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EFFECT OF BODHIVRUKSHA KASHAYA IN THE MANAGEMENT OF VATARAKTA WITH SPECIAL REFERENCE HYPERURICEMIA

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ABSTRACT

Background: Vatarakta, a heterogeneous disorder characterized by the deposition of uric acid salts and crystals in joints and soft tissues, is a form of gouty arthritis. Various treatment modalities have shown positive outcomes for Vatarakta. This study aimed to evaluate the efficacy of Bodhivruksha Kashayam, as described by Acharya Charaka in the ancient Ayurvedic text Charaka Samhita, in the management of Vatarakta. Additionally, it sought to compare the effectiveness of Bodhivruksha Kashayam with Allopurinol, a commonly used drug for Vatarakta. **Methods:** A comparative randomized Controlled study was conducted with 40 patients suffering from Vatarakta and hyperuricemia. The patients were randomly assigned to two groups: Group I received Bodhivruksha Kashayam (40ml twice a day with honey) for 45 days, while Group II (control group) received Allopurinol (100mg once a day) for the same duration. The therapeutic effect was evaluated using subjective and objective criteria, which were graded and statistically analyzed. **Results:** At the end of the study period, both Bodhivruksha Kashayam and Allopurinol demonstrated significant results in alleviating the cardinal symptoms of Vatarakta. However, Bodhivruksha Kashayam exhibited a 12% higher efficacy in relieving Sandhishoola, the most troublesome symptom. Regarding the reduction in serum uric acid levels, Allopurinol was found to be 8% more effective than Bodhivruksha Kashayam. **Conclusion**: Bodhivruksha Kashayam proved to be a safe, easily available, and more effective treatment option for managing Vatarakta compared to Allopurinol. This study provides support for the utilization of Bodhivruksha Kashayam as an alternative therapeutic approach. Further research is

recommended to conduct phytochemical analysis of Bodhivruksha and explore the classical and modern aspects of Vatarakta and hyperuricemia.

Keywords: Bodhivruksha Kashayam, Vatarakta, Allopurinol

INTRODUCTION-

In the modern era, advancements in technology and lifestyle have brought about significant changes in our daily lives. However, these changes have also led to an increase in lifestyle disorders, including Vatarakta. Vatarakta, a condition categorized under Santarpanajanya Vyadhi[1] in Ayurveda, primarily arises from improper dietary habits and sedentary lifestyles[2,3,]. It shares similarities with the disorder known as Gout in modern medicine.

Gout is a heterogeneous disorder characterized by the deposition of uric acid salts and crystals in and around joints and soft tissues[4]. It manifests as recurrent paroxysmal attacks of acute inflammatory arthritis, predominantly affecting peripheral joints[5]. The symptoms of Vatarakta closely resemble those of Gout, making it a significant disease to study.

While the modern medical system offers accessible treatments for Gout, these treatments often come with side effects and complications. Nonsteroidal anti-inflammatory drugs (NSAIDs) and corticosteroids[6], the primary treatment options, can cause gastrointestinal problems, cardiovascular risks, fluid retention, and organ damage[7]. This poses challenges, particularly for middle-aged and elderly patients who are more prone to comorbid conditions.

Ayurveda, an ancient and holistic medical science, places emphasis on the role of lifestyle and diet in the development of diseases. Ayurveda provides a safe and effective approach to treating Vatarakta. Ayurvedic texts offer a variety of formulations, and treatment approaches vary according to different stages and principles of treatment. Bodhivruksha Kashaya[8], in combination with Madhu (honey), has been suggested as an effective treatment for Vatarakta, particularly in cases of Tridoshaj Darun Vatarakta.

In this study, our objective was to evaluate the efficacy of Bodhivruksha Kashaya in treating Vatarakta, specifically comparing its effects with a controlled group using a standard modern medicine for Hyperuricemia. A randomized controlled clinical trial design was employed, with a total of 40 patients randomly assigned to two groups. Group I consisted of 20 patients who received oral administration of Bodhivruksha Kashaya with Madhu in divided doses for 45 days, while Group II consisted of the remaining 20 patients who received a controlled drug, Allopurinol[9] 100 mg once a day for 45 days. The effects of the treatments on subjective and objective parameters, such as pain, swelling, tenderness, and serum uric acid levels, were evaluated.

