



## Research Article

www.ijrap.net (ISSN:2229-3566)



### A COMPARATIVE CLINICAL STUDY TO EVALUATE THE EFFICACY OF KHADHIRASHTAKA KWATHA AND NAVAKARSHAKA KWATHA IN THE MANAGEMENT OF VICHARCHIKA (ECZEMA)

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Received on: 15/02/20 Accepted on: 15/05/20

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DOI: 10.7897/2277-4343.110494

#### ABSTRACT

Vicharchika has been mentioned under the heading of Kshudra Kushta is a Rakta Pradoshaja Vyadhi with the involvement of Kapha Pradhana Tridosha. Eczema is a form of dermatitis in which inflammation is focused on the epidermis and lesions are pruritic, edematous, oozing, plaques often containing vesicles and bullae. Here Vicharchika is compared to eczema as the characteristic features of Vicharchika coinciding with eczema. The aim of this study is to assess comparative clinical effect of Khadhirashtaka Kwatha and Navakarshaka Kwatha in the management of Vicharchika (Eczema). It is a randomized non-controlled parallel arm clinical study. 40 patients fulfilling diagnostic and inclusion criteria were selected for the study. The patients were randomly divided into 2 groups i.e. Group A and B with 20 patients in each group. Group 'A' patients were treated with Khadhirashtaka Kwatha and Group 'B' patients were treated with Navakarshaka Kwatha. The data were analyzed statistically by using Paired 't' and Unpaired 't' tests. Group A and B have shown statistically significant results. Group B showed better response when compared to Group A. Both medicines were found to be effective in reducing the severity of the Vicharchika symptoms.

**Keywords:** Vicharchika, Kushta, Khadhirashtaka Kwatha, Navakarshaka Kwatha, Eczema.

#### INTRODUCTION

Skin is the largest organ of the body. The skin acts as a barrier for various microorganism, regulates the body temperature and responsible for tactile sensation of body. In Ayurveda various layers of skin has been mentioned on the basis of their thickness and their functions. Acharya Sushruta describes the fourth layer of Twacha or skin as Tamra which is the site for skin diseases<sup>1</sup>.

In Ayurveda the skin diseases are considered under the broad headings of "Kushta". Vicharchika is one among Ashtadasha Kushtas. It is a Rakta pradoshaja vikara. Characteristic symptoms of Vicharchika are Shyava, Pidaka, Kandu and Srava<sup>2</sup>.

Vicharchika can be compared to eczema in modern parlance. The progressive incidence of eczema varies from 11% to 21% depend on age<sup>3</sup>. Eczema are common inflammatory skin disease characterized by pruritus, erythematous papules, often with overlying vesicles, which ooze and become crusted<sup>4</sup>, by which the patient always experiences physical, emotional and social embarrassment in the society.

At present there is no permanent cure for the Eczema, also the side effect of the available drugs is posing much more problems than the disease itself. This emphasizes the need for its adequate treatment and possible prevention by Ayurvedic treatment. So, considering it as a challenging illness, clinical trial on Vicharchika has been undertaken in order to find out a wholesome medicament for this troublesome disease.

Owing to which an attempt has been made in the following work by selecting Shamana Yoga's like Khadhirashtaka Kwatha<sup>5</sup> and Navakarshaka Kwatha<sup>6</sup> in the management of Vicharchika.

- To evaluate the efficacy of Khadhirashtaka Kwatha in Vicharchika.
- To evaluate the efficacy of Navakarshaka Kwatha in Vicharchika.
- To comparatively evaluate the efficacy of Khadhirashtaka Kwatha and Navakarshaka Kwatha in Vicharchika.

#### MATERIALS AND METHODS

##### Study design

A comparative clinical study with pre and post test design

##### Study population

Urban and rural population from Davangere, Karnataka, India

##### Study sample

40 patients fulfilling diagnostic and inclusion criteria were selected for the study. The patients were randomly divided into 2 groups i.e. Group A and B with 20 patients in each group. In group A, administered with Khadhirashtaka Kwatha and group B administered with Navakarshaka Kwatha for a period of 30 days

## Aim

To assess comparative clinical effect of Khadhirashtaka Kwatha and Navakarshaka Kwatha in the management of Vicharchika (Eczema)

## Study setting

This study was carried out on the patients attending the OPD and IPD and special camps conducted in Ashwini Ayurvedic Medical College Hospital Davangere. Study was carried out after ethical clearance from Institutional ethical clearance committee.

## Trial Drug Details

### Ingredients of Khadhirashtaka Kwatha

Table 1: Ingredients of Khadhirashtaka Kwatha

Dravya	Botanical Name
Khadira	<i>Acacia catechu</i>
Haritaki	<i>Terminalia chebula</i>
Vibhitaki	<i>Terminalia bellirica</i>
Amalaki	<i>Emblica officinalis</i>
Nimba	<i>Azadirachta indica</i>
Patola	<i>Trichosanthes dioica</i>
Amrita	<i>Tinospora cordifolia</i>
Vasa	<i>Adhatoda vasica</i>

Table 2: Ingredients of Navakarshaka Kwatha

Dravya	Botanical Name
Haritaki	<i>Terminalia chebula</i>
Vibhitaki	<i>Terminalia bellirica</i>
Amalaki	<i>Emblica officinalis</i>
Nimba	<i>Azadirachta indica</i>
Manjistha	<i>Rubia cordifolia</i>
Vacha	<i>Acorus calamus</i>
Katurohini	<i>Picrorhiza kurroa</i>
Amrita	<i>Tinospora cordifolia</i>
Daruharidra	<i>Berberis aristata</i>

## Diagnostic criteria

The diagnosis was mainly based on the cardinal signs and symptoms of Vicharchika as well as eczema as explained in the texts.

