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A STUDY ON COMPARISION OF THE EFFICACY OF ARKA PATRA LEPA AND GANDHAKA MALAHARA IN THE MANAGEMENT OF DADRU

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ABSTRACT

Skin is the largest organ of human body. Its size and external location makes it susceptible to a wide variety of disorders. Dadru is one of among the kushtarogas which is identified by symptoms such as kandu, mandala, rag, and pidakas with predominance of kapha dosha.The present study entitled — to compare the efficacy of Arka patra lepa and Gandhaka malahara in the management of Dadru has been carried out to study the efficacy of Arkapatra lepa and Ganadaka malahara in Dadru.Hence, in this study, Lepan Karma is selected for the treatment as per the indication by Acharya Sushruta. Acharya Charaka has described Lepana as "Sadya Siddhi Karaka" because external applications play a key role in the treatment of Kushtha.The selected Lepa for this study is "Arkapatra lepa". This is non-controversial, abundantly available everywhere in India, non toxic and very cost effective. All these qualities have made this combination an ideal and superior one than others.One of the aims of this study was that to assess the efficacy ofArkapatra lepa in the management of the disease. After administration of Arkapatra lepa, we conclude that 70% patient's shows moderate improvement and 26% patients shows marked improvements.Another aims of this study was that to assess the efficacy of Gandhaka malahara in the management of the disease. After administration of Gandhaka malahara, we conclude that an around 76% patient shows moderate improvement and 16% patients shows marked improvements.

Key words : kasa, Vataj kasa,

INTRODUCTION:

Skin is the largest organ of human body. Its size and external location makes it susceptible to a wide variety of disorders. In recent years, there has been a considerable increase in the incidence of skin problems in the tropical and developing countries like India due to various reasons like poverty, poor sanitation, unhygienic, pollution, harmful chemicals, and exposure to extreme environmental conditions of cold, heat. Normal skin maintains an interrelated integrity & it is the purpose of this research work to study in detail some deviations from that integrity through clinical point of view.

Nowadays skin diseases are very common. Though skin diseases are common at any age of the individual, they are particularly frequent in the elderly.

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Dadru is one of among the kushtarogas which is identified by symptoms such as kandu, mandala, rag, and pidakas with predominance of kapha dosha.

Dadru Kushtha is the Kshudrakushtha. Dadru is curable but very tenacious in nature; hence they should be treated continuously 20 days otherwise relapses are very common. It can be correlated with Tinea infections. 39% of world population is suffering from it. Incompatible foods and activities which are mentioned in Ayurveda is also an important cause for Dadru.

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Tender leaves of putika, arka, snuk, narendra druma (aragvadha) and sumana (jati) are macerated in cow's urin and applied; this cures svitra, dadru, bad ulcer, piles, and sinus ulcers.

Dadru is purely Kaphaja Phenomenon. Acharya Sushruta has mentioned the treatment as 'Lepana of Shodhana' type because external application is the best way to treat Kushtha. Furthermore Acharya Charaka has described Lepana as 'Sadyah Siddhi Karaka'. Hence Arka patra lepa is selected here for research purpose.

Objectives of the study:

1) Determine the efficacy of Arka Patra Lepa and Gandhaka Malahara in Dadru patients.

2) Compare the efficacy of Arka Patra Lepa and Gandhaka Malahara in Dadru.

3) Study the Dadru according to samhita in details.

Hypothesis:

Dependent variables - Kandu

Independent variables –Raaga, Number of mandal, Size of mandal, Pidaka

H_0 – Arka patra lepa and Gandhaka malahara are not equally effective.

H_1 – Arka patra lepa and Gandhaka malahara are equally effective.

H_2– Arka patra lepa is greater effective than Gandhaka Malahara in management of Dadru.

DADRU

Dadru is Kshudrakushtha. Kshudrakushtha means the type of Kushtha which neither progresses nor decreases but remains static for a longer time. Thus it is very difficult to cure.

Acharya Charaka has depicted Dadru as a Kshudrakushtha. As per his definition, the reddish coloured Pidaka in the form of Mandala with elevated borders and itching is known as Dadru.

