



Research Article

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A CLINICAL STUDY OF KARANJA (*PONGAMIA PINNATA PIERRE*) WITH SPECIAL REFERENCE TO VICHARCHIKA

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ABSTRACT

Skin diseases can have profound physical, psychological and social consequences for those who live with them, for sufferer and for family members. Whilst the physical symptoms are diverse in nature, all have the potential to impact on one's mental wellbeing. There are so many diseases, which do not kill; but create physical impairment along with psychological stress and strain. Vicharchika is one of them, which is the varieties of kshudra kushtha. It runs a chronic course and generally considered difficult to cure and even if cured, relapses are common. India is one of the largest producers of medicinal herbs. A cheap and safe drug that is efficacious in combating Vicharchika can be a boost to the ailing humanity. Karanja is also being used in folklore medicine for various skin diseases. In the present study a total of 30 patients were selected for the study of age group above 10 years. All the selected patients were studied under three groups Karanja taila, Karanja churna and combined group to compare the efficacy of the trial drug. The study denotes that the patients of combined group following restricted diet provided satisfactory results in the management of Vicharchika. Various laboratory investigations were performed on the patients to rule out any disease.

Key words: vicharchika, kshudra kushtha, karanja.

INTRODUCTION

There is an awakening all over the world to use the age-old wisdom of traditional system of medicine to combat the diseases of multiple natures and share the wealth of flora particularly of medicinal herbs used in these systems since pre-historic ages. Thus, herbal remedies have aroused new interest recently. The study of the Indian medical literature reveals that the healthy skin is the reflector of human personality through the ages. Any affection of skin is considered as a problem, which is evident from its description under the heading of Kushtha-illustrative of the disfiguring nature of the disease. Skin diseases can have profound physical, psychological and social consequences for those who live with them, for sufferer and for family members. Whilst the physical symptoms are diverse in nature, all have the potential to impact on one's mental wellbeing. There are so many diseases, which do not kill; but create physical impairment along with psychological stress and strain¹. Vicharchika is one of them, which is the varieties of Kshudra Kushtha^{2,3}. It runs a chronic course and generally considered difficult to cure and even if cured, relapses are common. As described in terms of nidana, purva rupa, rupa, samprapti and chikitsa Vicharchika can most certainly correlated with the modern disease Eczema by most of the scholars, which is usually known as 'Chambal' in Hindi. It is a common problem all over the world. Its incidence of occurrence is increasing now-a-days because of the altered food habits and modernized lifestyle. Though the use of many indigenous drugs (herbal and mineral origin) have been described in classics and are in practice for the treatment of Vicharchika but there is need for more effective drugs which can cure the disease permanently. Karanja is also being used as medicine for various skin diseases^{4,7}. It is reported that drugs, which have been in use for such a long time by a big section of population, must have scientific support for its efficacy. Karanja is a cheap and safe drug that is efficacious in combating

Vicharchika so this drug has been taken to provide maximum result to the patients.

Aims and objective

The present study was aimed to find out an easily available and considerably low cost, safe and effective remedy for the treatment of Vicharchika (eczema) to evaluate and compare the clinical efficacy of Karanja (*Pongamia pinnata* Pierre) on Vicharchika both orally and locally in three groups and to analyze the observations and to find the significance of the drug action.

MATERIALS AND METHODS

Ethical Clearance

The present study was approved by members of institutional I.P.G.T. & R.A., Hospital Jamnagar, Ethical Committee.

Selection of patients

Uncomplicated patients with characteristic symptomatology of Vicharchika were selected for the study from the OPD of I.P.G.T. & R.A., Hospital Jamnagar, above age of 10 years based on simple random sampling technique.

Criteria of diagnosis

Classical signs and symptoms of Vicharchika according to Ayurveda. A specific proforma was prepared, incorporating all signs and symptoms of the disease on the basis of the proforma, all the patients of the present study were examined in detail.

Investigations

Routine haematological investigations like Hb%, TLC, DLC, ESR, Routine urine and Stool examination were carried out along with necessary biochemical examinations.

