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ORIGINAL RESEARCH ARTICLE

A Comparative Clinical Study to Evaluate the Efficacy of *Sitopaladi Churna* and *Vishwadi Churna* in the Management of *Vataja Kasa*

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ABSTRACT

Background: *Vataja Kasa* seems to be very simple disease, if not controlled and treated properly it may lead to disease with poor prognostic condition. Hence, we are in demand of a quick-acting medicine with higher effectiveness, search of such a medicine end up with *Vishwadi Churna* is taken as a standard drug to compare and assess the trial drug.

Materials and Methods: Twenty patients of Group A were treated with *Sitopaladi Churna* for 30 days. Twenty patients of Group A were treated with *Vishwadi Churna* for 30 days. Twenty patients in each group and both groups subjected to *Vataja Kasa* management. In the first group doses of *Sitopaladi Churna* in dosage of 2 g thrice a day with *Sukoshna jala* for 30 days and in the second group *Vishwadi Churna* in dosage of 2 gm thrice a day with *Sukoshna jala.* In this study, various observations of geographical elements such as age, gender, and Religion are presented in the form of diagrams, charts, etc.

Results: The result of both the groups was analyzed statistically compared and the results were interpreted in the term of increase or decrease in the parameter.

Conclusion: From the statistical analysis, *Sitopaladi Churna* is more effective than *Vishwadi Churna* in *Vataja kasa.*

1. INTRODUCTION

Ayurveda is the science of life which elaborates the importance of Preventive, Promotive, and Curative aspects of health. One of the unique criteria of living activity is breathing. The basic activity of *Pranavaha Strotas* is exchange of gases, the rate of exchanges of gases is to tune of 16 times per minute, making is one of the most vulnerable sites for diseases. As it is indicated in Ayurveda that our body is made up of *Strotas*, the disturbance in *Aahara, Vihara, Dinacharya, Rutucharya* leads to Strotodushti.[1] *Vataja Kasa* is a very common disease of the respiratory system. *Vataja Kasa* is the one of dreadful disease of the *Pranavaha Strotas* according to Acharya Charaka.[2] *Kasa* is of five types that is *Vataja Kasa, Pittaj Kasa, Kaphaj Kasa, Kshataj Kasa,* and *Kshayaj Kasa.*[3] *Vataja Kasa* which is characterized by the *lakshanas of Hrud-Parshwa-Shir-shoola, Swarbheda, Shushka Kantha, Shuka Vaktra, Shushka Kasa* with *Shushka alpa kapha, Dourbalya,* etc.[4] Where *Shushka Kasa* is prominent symptom. The symptoms above are similar to Tropical Pulmonary Eosinophilia (TPE). Thus, *Vataja Kasa* can be correlated to TPE. TPE is a syndrome of wheezing, fever, and eosinophilia seen predominantly in the Indian subcontinent and other tropical areas. In 1943 Weingarten used the term tropical eosinophilia when describing a syndrome characterized by severe spasmodic bronchitis, eosinophilic, leukocytosis, and disseminated mottling of both lungs. Its etiological link with Wuchereria bancrofti and Brugia malayi has been well established. The pathogenesis is due to an exaggerated immune response to the filarial antigens which includes Type 1, Type 3, and Type 4 reactions with eosinophilia playing a pivotal role.[5] It is most commonly found in regions of the Indian subcontinent, South East Asia, South America, and Africa. It is found in <1% of filarial infections and occurs as a hypersensitivity reaction to the microfilariae.[5] According to survey conducted on 1986, it was observed that the incidence and prevalence rate of TPE in India is 12.6/1000 percent.[6] According to journal of epidemiology and community health 1993 by Dr. Ray, the incidence and prevalence rate is 12.7/1000%.[6] The male and female ration of TPE is 4:1 in India, it

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is mostly found around the coastal regions from Maharashtra to Kerala and West Bengal to Tamil Nadu. The prevalence of TPE in various settings in India has varied from 0.5% among children in Tamil Nadu to 9.9% among jail inmates in Patna.[7] *Vataja Kasa* seems to be very simple disease, if not controlled and treated properly it may lead to disease with poor prognostic condition. Hence, we are in demand of a quick-acting medicine with higher effectiveness, search of such a medicine end up with *Vishwadi Churna* is taken as a standard drug to compare and assess the trial drug.