MATERIAL AND METHOD:

Sampling method- Randomized control trials

Inclusive criteria:

1. Patient diagnosed as Dadru as per the clinical features mentioned in Ayurvedic text were included in the study

2. Age group – above 16 years and bellow 70 years randomly included for study.

Exclusive criteria:

1. Patients under long standing medications.

2. Pregnant women and lactating women.

3. Chronicity more than 2 years.

4. Age group – bellow 16 years and above 70 years.

Grouping and randomization of patient –

60 patient subjected to clinical trials will be randomly selected.

1. **Group A –**

   In this group 30 patients will be treated with Arka patra.

2. **Group B –**

   In this group 30 patients will be treated with Gandhaka malahara.

OBSERVATION AND RESULT

TABLE 1: Age wise distribution:

Age Group	Trial Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
20-30 Years	24	80.0	12	40.0
30-40 Years	6	20.0	5	16.7
40-50 Years	0	0.0	3	10.0
50-60 Years	0	0.0	8	26.7
60-70 Years	0	0.0	2	6.7
TOTAL	30	100.0	30	100.0

In above table, 24 patients were from the age group of 20-30 years and 6 patients were from the age group of 20-30 years in Trial group. 12 patients were from the age group of 20-30 years and 8 patients were from the age group of 50-60 years in Trial group

TABLE 2: Gender wise distribution:

Gender	Trial Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Male	19	63.3	15	50.0
Female	11	36.7	15	50.0
TOTAL	30	100.0	30	100.0

In above table, 19 patients are of male gender and 11 patients are female gender in Trial group. 15 patients are of both male and female gender in control group.

TABLE 3: Religion wise distribution:

Religion	Trial Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Hindu	27	90.0	28	93.3
Muslim	3	10.0	2	6.7
TOTAL	30	100.0	30	100.0

In above table, 27 patients are of Hindu and 3 patients are of Muslim religion in Trial group. 28 patients are of Hindu and 2 patients are of Muslim religion in control group.

TABLE 4: Occupation wise distribution:

Occupation	Trial Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Farmer	11	36.7	9	30.0
Housewife	7	23.3	5	16.7
Job	7	23.3	10	33.3
Student	5	16.7	6	20.0
TOTAL	30	100.0	30	100.0

In above table, 11 patients are farmer, 7 patients are housewife, 7 patients are doing job and 5 patients are student in trial group. 9 patients are farmer, 5 patients are housewife, 10 patients are doing job and 6 patients are students in control group.

TABLE 5: Diet wise distribution:

Diet	Trial Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Mixed	21	70.0	14	46.7
Veg	9	30.0	16	53.3
TOTAL	30	100.0	30	100.0

In above table, 21 patients are of mixed diet and 9 patients are of pure vegetarian in trial group. 14 patients are of mixed diet and 16 patients are of pure vegetarian in control group

TABLE 6: Prakruti wise distribution:

Prakruti	Trial Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
KP	18	60.0	10	33.3
KV	0	0.0	0	0.0
PK	6	20.0	15	50.0
PV	6	20.0	1	3.3
VK	0	0.0	0	0.0
VP	0	0.0	4	13.3
TOTAL	30	100.0	30	100.0

In above table, 18 patients are of Kapha-pitta prakruti and 6 patients are each of Pitta-kapha and Pitta–vata prakruti in trial group. 15 patients are of Pitta-kapha prakruti and 10 patients are of Kapha-pitta prakruti in control group.

TABLE 7: Agni wise distribution:

Agni	Trial Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Manda	7	23.3	8	26.7
Samagni	3	10.0	4	13.3
Tikshna	9	30.0	7	23.3
Visham	11	36.7	11	36.7
TOTAL	30	100.0	30	100.0

In above table, 11 patients are of vishamagni, 9 patients are of tikshnagni and 7 patients are of mandagni in trial group. 11 patients are of vishamagni, 8 patients are of mandagni, 7 patients are of tikshnagni in control group.