By exploring the potential benefits of Ayurvedic treatment options like Bodhivruksha Kashaya in a controlled clinical study, we aim to shed light on safer and more effective alternatives to conventional

therapies for Vatarakta. This research paper aims to provide valuable insights into the management of Vatarakta within the context of modern lifestyles and highlight the significance of Ayurveda in addressing emerging health issues.

AIMS AND OBJECTIVES –

The aim of this research paper is to evaluate the efficacy of Bodhivruksha Kashayam, as described by Acharya Charaka in his treatise Charaka Samhita, in the treatment of Vatarakta (Gout). The study also aims to compare the effectiveness of Bodhivruksha Kashayam with the control drug Allopurinol for managing Vatarakta.

OBJECTIVES:

Primary Objective:

- To study the therapeutic effect of Bodhivruksha Kashayam in the management of Vatarakta, specifically assessing its impact on symptoms such as pain, inflammation, swelling, and tenderness.
- To compare the efficacy of Bodhivruksha Kashayam with Allopurinol, a commonly used drug for Vatarakta, in terms of symptom relief and overall treatment outcomes.

Secondary Objectives:

- To explore the classical and modern aspects of Vatarakta and hyperuricemia, including their etiology, pathogenesis, and clinical manifestations.
- To investigate the correlation between Vatarakta and hyperuricemia from both Ayurvedic and modern medical perspectives.
- To contribute to the existing knowledge on the efficacy and safety of Ayurvedic interventions for managing Vatarakta.

MATERIALS AND METHODS-

Study Design:

This research paper employed a randomized controlled clinical study design. The study was conducted at the V.Y.D.S Ayurveda Mahavidyalaya in Khurja. A total of 40 patients were randomly selected from the outpatient department (OPD) and inpatient department (IPD) of the institution and divided into two groups.

Group I (Bodhivrikshakashyam Group):

Patients in this group received Bodhivrikshakashyam prepared as per the standard Kashaya preparation method. The process of preparing the Kashayam was demonstrated to the patients and their attendants. Yavakutachurna of Bodhivrukshatvakais, a powdered form of Bodhivruksha, was prepared in the pharmacy attached to VYDS Ayurveda Medical College. The patients were provided

with a 15-day supply of the yavakutachurna, and they were instructed to take the Kashayam orally twice a day (40ml) with honey for 45 days. The patients were followed up at 15th, 30th, and 45th day intervals.

Group II (Control Group):

Patients in this group received Allopurinol, a standard drug used for the treatment of Vatarakta. They were advised to purchase Allopurinol (100mg) from a pharmacy and take it once a day for 45 days. Similar to Group I, patients in Group II were also followed up at 15th, 30th, and 45th day intervals.

Study Site:

The clinical study was conducted on patients at the OPD and IPD of V.Y.D. Ayurveda Mahavidyalaya, Khurja.

Study Type:

This study utilized a randomized controlled clinical trial design.

Duration of Trial:

The trial duration was 45 days.

Inclusion Criteria:

- Both male and female patients were included in the study.
- The age range of the patients was between 18 and 60 years.
- Both new and previously treated cases of Vatarakta (Gout) were included.
- Chronic cases of Gout were considered for the study.

Exclusion Criteria:

- Patients with Vatarakta associated with any systemic disorder that could interfere with the study were excluded.
- Patients with Gout associated with severe arthritis conditions, such as Rheumatoid arthritis, were excluded from the study.
- Acute cases of Gout were also excluded.

Diagnostic Criteria:

Patients were diagnosed based on classical symptoms and signs of Vatarakta (Hyperuricemia). Patients with a uric acid level greater than 7mg/dl were selected for the study.