1.1. Aims and Objectives

The objectives of the study are as follows:

- Evaluate the effect of *Vishwadi Churna* in *Vataja Kasa.*
- Evaluate the effect of *Sitopaladi Churna* in *Vataja Kasa*.
- To compare the efficacy of *Sitopaladi Churna* and *Vishwadi Churna* in the management of *Vataja Kasa.*

2. MATERIALS AND METHODS

2.1. Sample Source

Patients were diagnosed and selected from the *Kayachikitsa* OPD and IPD of PG studies in *Kayachikitsa* of *Dhanavantari* medical college and hospital, medical camps and other referrals.

2.2. Pharmaceutical Source

The formulations selected for research work were prepared in institutional pharmacy of *Dhanavanatri Ayurveda* College, *Siddapur*.

2.3. Method of Collection of Data

Minimum of 40 patients of either, sex, or age group above 15 years and below 60 years were selected irrespective of caste and religion and divided into two groups of 20 each.

2.4. Study Design

This was a comparative clinical study.

2.5. Method of Sampling

Convenient method.

2.6. Diagnostic Criteria

- Diagnosis is made on the basis of classical symptoms and laboratory findings.
- Presence of prominent feature of *Vataja Kasa.*
- Increased in A.E.C. of peripheral blood smear i.e. 440/UI.

2.7. Inclusion Criteria

The following criteria were included in the study:

- Patients of classical *Vataja Kasa* symptoms irrespective of gender, caste, occupation and economical status.
- Ages between above 15 years and below 60 years.
- Patients having increased A.E.C. (Absolute Eosinophilic count) in peripheral blood smear were selected.

2.8. Exclusion Criteria

The following criteria were excluded from the study:

- All other varieties of *Kasa* except *Vataja Kasa.*
- *Vataja Kasa* associated with any other medical emergencies
- Patients with complications of *Kasa,* that is, *Rajayakshma*, carcinoma of bronchus, pulmonary tuberculosis, pleurisy, and pneumonia are excluded.
- Patients below the age of 15 years and above 60 years.
- *Vataja Kasa* patients along with metabolic diseases such as diabetes and HTN are excluded.
- Secondary chronic pulmonary Eosinophilia along with asthma.
- Pregnant and lactating women are excluded.

2.9. Research design

2.9.1. Grouping

Selected 40 patients of Vataja Kasa was divided into two groups – A and B.

2.10. Procedure of Administration of Drug

- *Sitopaladi Churna* - 2 g thrice a day before food.
- *Vishwadi Churna* - 2 g thrice a day before food.

2.11. Observation Period

Patients were observed on 1st, 7th and 15th, and 30th days to assess the progress of the condition.

2.12. Follow-up

15 days after the course of treatment.

2.13. Total Study Duration

30 days.

2.14. Assessment of Result

The subjective and objective parameters of baseline data to pre- and post-medication were compared for assessment of the result. All the result was analyzed using appropriate statistical tests.

2.15. Preparation of Medicine

Sitopaladi Churna and *Vishwadi Churna* which were used for the study were prepared in Teaching pharmacy of the institution and details of which is as follows;

2.16. Method of Preparation

Fine herbal powders of the above herbs are taken in the said proportions mixed thoroughly and are kept in an air-tight container. Try to keep it away from moist area.

2.17. Diet

Patients were advised to follow routine diet.

2.18. Assessment Criteria

2.18.1. Subjective criteria

Sushka Kasa, Shirashoola, Parshwashoola, Hrutshoola, Swarabheda, Prasakta vega, Shushka Kantha, Shushka Vaktra, Sushka alpa kapha, and symptoms of T.P.E. as mentioned in contemporary text.