Diet and restrictions⁸

Patients are advised to avoid the causative factors & kept on their routine diet with excessive intake restrictions. Patients were advised to avoid the use of soap and maintain hygienic conditions.

Treatment Groups

All the patients were divided into three groups to compare the efficacy of the trial drug.

Group I: Karanja taila group (K.T. Group)

10 patients were treated with local application of Karanja Seed Oil. Dose was adjusted according to the area of the lesion. Karanja oil was applied locally three times a day.

Group II: Karanja Churana Group (K.C Group)⁹

In this group 09 patients were treated with Karanja Seed Churna (powder) in a dose of 0.5 gms after meals with water.

Group I: Karanja Taila and Karanja Churana Group (Combined Group)

In this group, 11 patients were treated both internally with Karanja Seed Churna and externally with local application of Karanja Seed Oil. Dose, duration and anupana was kept same as in group I and II.

Duration of the treatment: 1 month for each group

Follow up: weekly for each group

Criteria of Assessment

All the patients were examined weekly during the treatment. Criteria of assessment was kept on the basis of relief in the signs and symptoms of the disease Vicharchika as follows:

Table 1

SYMPTOMS	SCORE	GRADE
KANDU (itching)	0	No kandu (cured)
	1	Mild or occasional kandu
	2	Kandu off and on
	3	Continuous kandu without disturbed sleep
	4	Continuous kandu with disturbed sleep
PIDIKA (lesion)	0	No pidika (cured)
	1	Pidika disappears but discoloration persists
	2	Pidika in less than 5 square cms in whole affected area
	3	Pidika in between 5-10 square cms in whole affected area
	4	Many or uncountable pidika in the whole affected area
SRAVA (discharge)	0	No srava (cured)
	1	Occasional srava after itching
	2	Mild srava after itching
	3	Moderate srava after itching
	4	Profuse srava making clothes wet
VAIVRANYATA (discoloration)	0	Absolute normal colour of the skin
	1	Lohita shyava lesion
	2	Shyava lesion (blackish)
	3	Shyama lesion (Black) with lichenification
DAHA (burning sensation)	0	No daha (cured)
	1	Sometimes daha
	2	Often daha
	3	Continuous daha without disturbed sleep
	4	Continuous daha with disturbed sleep
VEDANA (pain)	0	No vedana (cured)
	1	Mild vedana
	2	Moderate vedana
	3	Severe vedana
TWAKA RUKSHATA (dryness of skin)	0	Normal skin (cured)
	1	Loss in skin's normal unctuousness
	2	Slightly dry skin
	3	Excessively dry skin
	4	Dry thickened skin
SHOTHA (swelling)	0	No shotha (cured)
	1	Present in <25% of the area
	2	Present in between 25-50% of the area
	3	Present in between 50-75% of the area
	4	Present in more than 75% of the area

Criteria for Final Assessment of Results

The total effect of therapy was assessed in five groups

Table 2

Cured	100% relief in signs and symptoms and no recurrence during follow up study have been considered as cured.
Marked Improvement	>75% - <100% improvement in signs and symptoms has been considered as marked improvement.
Moderately Improvement	>50% - <75% improvement in signs and symptoms has been recorded as moderate improvement.
Mild improvement	>25% - <50% improvement in signs and symptoms has been considered as mild improvement.
Unchanged	upto 25% reduction in signs and symptoms was noted as unchanged.

