAT		Mean difference	% of Relief	SD	SE	t	Value
Pain	1.2	0.4	0.80	63.1	0.4	0.1	7.4	<0.0
	7	7		4	1	1	8	01
Burning sensation	1.2	0.5	0.67	55.5	0.4	0.1	5.2	<0.0
	0	3		8	9	3	9	01
Malaise	1.0	0.2	0.73	73.3	0.4	0.1	6.2	<0.0
	0	7			6	2	1	01
Tenderness	1.0	0.2	0.73	73.3	0.4	0.1	6.2	<0.0
	0	7			6	2	1	01
Oedema	1.1	0.6	0.53	47.0	0.5	0.1	4.0	<0.0
	3	0		0	2	3	0	01
Local Colour Changes	1.0	1.0	0.00	0.00	0.0	0.0	0.0	0.00
	0	0			0	0	0	
Walking Ability	1.3	0.7	0.60	45.0	0.5	0.1	4.5	<0.0
	3	3		0	1	3	8	01
Peripheral Pulses	1.2	1.0	0.20	16.6	0.4	0.1	1.8	0.083
	0	0		5	1	1	7	

BT=Before Treatment AT=After Treatment SD=standard Deviation SE=Standard Error.

Figure 2.Comparison of the effect of treatment on local colour change

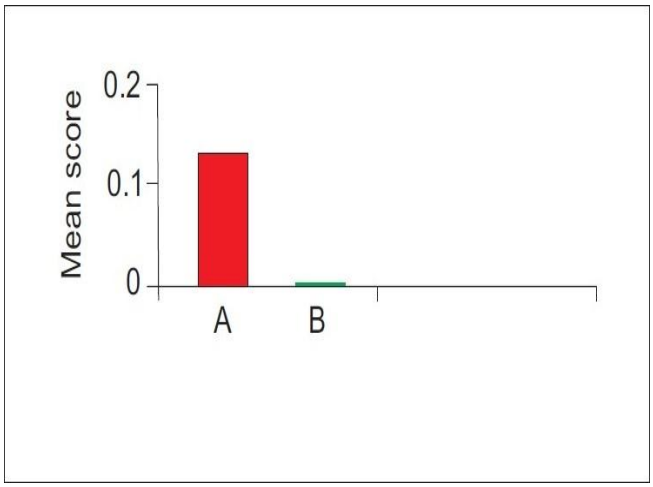
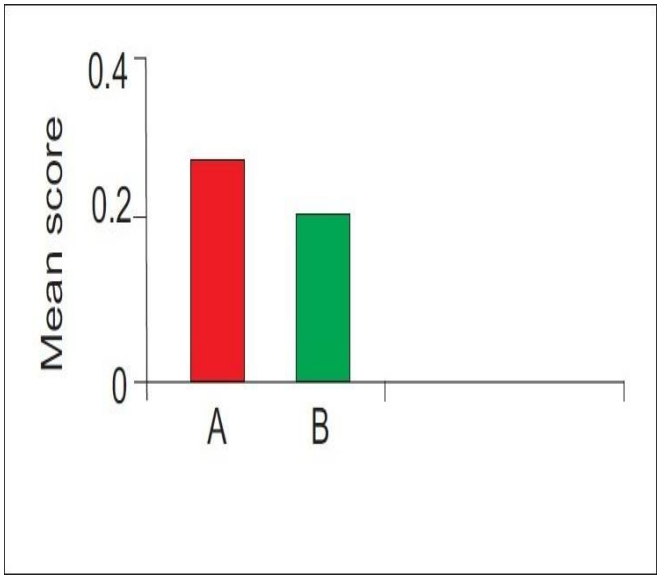