2.18.2. Objective criteria

A.E.C., Differential count, Hb%, ESR.

2.19. Statistical Methods

Statistical paired t test was applied wherever necessary.

3. OBSERVATION AND RESULTS

Total 42 patients of-*Vataja Kasa* were selected from the 48 screened patients. Among them, two were dropouts and 40 patients completed the study.

4. OBSERVATIONS ON DEMOGRAPHIC DATA [TABLES 1-12]

In Group A – Majority of the patients 7 (35.00%) were reported in age group 51–60 years, followed by 5 (25%) patients observed in the age group 21–30 years, followed by 4 (20%) patients observed in the age group of 41–50 years, followed by 3 (15%) patients observed in the age group of 31–40 years, and 1 (5.00%) patients were reported in the age group 15–20 years.

In Group B – Majority of the patients 6 (30%) were reported in age group 21–30 years, followed by 5 (25%) patients observed in the age group of 41–50 years and 51–60 years, followed by 4 (20%) patients observed in the age group of 31–40 years, and no one was observed in 15–20 years age group.

In Group A – Maximum 11 (55%) patients were Male and 7 (45%) patients were Female.

In Group B – Maximum 10 (50%) patients were Male and 10 (50%) patients were Female.

In Group A – Maximum 5 (25%) patients were doing Job, 4 (20%) patients were Housewife's, 3 (15%) patients were doing Service, Student, Employee and 2 (10%) patients were Farmer.

In Group B – Maximum 6 (30%) patients were Housewife's, 4 (20%) patients were doing Job, Student, 3 (15%) patients were Employee, 2 (10%) patients were Farmer and 1 (5%) patients were Teacher.

The present study reveals that

In Group A – Maximum 9 (45%) patients were having *Vatapittaja Prakruti*, followed by 6 (30%) patients were having *Pittavataja Prakruti,* followed by 2 (10%) patients were having *Vatakaphaja, Pittakaphaja* and 1 (5%) patients were having *Kaphapittaja Prakruti.*

In Group B – Maximum 9 (45%) patients were having *Vatapittaja Prakruti,* followed by 5 (25%) patients were having *Pittavataja Prakruti*, 4 (20%) patients were having *Vatakaphaja Prakruti* and 2 (10%) patients were having *Pittakaphaja Prakruti.*

The present study shows that-

In Group A – Maximum 11 (55%) patients were having *Agnimandya*, followed by 7 (35%) patients were having *Vishamagni* and 2 (10%) patients were having *Tikshnagni*.

In Group B – Maximum 13 (65%) patients were having *Agnimandya*, followed by 7 (35%) patients were having *Vishamagni*.

The present study shows that-

In Group A – Maximum 8 (40%) patients were having *Madhyam Koshtha,* followed by 7 (35%) patients were having *Krura Koshtha* and 5 (25%) patients were having *Mrudu Koshtha.*

In Group B **–** Maximum 8 (40%) patients were having *Madhyam Koshtha,* followed by 6 (30%) patients were having *Mrudu Koshtha* and *Krura Koshtha.*

5. RESULTS

5.1. Effect of Therapies on Subjective Parameters

5.1.1. Shushka kasa

Mean difference of Group A is more than mean difference of Group B and *P* value is lower than the significance level alpha = 0.05, we should reject the null hypothesis H0 and accept the alternative hypothesis Ha, i.e. *Sitopaladi Churna* (Group A) is significant than *Vishwadi Churna* (Group B) for *Shushka kasa.*

5.1.2. Shirashoola

Mean difference of Group A is more than mean difference of Group B and *P* value is lower than the significance level alpha = 0.05, we should reject the null hypothesis H0 and accept the alternative hypothesis Ha, that is, *Sitopaladi Churna (*Group A) is significant than *Vishwadi Churna* (Group B) for *Shirashoola*.