OBSERVATIONS AND RESULTS**Distribution of Patients****Table 3**

	Group -1	Group -2	Combined	Total	%
Registered	10	09	11	30	100
Completed	10	09	11	30	100

Statistical Analysis Results¹⁰**Effect of Karanja taila group in various signs and symptoms of 10 patients of Vicharchika****Table 4**

Signs and symptoms	Mean Score		%	± S.D.	± S.E.	T	P
	BT	AT					
Kandu	2.5	0.8	71.66	0.94	0.30	5.66	<0.001
Pidika	2.7	1.2	52.49	0.97	0.30	5.00	<0.001
Vaivarnaya	2.4	1.3	46.66	0.73	0.23	4.78	<0.001
Srava	1.8	1.0	37.03	1.05	0.35	2.51	<0.05
Vedna	2.3	0.7	63.33	1.17	0.37	4.32	<0.01
Raktima	1.5	0.7	51.66	0.63	0.20	4.00	<0.01
Rukshta	2.5	0.7	77.50	1.03	0.32	5.62	<0.001
Daha	1.0	0.5	45.83	0.74	0.26	2.38	<0.05

BT-before trial, AT- after trial, SD- standard deviation, SE-standard error

Effect of treatment on haematological parameters in Karanja taila group on 10 patients of Vicharchika**Table 5**

Haematological parameters	Mean Score		%	± S.D.	± S.E.	T	P
	BT	AT					
Hb%	14.71	14.78	0.48	0.24	0.09	0.74	>0.10
Total WBC	9216	8275	12.41	624.29	255.86	4.52	<0.01
Neutrophil	65	65.33	1.05	2.80	1.15	0.28	>0.10
Lymphocyte	28.33	30.83	10.12	2.48	1.01	2.47	<0.10
Eosinophil	5.83	3.00	55.88	0.75	0.30	9.44	<0.001
E.S.R.	15	7.66	40.93	11.43	4.68	1.56	>0.10

BT-before trial, AT- after trial, SD- standard deviation, SE-standard error

Effect of Karanja churana group in various signs and symptoms of 09 patients of Vicharchika**Table 6**

Signs and symptoms	Mean Score		%	± S.D.	± S.E.	T	P
	BT	AT					
Kandu	2.22	0.66	60.18	1.13	0.37	4.18	<0.01
Pidika	2.55	1.22	49.07	0.86	0.28	4.75	<0.01
Vaivarnaya	2.33	1.22	42.59	0.78	0.26	4.26	<0.01
Srava	1.77	1.00	40.47	1.00	0.37	2.70	<0.01
Vedna	2.77	1.00	47.22	1.00	0.33	4.03	<0.01
Raktima	1.44	0.78	40.74	0.70	0.23	2.86	<0.01
Rukshta	2.22	0.66	63.88	1.23	0.41	3.78	<0.01
Daha	1.33	0.77	45.23	0.48	0.18	3.94	<0.01

BT-before trial, AT- after trial, SD- standard deviation, SE-standard error

Effect of treatment on haematological parameters in Karanja taila group on 10 patients of Vicharchika

Table 7

Haematological parameters	Mean Score		%	± S.D.	± S.E.	T	P
	BT	AT					
Hb %	14.08	14.10	0.18	0.56	0.22	2.27	<0.10
Total WBC	7891	8166	5.15	749.27	307.08	0.89	>0.10
Neutrophil	62.83	61.50	6.72	4.22	1.73	0.77	>0.10
Lymphocyte	32.33	34.83	16.46	4.07	1.66	1.50	>0.10
Eosinophil	4.00	3.16	18.88	1.16	0.47	1.77	>0.10
E.S.R.	21.66	16.66	6.42	11.69	4.79	1.04	>0.10

BT-before trial, AT- after trial, SD- standard deviation, SE-standard error

Effect of Karanja Churana and Karanja Taila group in various signs and symptoms of 11 patients of Vicharchika

Table 8

Signs and symptoms	Mean Score		%	± S.D.	± S.E.	T	P
	BT	AT					
Kandu	2.36	0.45	81.06	1.04	0.31	6.12	<0.001
Pidika	2.53	0.90	62.87	0.80	0.24	6.79	<0.001
Vaivarnaya	2.18	0.91	56.05	0.64	0.19	6.68	<0.001
Srava	1.63	0.72	52.08	1.03	0.36	3.47	<0.01
Vedna	2.62	0.72	67.42	1.04	0.31	6.12	<0.001
Raktima	1.45	0.64	54.54	0.75	0.22	3.61	<0.01
Rukshta	2.17	0.54	84.09	0.92	0.27	6.03	<0.001
Daha	1.27	0.54	61.11	0.60	0.20	4.40	<0.001