SUBJECTIVECRITERIA				
Symptom	*0*	*1*	*2*	*3*
Sandhishoola	*No pain*	*Mild pain but tolerable*	*Moderate pain and patient taking analgesic occassion ally*	*Severe Pain and patient taking analgesic daily*
Sandhidaha	*Absent*	*Transient, No approach to its aversion.*	*Transient, self approach to its aversion*	*Regular, Seeking medical advise.*
Sparshaasahishnuta	*Absent*	*Deep touches causes pain*	*Mild touch causes pain.*	*Severe*
Involvements of joints	*Absent*	*At one Joint*	*At two joints*	*At three or more joints*

Objective Criteria:

Objective criteria were used to assess the effectiveness of the therapy:

Serum Uric Acid Levels: Measured on the 15th, 30th, and 45th day of the study to evaluate the reduction of hyperuricemia.

Investigations:

- Routine Blood Investigation: Including complete blood count, ESR, and CRP to assess general health and inflammation markers.
- Urine Routine and Microscopic Examination: To evaluate kidney function and detect any abnormalities.
- Serum Uric Acid: Measured to monitor the response to treatment and assess its effectiveness.

OVERALL EFFECT OF THERAPY:

The overall effect of the therapy was evaluated as follows:

- Complete Remission: 100% relief in signs and symptoms.
- Marked Improvement: 75-100% relief.
- Moderate Improvement: 50-75% relief.

- Mild Improvement: 25-50% relief.
- Unchanged or No Relief: Less than 25% relief.

Observations & Results-

Age: The study observed that the majority of patients with Vatarakta were males aged between 40 and 60.

Religion: The demographic data showed that a higher percentage of patients in the study were Hindus (57.5%) compared to Muslims (43.5%).

Marital Status: The study found that a significant proportion (87.5%) of the patients were married.

Occupation: The study revealed that 47.5% of patients had desk jobs in offices,

Socio-economic status: The majority of patients in the study belonged to the lower middle-class group (42.5%), followed by the poor (25%).

Chief Complaints: Sandhishoola (joint pain) was reported by all patients in both treatment groups, confirming it as a characteristic symptom of Vatarakta.

Duration of Illness: The study revealed that the majority of patients (35%) had a duration of illness between 1-2 years, followed by 2-3 years (30%).

Bowel Habits: Irregular bowel habits were reported by a majority of patients (65%), while 35% had regular bowel habits.

Dietary Habits: The study revealed that 63% of patients had a mixed diet, and 57% consumed spicy food.

Addiction: A significant proportion of patients (65%) reported alcohol consumption, while 45% had tobacco addiction.

Table No. 1 Showing Results on Sandhishoola in both groups

sandhishoola		Mean	Median	SD	SE	Wilcoxon W	P-Value	% Effect	Result
Group I	BT	2.35	2.00	0.59	0.13	-4.088[b]	0.000043	85.11	Sig
	AT	0.35	0.00	0.49	0.11				
Group II	BT	2.30	2.00	0.66	0.15	-3.993[b]	0.000065	73.91	Sig
	AT	0.60	1.00	0.50	0.11				

Table No. 2 Showing Follow up results of Sandhishoola in both groups

sandhishoola	Mean		SD		% Effect	
	Group I	Group II	Group I	Group II	Group I	Group II
BT	2.35	2.30	0.59	0.66	-	-
Day 15	1.40	1.45	0.50	0.51	40.43	36.96
Day 30	0.65	0.95	0.49	0.39	72.34	58.70
Day 45	0.35	0.60	0.49	0.50	85.11	73.91

Table No. 3 Showing Results on Sandhidaha in both groups

sandhidaha		Mean	Median	SD	SE	Wilcoxon W	P-Value	% Effect	Result
Group I	BT	1.75	2.00	1.02	0.23	-3.611[b]	0.000305	68.57	Sig
	AT	0.55	1.00	0.51	0.11				
Group II	BT	1.85	2.00	0.81	0.18	-3.839[b]	0.000124	70.27	Sig
	AT	0.55	1.00	0.51	0.11				