5.1.3. Parshwashoola

Mean difference of Group A is more than mean difference of Group B and *P* value is lower than the significance level alpha = 0.05, we should reject the null hypothesis H0 and accept the alternative hypothesis Ha, that is, *Sitopaladi Churna* (Group A) is significant than *Vishwadi Churna* (Group B) for *Parshwashoola*.

5.1.4. Hrutshoola

Mean difference of Group A is more than mean difference of Group B and *P* value is lower than the significance level alpha = 0.05, we should reject the null hypothesis H_0 and accept the alternative hypothesis H_a, that is, *Sitopaladi Churna* (Group A) is significant than *Vishwadi Churna* (Group B) for *Hrutshoola*.

5.1.5. Swarabheda

Mean difference of Group A is more than mean difference of Group B and *P* value is lower than the significance level alpha = 0.05, we should reject the null hypothesis H0 and accept the alternative hypothesis Ha, that is, *Sitopaladi Churna* (Group A) is significant than V*ishwadi Churna* (Group B) for *Swarabheda*.

5.1.6. Prasakta vega

Mean difference of Group A is more than mean difference of Group B and *P* value is lower than the significance level alpha = 0.05, we should reject the null hypothesis H0 and accept the alternative hypothesis Ha, that is, *Sitopaladi Churna* (Group A) is significant than V*ishwadi Churna* (Group B) for *Prasakta vega.*

5.1.7. Shushka kanta

Mean difference of Group A is more than mean difference of Group B and *P* value is lower than the significance level alpha = 0.05, we should reject the null hypothesis H0 and accept the alternative hypothesis Ha, that is, *Sitopaladi Churna* (Group A) is significant than *Vishwadi Churna* (Group B) for *Shushka kanta.*

5.1.8. Shushka vaktra

Mean difference of Group A is more than mean difference of Group B and *P* value is lower than the significance level alpha = 0.05, we should reject the null hypothesis H0 and accept the alternative hypothesis Ha, that is, *Sitopaladi Churna* (Group A) is significant than *Vishwadi Churna* (Group B) for *Shushka vaktra.*

5.1.9. Shushka alpa kapha

Mean difference of Group A is more than mean difference of Group B and *P* value is lower than the significance level alpha = 0.05, we should reject the null hypothesis H0 and accept the alternative hypothesis Ha,

that is, *Sitopaladi Churna* (Group A) is significant than V*ishwadi Churna* (Group B) for *Shushka alpa kapha.*

5.2. Objective Parameters

5.2.1. AEC

As the t value calculated is lower than the t tabulated value at $P = 0.05$, where df = 58, we should accept the null hypothesis and reject the alternative hypothesis, that is, *Sitopaladi Churna* (Group A) is significant than *Vishwadi Churna* (Group B) for AEC.

5.2.2. Differential count

As the t value calculated is lower than the t tabulated value at $P = 0.05$, where df = 58, we should accept the null hypothesis and reject the alternative hypothesis, that is *Sitopaladi Churna* (Group A) is significant than *Vishwadi Churna* (Group B) for differential count.

5.2.3. Hb%

As the t value calculated is lower than the t tabulated value at $P = 0.05$, where df = 58, we should reject the null hypothesis and accept the alternative hypothesis i.e. i.e. *Sitopaladi Churna* (Group A) is significant than *Vishwadi Churna* (Group B) for Hb%.

5.2.4. ESR

As the t value calculated is lower than the t tabulated value at $P = 0.05$, where df = 58, we should accept the null hypothesis and reject the alternative hypothesis, that is *Sitopaladi Churna.* (Group A) is significant than *Vishwadi Churna* (Group B) for ESR.

5.3. Overall Effect of Therapies

- In Group A of *Sitopaladi Churna*, out of 20 patients, Good improvement (75–100% relief) was noted in 20 patients, that is, 1000%, and no one was noted in Moderate improvement (50–75% relief) mild improvement (25–50% relief) and poor improvement (0–25% relief).
- In Group B of *Vishwadi Churna*, out of 20 patients, Good improvement (75–100% relief) was noted in 18 patients i.e. 90%, Moderate improvement (50–75% relief) was noted in two patients, that is, 10% and no one was noted in Mild improvement (25–50% relief) and Poor improvement (0–25% relief) [Graph 1].