Figure 3.Comparison of the effect of treatment on peripheral pulses



Tenderness is another symptom of Vatarakta. In group A, the initial mean score of the patients for tenderness was 1.00, which was reduced to 0.20 after the treatment. In group B, the initial mean score of the patients for tenderness was 1.00, which was reduced to 0.26. The improvement was 80% and 73%, respectively. This improvement was statistically significant in both groups. The unpaired "t" -test showed equal efficacy of Kaishora guggulu and Amrita guggulu in this regard as the difference was not statistically significant. In case of the symptom of edema, the change that occurred with the treatment in both groups was greater than what could be expected by chance; there was a statistically significant change ($P < 0.010$), as assessed by the paired "t" -test. As per the unpaired "t" -test, this difference was not a statistically significant one. Thus, Kaishora guggulu and Amrita guggulu were equally effective in managing the symptom of edema. Patients treated with Kaishora guggulu in group A and with Amrita guggulu in group B had no significant difference in local color changes. The difference obtained in group A was not statistically significant ($P = 0.164$). In group B patients, the initial score of 1.00 remained the same even after treatment. In unpaired "t" -test, the difference mean showed by group A was 0.133 against the 0.000 difference in the mean of group A. However, this change could not be concluded because of the higher efficacy of Kaishora guggulu on local color change. Forty-five percent improvement was observed in the score of walking ability in group A; 1.467 was the initial mean score recorded in the 30 patients of Utthana Vatarakta This was brought down to 0.800 after the administration of Kaishora guggulu. In the second group, the initial mean score was 1.33, which was reduced to 0.733, showing 45% improvement. This improvement after the treatment was found to be highly significant ($P < 0.001$) as per the paired "t" -test. The unpaired "t" -test showed equal efficacy of both the yogas in dealing with the same. The mean initial score of peripheral pulses was 1.400 before the treatment, in patients of Utthana Vatarakta of group A. This initial mean score came down to 1.00 after the treatment. The improvement to the tune of 28% was significant ($P = 0.009$), as revealed by the paired "t" -test. In group B, the initial mean score was 1.200, which reduced to 0.200 after the intervention. This change in group B was not statistically significant as the P-value suggested $P = 0.082$. However, this higher response was not statistically significant according to the unpaired "t" -test.

The overall assessment in both the groups revealed equal efficacy of both the yogas in managing the illness. Sixty-six percent of the patients from both the groups showed an average remission of symptoms and signs. Moderate remission was observed in nearly 13% of the patients. None of the patients from both the groups showed complete remission or marked improvement. In the remaining 20% of the patients in each group, the tune of improvement was > 24%, which came under the unchanged category.

All the 60 patients taken for the study had some or the other form of improvement in the symptoms of Vatarakta.

In short, when the overall assessment was performed, both the groups did not show any remarkable difference in the final results. Both Kaishora guggulu and Amrita guggulu were equally effective in the management of Margavaranajanya Vatarakta. However, an individual analysis of the symptoms assessed in both groups by the paired "t" -test showed minor differences. Fifteen patients of group A treated with Kaishora guggulu showed relatively marginal improvement in almost all the symptoms and signs of Utthana Vatarakta. Even then, these differences were not significant from the statistical view point. Thus, these insignificant improvements observed in group A could not be concluded as the better efficacy of Kaishora guggulu in treating the illness of Santarpana Nidanajanya Margavaranaja Utthana Vatarakta. Here, the marginal difference observed could be due to the random sampling variability.

Disscussion

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 with a pre-test and post-test design, wherein a minimum of 60 patients of either sex, suffering from Utthana Vatarakta, in an age limit of 16 to 70 years, were selected and randomly categorized into two groups. The 30 patients of group A were treated with oral administration of Tab Kaishora guggulu 2 g thrice a day and the group B patients with Tab Amrita guggulu of the same dose pattern with anupana of lukewarm water. 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 the present study, 80% of the patients from both the groups had madhumeha (Diabetes mellitus), shonita mada (Hypertension) or both. Fifty percent of the patients in group A and nearly 60% of the patients in group B, suffering from Utthana Vatarakta, had the habit of smoking.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 Kaishora guggulu and Amrita guggulu in Utthana Vatarakta. The use of Kaishora guggulu or Amrita guggulu as shamana Aushadhas was a perfect selection in the management of rakta margavaranajanya Utthana Vatarakta. Obstruction in the Rakta Vaha Srotas causing hindrance to the normal movement of the Vata Dosha, is the root pathology behind the manifestation of the illness Vatarakta. This obstruction is established by the arterial color Doppler study.