TABLE 8: Past history wise distribution:

Past History	Trial Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
No	19	63.3	21	70.0
Yes	11	36.7	9	30.0
TOTAL	30	100.0	30	100.0

In above table, 11 patients are of past history and 19 patients don't have past history of dadru in trial group. 21 patients don't have past history and 9 patients are of past history of dadru in control group.

TABLE 9: Area of lesion wise distribution:

Area of Lesion	Trial Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Back	3	10.0	4	13.3
Chest	3	10.0	2	6.7
Feet	7	23.3	7	23.3
Forearm	5	16.7	6	20.0
Groin	5	16.7	5	16.7
Neck	4	13.3	3	10.0
Trunk	3	10.0	3	10.0
TOTAL	30	100.0	30	100.0

In above table, 7 patients have lesion on feet, 5 patients have lesions on both forearm and groin and 4 patients have lesion on neck in trial group. 7 patients have lesion on feet, 6 patients have lesions on forearm and 5 patients have lesion on groin and 4 patients have lesion on back in control group.

TABLE 10: Kandu Reading of respondents in Trial and Control Group:

Kandu	Median		Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT				
Trial	2	0	-4.912[a]	0.000	69.6	Significant
Control	3	0	-4.779[a]	0.000	67.5	Significant

Since observations are on ordinal scale, we have used Wilcoxon Signed Rank test to test the efficacy in Trial Group and Control Group. From above table we can observe that P-Values for Trial Group and Control Group are less than 0.05 hence we conclude that effect observed in both groups are significant.

TABLE 11: Follow up wise distribution of Kandu in Trial group:

Trial Group	**Kandu**			
	D1	**D7**	**D14**	**D21**
Grade 0	0	4	15	20
Grade 1	3	13	4	0
Grade 2	15	5	10	10
Grade 3	12	8	1	0

TABLE 12: Follow up wise distribution of Kandu in Control group:

Control Group	**Kandu**			
	D1	**D7**	**D14**	**D21**
Grade 0	0	0	5	17
Grade 1	1	11	11	2
Grade 2	11	8	14	11
Grade 3	18	11	0	0

TABLE 13: Raaga Reading of respondents in Trial and Control Group:

Raaga	Median		Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT				
Trial	2	0	-4.893[a]	0.000	70.5	Significant
Control	2	0	-4.873[a]	0.000	65.8	Significant

Since observations are on ordinal scale, we have used Wilcoxon Signed Rank test to test the efficacy in Trial Group and Control Group. From above table we can observe that P-Values for Trial Group and Control Group are less than 0.05 hence we conclude that effect observed in both groups are significant

TABLE 14: Follow up wise distribution of Raaga in Trial group:

Trial Group	**Raaga**			
	D1	**D7**	**D14**	**D21**
Grade 0	1	1	3	19
Grade 1	6	12	16	4
Grade 2	14	10	11	7
Grade 3	9	7	0	0

TABLE 15: Follow up wise distribution of Raaga in Control group:

Control Group	**Raaga**			
	D1	**D7**	**D14**	**D21**
Grade 0	0	0	4	18
Grade 1	4	12	16	3
Grade 2	9	9	10	9
Grade 3	17	9	0	0

TABLE 16: No. Of mandal Reading of respondents in Trial and Control Group:

No. of Mandal	Median		Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT				
Trial	1.5	0	-4.853[a]	0.000	68.0	Significant
Control	2	0	-4.759[a]	0.000	69.7	Significant

Since observations are on ordinal scale, we have used Wilcoxon Signed Rank test to test the efficacy in Trial Group and Control Group. From above table we can observe that P-Values for Trial Group and Control Group are less than 0.05 hence we conclude that effect observed in both groups are significant.