6. DISCUSSION

Kasa is a very common disease of the respiratory system. Kasa is the one of dreadful disease of the *Pranavaha Strotas* according to Acharya Charaka. Kasa is of five types that is *Vataja Kasa, Pittaj Kasa, Kaphaj Kasa, Kshataj Kasa* and *Kshayaj Kasa. Vataja Kasa* which is characterized by the *lakshanas* of *Hrud-Parshwa-Shirshoola, Swarbheda, Shushka Kantha, Shuka Vaktra, Shushka* Kasa with *Shushka alpa kapha, Dourbalya,* etc. Where *Shushka Kasa* is prominent symptom. The symptoms above are similar to TPE. Thus, *Vataja Kasa* can be correlated to TPE. Kasa seems to be very simple disease, if not controlled and treated properly, it may lead to disease with poor prognostic condition. Hence, we are in demand of a quick-acting medicine with higher effectiveness, search of such a medicine end up with *Sitopaladi churna* as study drug and *Vishwadi Churna* is taken as a standard drug to compare and assess the trial drug. *Sitopaladi churna* contains *Sitopala, Vanshlochana, Pippali, Ela, and Twaka. This Churna* has a *Madhura Rasa and Katu Rasa. Sitopaladi Churna* helps to balancing the Vata dosha and Pitta dosha. It has an Antitussive, Analgesics, and Antipyretic properties which helps to remove the doshas from the body. *Vishwadi Churna* contains *Shunthi, Pippali, Kachur, Karkatshrungi, Devadaru, Pushkarmula, Musta, Bharangi, Rasna, and Dhamasa*. The drugs of *Vishwadi Churna* having *Katu, Tikta Rasa* which helps to balances the Vata dosha and also helps to removes *Aama dosha, Kapha dosha*. The discussion regarding the observations and effect of therapies is presented as follows; for this study, comparative clinical study was used. Randomly selected 40 diagnosed patients of *Vataja Kasa* from the age group of 16–60 years were divided into two groups; Group A: In this group *Sitopaladi Churna*, Group B: In this group *Vishwadi Churna.* The results obtained from both the groups were statistically analyzed to obtain the effect of the therapies. In *Sitopaladi Churna* (Group A), it was observed that it is very significant relief in symptoms like *Shushka Kasa* (98.14%), *Shirashoola* (98.24%), *Parshwashoola* (98.14%), *Hrutshoola* (98.27%), *Swarabheda* (98.18%), *Prasakta vega* (98.21%), *Shushka kanta* (98.14%), *Shushka vaktra* (98.27%), and *Shushka alpa kapha* (98.21%). In *Vishwadi Churna* (Group B), it was observed that it is very significant relief in symptoms like *Shushka Kasa* (98.11%), *Shirashoola* (86.27%), *Parshwashoola* (84.31%), *Hrutshoola* (86.27%), *Swarabheda* (86.53%), *Prasakta vega* (86.53%), *Shushka kanta* (86.53%), *Shushka vaktra* (84.31%), and *Shushka alpa kapha* (84.31%). Effect of *Sitopaladi Churna* (Group A) and *Vishwadi Churna* (Group B) on symptoms observed in *Vataja kasa* is statistically proved to be significant on subjective criteria and objective criteria. The effect of *Sitopaladi Churna* (Group A) and *Vishwadi Churna* (Group B) both are significant at $P < 0.05$ for subjective criteria such as S*hushka kasa, Shirashoola, Parshwashoola, Hrutshoola, Swarabheda, Prasakta vega, Shushka kanta, Shushkta vaktra, and shushkta alpa kapha.* The effect of *Sitopaladi Churna* (Group A) and *Vishwadi Churna* (Group B) both are significant at $P < 0.05$ for objective criteria such as AEC, Differential count, Hb % and ESR.