In case of Santarpana Nidana Janya Vatarakta, the approach toward the management varies. Here, the objective of the entire treatment is to eliminate the Margavarana that has already occurred and is progressing in the Rakta Vaha Srotas. Therefore, in the initial stage of handling, the administration of Snehana and Bhruhmana are contraindicated.

In this situation, one has to go for Kapha-Medo Kshapana Chikitsa. Practically, this is implemented by methods of physical exercises, Virechana, gomutra-shilajatu-guggulu prayoga, and so on. After clearing the root of Rakta and Vata, the general line of management of Vatarakta is useful. Kaishora guggulu and Amrita guggulu are the two significant yogas taken from Bhaishajya Ratnavali and are indicated in Vatarakta Chikitsa. The combination and properties of the drugs in both the preparations shows the efficiency of the yogas in clearing the Margavarana. In both the preparations, Guggulu, Gudoochi, and Triphala are the chief ingredients.

Guggulu is one extraordinary drug that possesses Anabhishyandhi, Snigdha, and Sroto Shuhdhikaraka actions. It is considered as the best drug for the management of Meda Avruta Anila. It is the best drug that can be administered in this condition, as it is proved that it has an optimistic outcome in negating the incriminatory action of the morbid Kapha Dosha as well as the Medo Dhatu.

Guduchi is the drug of choice in Vatarakta. It acts as Vyadhipratyneeka and is a magnificent Rasayana. Triphala is well known for its Rookshana and Kapha Medo Hara effects. All the other ingredients of the yogas also work in the same pattern.

Apart from these, the recent experimental studies performed on these drugs also reveal the same; that the ingredients in both the yogas are highly efficacious in treating the state of hyperlipidemia. These points are good enough to support the selection of these two yogas for the present comparative study in the management of Vatarakta.

The Rookshana property of drugs like Danti (Baliospermum montanum), Triphala (Terminalia chebula Retz., Terminalia bellerica, Emblica officinalis), Vidanga (Embelia ribes), and Guggulu (Commiphora mukul) are believed to act on abnormally accumulated Kapha Dosha and Medas. Tikshna and ushna drugs like Pippali, Shunthi, Maricha, Vidanga, Danti, and so on, are present in Kaishora guggulu as well as Amrita guggulu, and Guggulu is stated to have a positive action on Srotovishodhana. The same is reflected in the results, as there is a definite improvement in the walking ability and marginal improvement in peripheral pulses.There is clear - cut evidence for improvement in circulation.Improvement in circulation means reduction in Margavarana, which in turn leads to reduced morbidity of Vata Dosha.

Apart from this, ingredients like Guggulu definitely have an action on the pacification of Vata Dosha too. Therefore, the average positive response obtained in a major percentage of patients taken for the study can be well understood as remission of Margavarana to a certain level and also due to release in the obstruction of Vata Dosha.

The average remission of symptoms observed in the results of both the groups definitely shows a marginal improvement in the circulation and a resultant pacification of the morbid Vata Dosha to a certain extent following the medication. Reduction in the chief presenting symptoms like pain, burning sensation, and malaise also indicates reduction in the morbidity of Vata Dosha.

Marginal improvement in the symptom of the local color change is suggestive of reduction in the severity of the morbidity of Rakta Dhatu. The changes seen after the intervention in both the groups are definitely satisfactory. The therapeutic efficacy of Kaishora guggulu and Amrita guggulu in Utthana Vatarakta has proved to be similar. However, the ultimate aim of complete remission of Margavarana and total relief from the symptoms has not yet been achieved. In short, of course, the results are constructive, but not complete.

Conclusion

The entire notion of Margavarana can be well correlated to the pathology of atherosclerosis, and the state of Utthana Vatarakta to that of Peripheral arterial disease in the modern dialect. Results show noticeable improvement in the symptoms and signs of Utthana Vatarakta after the intervention in both the groups. The outcome of the study reveals the identical therapeutic efficacy of Kaishora guggulu and Amrita guggulu in Utthana Vatarakta. The use of Kaishora guggulu or Amrita guggulu as Shamana Oushadhas is a perfect selection for the management of Rakta Margavaranajanya Utthana Vatarakta.