TABLE 17: Follow up wise distribution of No. Of Mandal in Trial group:

Trial Group	**No. of Mandal**			
	D1	**D7**	**D14**	**D21**
Grade 0	1	2	8	22
Grade 1	9	12	20	8
Grade 2	19	16	2	0
Grade 3	1	0	0	0

TABLE 18: Follow up wise distribution of No. Of Mandal in Control group:

Control Group	**No. of Mandal**			
	D1	**D7**	**D14**	**D21**
Grade 0	0	0	4	17
Grade 1	1	11	24	12
Grade 2	22	18	2	1
Grade 3	7	1	0	0

TABLE 19: Size Of mandal Reading of respondents in Trial and Control Group:

Size of Mandal	Median		Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT				
Trial	2	0	-4.919[a]	0.000	70.7	Significant
Control	2	0	-4.998[a]	0.000	67.9	Significant

Since observations are on ordinal scale, we have used Wilcoxon Signed Rank test to test the efficacy in Trial Group and Control Group. From above table we can observe that P-Values for Trial Group and Control Group are less than 0.05 hence we conclude that effect observed in both groups are significant.

TABLE 20: Follow up wise distribution of Size of Mandal in Trial group:

Trial Group	**Size of Mandal**			
	D1	**D7**	**D14**	**D21**
Grade 0	0	2	8	21
Grade 1	11	12	12	1
Grade 2	10	7	10	8
Grade 3	9	9	0	0

TABLE 21: Follow up wise distribution of Size of Mandal in Control group:

Control Group	**Size of Mandal**			
	D1	**D7**	**D14**	**D21**
Grade 0	0	0	4	17
Grade 1	0	13	13	4
Grade 2	12	7	12	9
Grade 3	18	10	1	0

TABLE 22: Pidaka Reading of respondents in Trial and Control Group:

Pidaka	Median		Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT				
Trial	2	0	-4.901[a]	0.000	68.9	Significant
Control	2	0	-4.690[a]	0.000	69.7	Significant

Since observations are on ordinal scale, we have used Wilcoxon Signed Rank test to test the efficacy in Trial Group and Control Group. From above table we can observe that P-Values for Trial Group and Control Group are less than 0.05 hence we conclude that effect observed in both groups are significant.

TABLE 23: Follow up wise distribution of Pidaka in Trial group:

Trial Group	**Pidaka**			
	D1	**D7**	**D14**	**D21**
Grade 0	0	0	9	20
Grade 1	1	11	14	10
Grade 2	14	19	7	0
Grade 3	15	0	0	0

TABLE 24: Follow up wise distribution of Pidaka in Control group:

Control Group	**Pidaka**			
	D1	**D7**	**D14**	**D21**
Grade 0	0	0	9	17
Grade 1	2	8	10	13
Grade 2	10	21	11	0
Grade 3	18	1	0	0

Chart no.1

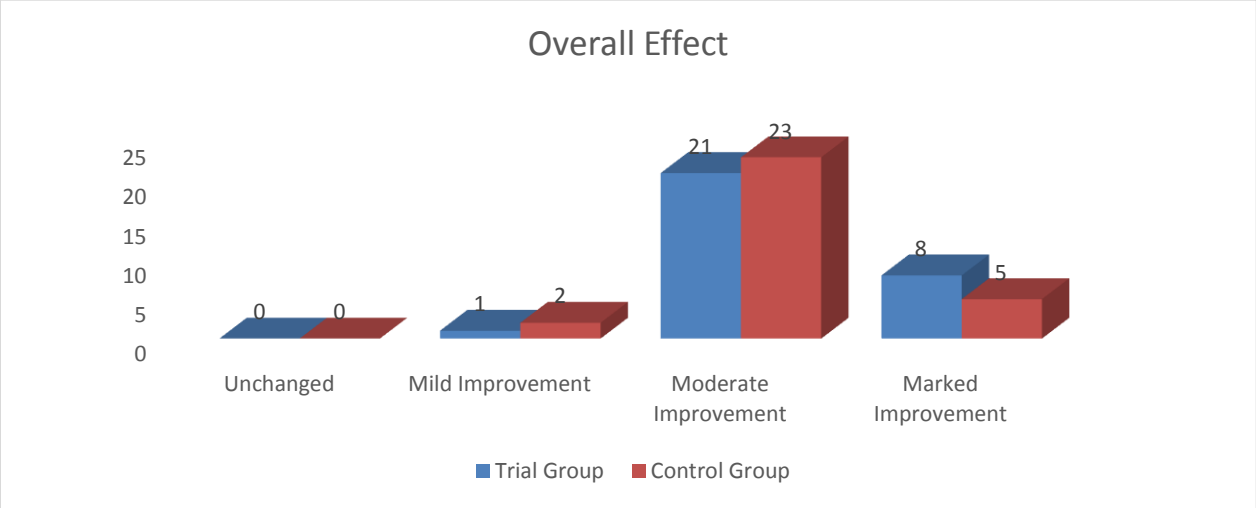

TABLE 25: COMPARISON BETWEEN TRIAL GROUP AND CONTROL GROUP:

	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	P-Value
Kandu	Trial	30	26.65	799.50	334.500	0.065
	Control	30	34.35	1030.50		
	Total	60				
Raaga	Trial	30	25.85	775.50	310.500	0.021
	Control	30	35.15	1054.50		
	Total	60				
No. of Mandal	Trial	30	24.65	739.50	274.500	0.004
	Control	30	36.35	1090.50		
	Total	60				
Size of Mandal	Trial	30	22.42	672.50	207.500	0.000
	Control	30	38.58	1157.50		
	Total	60				
Pidaka	Trial	30	32.50	975.00	390.000	0.340
	Control	30	28.50	855.00		

	Total	60				

For comparison between Trial Group and Control Group we have used Mann Whitney U test. From above table we can observe that P-Value for Raaga, No. of Mandal, size of mandal is less than 0.05 hence we conclude that there is significant difference in trial group and control group. Further we can observe that effect observed in Triall Group is more than Control Group.

TABLE 26: Overall Effect of both groups:

Overall Effect	Trial Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Unchanged	0	0.0	0	0.0
Mild Improvement	1	3.3	2	6.7
Moderate Improvement	21	70.0	23	76.7
Marked Improvement	8	26.7	5	16.7

In overall effect, marked improvement was observed in 8 patients from trial group and 5 patients in control group, moderate improvement was observed in 21 patients from trial group and 23 patients from control group. Hence we can conclude that effect observed in Trial Group is more than Control Group.

DISCUSSION:

At the end after clinical examination of several patients in general practice, we found patients suffering from Dadru more in numbers. So the study entitled "A COMPARATIVE STUDY OF ARKA PATRA LEPA AND GANDHAKA MALAHARA IN MANAGEMENT OF DADRU" was conducted among 60 patients.

OVERALL EFFECT WITH COMPARISON

The overall effect of each therapy was assessed on the basis of improvement in individual patients.

1. Trial group (Arkapatra lepa):-

The treatment was found effective and showed Mild change in 3.3%, Moderate change in 70% and marked change in 26.7% of patients.

2. Control group (Gandhaka malahara):-

The treatment was found effective and showed Mild change in 6.7%, Moderate change in 76.7% and marked change in 16.7% of patients.

The overall percentage wise effect of Arkapatra lepa is better in comparison to Gandhaka malahara.

SUMMARY:

The present dissertation entitled ― A COMPARATIVE STUDY OF ARKAPATRA LEPA AND GANADAKA MALAHARA IN THE MANAGEMENT OF DADRU has been carried out to study the efficacy of Arkapatra lepa and Ganadaka malahara in Dadru.The study is disposed in following sections: Introduction, Aims & objectives, Material & Method, Observations & Results, Discussion and Conclusion.

CONCLUSION:

One of the aims of this study was that to assess the efficacy of Arkapatra lepa in the management of the disease. After administration of Arkapatra lepa, we conclude that 70% patient's shows moderate improvement and 26% patients shows marked improvements.Another aims of this study was that to assess the efficacy of Gandhaka malahara in the management of the disease. After administration of Gandhaka malahara, we conclude that an around 76% patient shows moderate improvement and 16% patients shows marked improvements. From above results we conclude that, Arkapatra Lepa is much efficient than Gandaka Malahara in the management of disease Dadru.**The Observations also showed that the teenagers & youth are the main victim of the disease Dadru. Male predominance was evident in the present study but there is no relationship of sex with this disease.**The disease Dadru can be correlated with fungal dermatophytes as there is huge similarity between sign and symptoms.

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