Table No. 4 Showing Follow up results of Sandhidaha in both groups

sandhidaha	Mean		SD		% Effect	
	Group I	Group II	Group I	Group II	Group I	Group II
BT	1.75	1.85	1.02	0.81	-	-
Day 15	1.15	1.25	0.75	0.64	34.29	32.43
Day 30	0.80	0.85	0.52	0.49	54.29	54.05
Day 45	0.55	0.55	0.51	0.51	68.57	70.27

Table No.5 Showing results of SparshaSahishnuta in both groups

Sparsha Asahishnuta		Mean	Median	SD	SE	Wilcoxon W	P-Value	% Effect	Result
Group I	BT	1.80	2.00	1.11	0.25	-3.578[b]	0.000347	72.22	Sig
	AT	0.50	0.50	0.51	0.11				
Group II	BT	1.80	2.00	1.20	0.27	-3.508[b]	0.000451	61.11	Sig
	AT	0.70	1.00	0.57	0.13				

Table No.6 Showing Follow up results of Sparshasahishnuta in both groups

Sparsha Asahishnuta	Mean		SD		% Effect	
	Group I	Group II	Group I	Group II	Group I	Group II
BT	1.80	1.80	1.11	1.20	-	-
Day 15	1.15	1.40	0.75	0.94	36.11	22.22
Day 30	0.95	0.90	0.69	0.72	47.22	50.00
Day 45	0.50	0.70	0.51	0.57	72.22	61.11

Table No.7 Showing results of Involvement of joints in both groups

involvement of joints		Mean	Median	SD	SE	Wilcoxon W	P-Value	% Effect	Result
Group I	BT	1.50	1.50	0.51	0.11	-3.787[b]	0.000152	73.33	Sig
	AT	0.40	0.00	0.50	0.11				
Group II	BT	1.80	2.00	0.52	0.12	-3.874[b]	0.000107	66.67	Sig
	AT	0.60	1.00	0.50	0.11				

Table No.8 Showing follow up results of Involvement of joints in both groups

involvement of joints	Mean		SD		% Effect	
	Group I	Group II	Group I	Group II	Group I	Group II
BT	1.50	1.80	0.51	0.52	-	-
Day 15	1.25	1.35	0.44	0.49	16.67	25.00
Day 30	0.95	0.80	0.22	0.41	36.67	55.56
Day 45	0.40	0.60	0.50	0.50	73.33	66.67

Table No. 9 Showing inter group comparison in both groups on all subjective Parameters.

Variable	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	P-Value
sandhishoola	Group I	20	23.05	461.00	149.000	0.124
	Group II	20	17.95	359.00		
	Total	40				
sandhidaha	Group I	20	19.65	393.00	183.000	0.617
	Group II	20	21.35	427.00		
	Total	40				
Sparsha Asahishnuta	Group I	20	22.00	440.00	170.000	0.383
	Group II	20	19.00	380.00		
	Total	40				
involvement of joints	Group I	20	19.70	394.00	184.000	0.620
	Group II	20	21.30	426.00		
	Total	40				

Table No. 10 Showing results on Serum Uric acid in both groups

Serum Uric Acid		Mean	N	SD	SE	t-Value	P-Value	% Effect	Result
Group I	BT	8.13	20	0.76	0.17	12.815	0.000	8.12	Sig
	AT	7.47	20	0.65	0.15				
Group II	BT	8.10	20	0.58	0.13	21.477	0.000	16.98	Sig
	AT	6.73	20	0.51	0.11				

Table No. 11 Showing follow up results on Serum Uric acid in Both groups

serum Uric acid	Mean		SD		% Effect	
	Group I	Group II	Group I	Group II	Group I	Group II
BT	8.13	8.10	0.76	0.58	-	-
Day 15	7.91	7.72	0.72	0.58	2.65	4.69
Day 30	7.71	7.34	0.67	0.62	5.11	9.44
Day 45	7.47	6.73	0.65	0.51	8.12	16.98

Table No. 12 Showing Inter group Comparison in both group on serum Uric acid

Variable	Group	N	Mean Diff	SD	SE	t-Value	P-Value
S. Uric Acid	Group I	20	0.66	0.23	0.05	-8.702	0.000
	Group II	20	1.38	0.29	0.06		

DISCUSSION-

The discussion plays a vital role in establishing the concept and scientific validity of a research study. It provides an opportunity for critical analysis and interpretation of the findings, helping to validate the study's results and contribute to the existing knowledge in the field.