7. CONCLUSION

In the present study of *Vataja Kasa*, according to the collected data it is observed that both the drugs, *that is, Sitopaladi Churna and Vishwadi Churna* shows significant relief in all symptoms of Vataja Kasa. From the statistical analysis, *Sitopaladi Churna* is more effective than *Vishwadi Churna in Vataja Kasa. Sitopaladi Churna* shows more relief in symptoms like *Shushka kasa, Shirashoola, Parshwashoola, Hrutshoola, Swarabheda, Prasakta vega, Shushka kanta, Shushka vaktra, and Shushka alpa kapha*. Both the drugs – *Sitopaladi Churna* and *Vishwadi Churna* gave good improvement in both the groups. *Sitopaladi Churna* is more effective than *Vishwadi Churna* in the given study.

8. ACKNOWLEDGMENTS

Nil.

9. AUTHORS' CONTRIBUTIONS

All the authors contributed equally in design and execution of the article.

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Nil.

11. ETHICAL APPROVALS

The study has got ethical approval from Dhanvantri Ayurveda college, hospital and research center, Siddapur institutional ethical committee- Ref. no. IEC/DACH/DATE April 29, 2022.

12. CONFLICTS OF INTEREST

Nil.

13. DATA AVAIBALITY

This is an original manuscript and all data are available for only review purposes from principal investigators.

14. PUBLISHERS NOTE

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Table 1: Group A

Sample size	Drug	Dose	*Anupana*	Duration
20 Patients	*Sitopaladi Churna*	2 g thrice a day	*Sukoshna jala*	30 days

Table 2: Group B

Sample size	Drug	Dose	*Anupana*	Duration
20 Patients	*Vishwadi Churna*	2 gm thrice a day	*Sukoshna jala*	30 days

Table 3: Contents of *Sitopaladi churna*

S. No.	Sanskrit name	Botanical name	Part used	Proportion
1.	*Sitopala*	*Saccharum officinalis*	Sugar	16 parts
2.	*Vamshlochana*	*Bambusa arundinacea*	Inner part	8 parts
3.	*Pippali*	*Piper longm*	Fruit	4 parts
4.	*Ela*	*Elletaria cardamomum*	Fruit	2 parts
5.	*Twaka*	*Cinnamomum zeylanicum*	Bark	pala

Table 4: Contents of *Vishwadi churna*

S. No.	Sanskrit name	Botanical name	Part used	Proportion
1.	*Shunthi*	*Zingiber officinale*	Rhizome	1 pala
2.	*Pippali*	*Piper longm*	Fruit	1 pala
3.	*Kachur*	*Curcuma zedoaria Rocs*	Rhizome	1 pala
4.	*Karkatasrngi*	*Pistacia integerrima*	Galls	1 pala
5.	*Devdaru*	*Cedrus deodara*	Kandasara	1 pala
6.	*Pushkarmula*	*Inula racemosa*	Root	1 pala
7.	*Musta*	*Cyperus rotundus*	Root	1 pala
8.	*Bharangi*	*Clerodendrum serratum*	Root	1 pala
9.	*Rasna*	*Pluchea lanceolata*	Rhizome	1 pala
10.	*Dhamasa*	*Fagonia cretica*	Panchanga	1 pala

Table 5: Study chart

Total screened	Total registered	Drop outs	Completed
48	42	2	40

Table 6: Age wise distribution

Age groups in years	Group A		Group B		Total	
	No. of Patients	Percentage	No. of Patients	Percentage	No. of Patients	Percentage
15–20	1	5.00	0	0.00	1	2.50
21–30	5	25.00	6	30.00	11	27.50
31–40	3	15.00	4	20.00	7	17.50
41–50	4	20.00	5	25.00	9	22.50
51–60	7	35.00	5	25.00	12	30.00
Total	20	100	20	100	40	100