References

1. Hall AP, Barry PE, Dawber TR, McNamara PM. Epidemiology of gout and hyperuricemia: a long-term population study. *Am J Med*. 1967;42:27–37.
2. Kelley WN, Schumacher HR Jr. Crystal-associated synovitis. In: Kelley WN, ed. Textbook of rheumatology. 4th ed. Philadelphia: Saunders, 1993:1291–336.
3. McCarty DJ. Gout without hyperuricemia. *JAMA*. 1994;271:302–3.
4. Wortman RL. Gout and other disorders of purine metabolism. In: Fauci AS, ed. Harrison's Principles of internal medicine. 14th ed. New York: McGraw-Hill, 1998:2158–65.
5. Berkowitz D. Gout, hyperlipidemia, and diabetes interrelationships. *JAMA*. 1966;197:77–80.
6. Abbott RD, Brand FN, Kannel WB, Castelli WP. Gout and coronary artery disease: the Framingham study. *J Clin Epidemiol*. 1988;41:237–42.
7. Rizzoli AJ, Trujeque L, Bankhurst AD. The coexistence of gout and rheumatoid arthritis: case reports and a review of the literature. *J Rheumatol*. 1980;7:316–24.
8. Martinez-Cordero E, Bessudo-Babani A, Trevino Perez SC, Guillermo-Grajales E. Concomitant gout and rheumatoid arthritis. *J Rheumatol*. 1988;15:1307–11.
9. Wilson JM, Young AB, Kelley WN. Hypoxanthine-guanine phosphoribosyltransferase deficiency. *N Engl J Med*. 1983;309:900–10.
10. Lawry GV 2d, Fan PT, Bluestone R. Polyarticular versus monoarticular gout: a prospective, comparative analysis of clinical features. *Medicine*. 1988;67:335–43.11.
11. Vaidya BHP. 9th ed. Varanasi: Chaukambha orientalia; 2002. Vagbhata, Ashtanga Hridaya, Shareera Sthana, Angavibaga Adhyaya 3/84; p. 402.
12. Yadaviji T. 5th ed. Varanasi: Chaukambha Sanskrit Sansthan; 2001. Agnivesha, Charaka, Dridabala, Charaka samhita, Sutra Sthana, Vidhishoniteeya Adhyaya 24/4; p. 134.
13. 5th ed. Varanasi: Chaukambha Sanskrit sansthana; 2001. Chakrapanidatta, commentator Charaka samhita, Chikitsa sthana, Vatashonita Chikitsa Adhyaya 29/1; p. 627.
14. Ibidem, Charaka samhita, Vatashonita Chikitsa Adhyaya 29/156. :638.
15. Creager MA, Dzau JV. Vascular diseases of extremities. In: Henry N, Ginsburg I, Goldburg J, editors. Harrison's principles of internal medicine. 15th ed. New York: Mc Graw Hill publications; 2000. pp. 1486–87.
16. Ramachandra NS. Mysore: Mysore University; 2002. The effect of Lekhana basti in the management of sthoulya, Unpublished Doctoral Dissertation; p. 121.
17. Sanjeevani R. A clinical study on the management of Sthoulya by Panchatikta and Lekhana basti Unpublished Doctoral Dissertation, IPGTand RA. Jamanagar. 2001:136.
18. Sathish Unpublished Doctoral Dissertation. Bangalore: Rajiv Gandhi University of health sciences; 2003. Conceptual study of vatarakta VIS-A-VIS T.A.O. and clinical management with, Manjistadi kshara basti; p. 133.
19. Patil KV. Unpublished Doctoral Dissertation. Bangalore: Rajiv Gandhi University of health sciences; A clinical study to evaluate the therapeutic effect of Vataraktantaka Rasa and Lekhana basti in Vatarakta; p. 151.
20. Shaha B. 2nd ed. Varanasi: Chaukhamba bharati Academy; 1999. Nigantu Adarsha, Purvardha; p. 614.
21. Dasa G. Bhaishajya Rathnavali, Chapter 27/98-108. In: shastri A, editor. 18th ed. Varanasi: Choukamba Surbharati prakashan; 2007. p. 598.