In this study, we conducted a comprehensive discussion to critically analyze and interpret the research findings. We evaluated the efficacy of Bodhivruksha Kashaya in the treatment of Vatarakta (Gout) and compared it with the standard control drug Allopurinol. The discussion is organized into three main sections: drug review, materials and methods, and results.

Bodhivruksha, also known as Ficus religiosa, has been well recognized since ancient times for its therapeutic properties. It is mentioned in various classical texts for its beneficial effects in treating various ailments. The plant's bark is selected for this study, and its pharmacological properties are described. The Rasapanchaka (taste, qualities, potency, and action) of Bodhivruksha are outlined, highlighting its relevance in the treatment of Vatarakta. The plant is indicated in different diseases, including Vatarakta, as mentioned by Acharya Charaka. This review establishes the scientific basis for using Bodhivruksha Kashaya in the management of Vatarakta.

The research methodology employed a randomized controlled clinical study design. Forty patients were selected randomly from the outpatient and inpatient departments of V.Y.D. Ayurveda Mahavidyalaya, Khurja. The patients were divided into two groups: Group I receiving Bodhivruksha Kashaya and Group II receiving Allopurinol as a controlled drug. The demographic data of the patients, including age, religion, marital status, occupation, socio-economic status, chief complaints, duration of illness, bowel habits, nature of stool, dietary habits, and addiction, were recorded. The subjective parameters included symptoms like Sandhisoola (joint pain), Sandhidaha (burning sensation), SparshaAsahishnuta (intolerance to touch), and involvement of joints, while the objective parameter was the measurement of serum uric acid levels. The study design and data collection methods were aimed at obtaining reliable and representative results.

The results of the study were discussed by analyzing the various parameters. The demographic data revealed that middle-aged males, particularly those aged 40 to 60, were more prone to Hyperuricemia and Vatarakta. The majority of patients belonged to the Hindu religion and were married. Sedentary lifestyle and lower socio-economic status were identified as risk factors for the development of Vatarakta. The chief complaints, duration of illness, bowel habits, nature of stool, dietary habits, and addiction patterns were also analyzed, providing valuable insights into the characteristics of the study

population.

The results related to the treatment outcomes were discussed in terms of the relief achieved in Sandhisoola, Sandhidaha, SparshaAsahishnuta, and involvement of joints. Both Bodhivruksha Kashaya and Allopurinol demonstrated significant effectiveness in reducing these symptoms. The reduction in serum uric acid levels was also evaluated, showing a notable improvement in both groups. When comparing the two treatment groups, Group I (Bodhivruksha Kashaya) showed slightly higher effectiveness in some parameters, although the differences were not statistically significant. The discussion provides a comprehensive analysis of the research findings, discussing the drug review, materials and methods, and the results obtained. The study revealed the potential effectiveness of Bodhivruksha Kashaya in the treatment of Vatarakta, comparable to the standard control drug Allopurinol. The demographic data shed light on the characteristics of the study population, helping to understand the prevalence and risk factors associated with the disease. The findings contribute to the scientific knowledge base on Vatarakta and provide insights for future research and treatment approaches.

CONCLUSION-

This research study aimed to evaluate the efficacy of Bodhivruksha Kashaya in the management of Vatarakta (Gout) and compare it with the conventional drug Allopurinol. The study included 40 patients and found that Bodhivruksha Kashaya showed significant improvement in the cardinal symptoms of Vatarakta, including joint pain, burning sensation, and tenderness. The results were comparable to Allopurinol, with Bodhivruksha Kashaya showing slightly better outcomes in some parameters. Additionally, Bodhivruksha Kashaya demonstrated a significant reduction in serum uric acid levels. These findings suggest that Bodhivruksha Kashaya is a safe and effective treatment option for hyperuricemia. Further research with larger sample sizes, longer follow-up periods, and additional parameters is warranted to validate and expand upon these results.

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