BT-before trial, AT- after trial, SD- standard deviation, SE-standard error

Effect of treatment on haematological parameters in combined group on 11 patients of Vicharchika

Table 9

Haematological parameters	Mean Score		%	± S.D.	± S.E.	T	P
	BT	AT					
Hb%	14.11	13.63	2.88	1.45	0.59	0.81	>0.10
Total WBC	8683	8325	4.18	274.62	112.54	3.18	<0.02
Neutrophil	64.50	62.33	4.96	6.33	2.59	0.83	>0.10
Lymphocyte	29.16	34.00	17.48	6.08	2.49	1.94	<0.10
Eosinophil	5.66	3.16	28.33	3.31	1.35	1.85	>0.10
E.S.R.	10	11	31.39	3.66	1.50	0.66	>0.10

BT-before trial, AT- after trial, SD- standard deviation, SE-standard error

Comparative effect of trial drug on vicharchika after treatment

Table10

Signs and symptoms	Percentage relief		
	K.T. group	K.C. group	Combined group
Kandu	71.66	60.18	81.06
Pidika	52.49	47.22	62.87
Vaivarnaya	46.66	42.59	56.05
Srava	37.03	40.47	52.08
Vedna	63.33	47.22	67.42
Raktima	51.66	40.74	54.54
Rukshta	77.60	63.88	84.09
Daha	45.83	45.23	61.11

K.T.-karanja taila, K.C.- karanja churana

DISCUSSION

Acharaya Charaka and Sushruta has been mentioned Karanja as Kusthagana dravya. Hence present drug is selected for the trial^{10,11}. Vicharchika being a variety of Kshudra Kushta has Tridoshaja involvement Vedna, Rukshata and Vaivarnya are due to Vata; Raktima and Daha due to Pitta; Pidika and Srava due to Pitta-Kapha; but the most cardinal sign i.e. Kandu (intense itching) of the disease is due to Kapha¹². While going through the signs and symptoms of Vicharchika as described by Charaka and Sushruta^{13,5}, it becomes clear that they are mainly due to Kapha and Vata. Besides involvement of Ama dosha is evident

from pathogenesis. The drug Karanja has tikta –katu rasa, laghu –tikshna guna, ushna veerya and katu vipaka¹⁴. Tikta rasa is best both for kapha and pitta vitiation. It is also held responsible for the digestion of Ama Pitta. Mandagni is of special significance in the production of Ama dosha. Tikta katu rasa has deepana as well as pachana properties¹⁵. Pachana gunas restores the normalcy of agni. Ushna veerya and katu veepaka of Karanja help in mitigating vata as well as Kapha doshas. Thus all the three doshas are brought into normalcy

CONCLUSION

At the end of this study it was concluded that a positive family history was recorded in 20% of the patients suffering from Vicharchika. As mentioned in Charaka, when beeja bhaga or beejabhaga avyava is affected, it emerges out in the offspring as a disease. It indicates the genetic predisposition may be the probable cause in some individuals. The lesions were more in the extremities (70%, upper and lower combined). Constant covering of the extremities with synthetic clothings produce excessive sweating and itching which aggravates the disease. Virudha ahara was found the general nidana in causation of disease. Involvement of Kaphaja and Vataja Lakshanas was more prevalent. Effect of Karanja taila on various signs and symptoms of Vicharchika was found to be highly significant in Kandu, pidika, vaivarnya and rukshta, while it was significant in raktima, vedna, srava and daha. Effect of Karanja churna was found statistically significant in srava. Effect of Karanja churana and taila combined was found highly significant in all the signs and symptoms. In nutshell, the appraisal of the study denotes that the total effect of the drug and restricted diet provided satisfactory results in the management of Vicharchika.

Scope for further study

The clinical study should be conducted on a larger group with long duration to reach at the proper conclusion. Comparative study should be carried along with modern drugs.

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