Table 7: Gender-wise distribution

Gender	Group A		Group B		Total	
	No. of Patients	Percentage	No. of Patients	Percentage	No. of Patients	Percentage
Male	11	55.00	10	50.00	21	52.5
Female	9	45.00	10	50.00	19	47.5
Total	20	100	20	100	40	100

Table 8: Occupation-wise distribution

Occupation	Group A		Group B		Total	
	No. of Patients	Percentage	No. of Patients	Percentage	No. of Patients	Percentage
Farmer	2	10.00	2	10.00	4	10.00
Service	3	15.00	0	0.00	3	7.50
Job	5	25.00	4	20.00	9	22.50
Housewife	4	20.00	6	30.00	10	25.00
Student	3	15.00	4	20.00	7	17.50
Employee	3	15.00	3	15.00	6	15.00
Teacher	0	00.00	1	5.00	1	5.00
Total	20	100	20	100	40	100

Table 9: *Prakruti*-wise distribution

Prakruti	**Group A**		**Group B**		**Total**	
	No. of Patients	**Percentage**	**No. of Patients**	**Percentage**	**No. of Patients**	**Percentage**
Vatapittaja	9	45.00	9	45.00	18	45.00
Vatakaphaja	2	10.00	4	20.00	6	15.00
Pittavataja	6	30.00	5	25.00	11	27.50
Pittakaphaja	2	10.00	2	10.00	4	10.00
Kaphavataja	0	0	0	0	0	0
Kaphapittaja	1	5.00	0	0	1	2.50
Total	20	100	20	100	40	100

Table 10: *Agni*-wise distribution

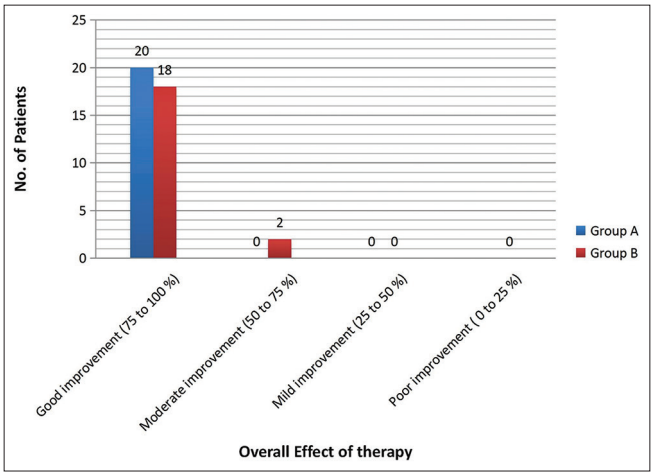
Agni	**Group A**		**Group B**		**Total**	
	No. of Patients	**Percentage**	**No. of Patients**	**Percentage**	**No. of Patients**	**Percentage**
Vishama	7	35.00	7	35.00	14	35.00
Tikshna	2	10.00	0	0	2	5.00
Mandya	11	55.00	13	65.00	24	60.00
Sama	0	0	0	0	0	0
Total	20	100	20	100	40	100

Table 11: *Koshtha*-wise distribution

Koshtha	**Group A**		**Group B**		**Total**	
	No. of Patients	**Percentage**	**No. of Patients**	**Percentage**	**No. of Patients**	**Percentage**
Krura	7	35.00	6	30.00	13	32.50
Madhyam	8	40.00	8	40.00	16	40.00
Mrudu	5	25.00	6	30.00	11	27.50
Total	20	100	20	100	40	100

Table 12: Percentage relief in subjective criteria

Criteria	**Percentage relief**	
	Group A	**Group B**
Shushka kasa	98.14	98.11
Shirashoola	98.24	86.27
Parshwashoola	98.14	84.31
Hrutshoola	98.27	86.27
Swarabheda	98.18	86.53
Prasakta vega	98.21	86.53
Shuska kanta	98.14	86.53
Shushka Vaktra	98.27	84.31
Shushka alpa kapha	98.21	84.31



Graph 1: Overall effect of therapy