## Inclusion criteria

- Patients presenting with signs and symptoms of Vicharchika (eczema) like Kandu (itching), Pidaka (papules), Srava (discharge) and Shyava (Reddish black discoloration) were selected for the study
- Patients with the age group between 16-60 years were selected irrespective of sex and economical status.

## Exclusion criteria

- Vicharchika with other systemic disorder.
- Complications which intervenes the course of treatment have been excluded.

## Lab investigations

Hb%, ESR, AEC, Blood sugar was carried out in all patients for diagnosis and to rule out diabetes.

## Interventional Phase

Group A: 20 patients were administered with Khadhirashtaka Kwatha 30 ml twice daily 1 hour before food for 30 days.

Group B: 20 patients were administered with Navakarshaka Kwatha 30 ml twice daily 1 hour before food for 30 days.

## Follow up study

Once in 15 days for a period of 60 days after completion of the treatment.

## Assessment criteria

The state of the disease changes after the intervention was observed before, during and after the treatment. Standard methods of scoring the symptoms like Kandu, Pidaka, Shyava,

Srava was assessed before, during the administration of Shamana Aushadhi at the interval of 7 days for 30 days.

The assessment criteria used to evaluate the overall effect of the treatment.

- Poor improvement- 0-20% relief
- Average improvement- 20-40 % relief
- Moderate improvement of Lakshanas- 40-60% relief.
- Good improvement, in Lakshanas- above 60 – 80% relief.
- Excellent improvement- 80-99% relief.

## Statistical analysis

The data were analyzed statistically using Paired 't'test and Unpaired't'test.

## RESULT

Out of 40 patients, 5 patients (12.5%) were between the age group of 16-31 years, 19 patients (47.5%) were between 32-46 years and 16 patients (40%) were between 47-60 years.

Among 40 patients selected for clinical study, 24 patients (60%) were male and 16 patients (40%) were females. Though the religion wise distribution of the patients has no significance in the clinical study but based on their availability patients from Hindu were more, i.e. 33 patients (82.50%), Muslim patients were 6 (15%) and Christian patients were 1 (2.5%).

Out of 40 patients 8 patients (20%) belonged to upper class, 17 patients (42.5%) to middle class, 9 patients (22.5%) to lower middle class and 6 patients (15.0%) to poor class.

The incidence of addiction in study showed that 8 (20%) were addicted to alcohol drinking, 3 patients (7.5%) to Smoking and 3 patients (7.5%) were addicted to Tobacco chewing.

The study viewed that 11 (27.5%) patients were Vata Pitta Prakriti persons, 21 (52.5%) were Pitta Kapha Prakriti persons and 8 (20%) were Vata Kapha Prakriti persons. Among 40 patients, 27 (67.5%) patients were vegetarians and 13 (32.5%) were of mixed diet habits.

**Table 3: Incidences of classical sign and symptoms of Vicharchika**

Signs percentage symptoms	Group A		Group B		Total	
	No.	Percentage	No.	Percentage	No.	Percentage
Kandu (itching)	20	100	20	100	40	100%
Pidaka (papules)	15	75	17	85	32	80%
Shyava (blackish discolorations)	20	100	20	100	40	100%
Srava (oozing)	20	100	20	100	40	100%

The study viewed that all 40 patients (100%) had Kandu, 32 patients (80%) had Pidakas and all 40 patients (100%) had Shyava and Srava before the treatment.

**Assessment of response in Group A after treatment**

**Table 4: Effect of Khadhirashtaka Kwatha in Group A**

Parameter	Mean		Difference in mean	Paired to				Remaining
	BT	AT		S.D	S.E.M	't'	'p'	
Kandu	2.250	1.150	1.100	0.489	0.109	6.681	0.001	S
Pidaka	2.000	1.200	1.800	0.523	0.117	5.141	< 0.001	HS
Shyava	2.750	2.200	0.550	0.768	0.172	2.773	0.009	S
Srava	1.500	6.650	0.900	0.587	0.131	4.194	< 0.001	HS

BT: Before treatment, AT: After treatment, SD: Standard deviation, SEM: Standard error of the mean, HS: Highly significant

In the present study, all the symptoms taken for the assessment were scored after administration of Kwatha. Statistical analysis of data in group A revealed that all the parameters have shown statistically significant result after treatment.

**Table 5: Effect of Navakarshika Kwatha in Group B**

Parameter	Mean		Difference in mean	Paired to				Remaining
	BT	AT		S.D	S.E.M	't'	'p'	
Kandu	2.250	1.050	1.200	1.510	1.114	7.931	< 0.001	HS
Pidaka	1.950	1.050	0.900	0.686	0.153	5.086	< 0.001	HS
Shyava	2.800	1.500	1.300	0.688	0.154	7.255	< 0.001	HS
Srava	1.500	0.350	1.150	0.671	0.150	5.070	< 0.001	HS

BT: Before treatment, AT: After treatment, SD: Standard deviation, SEM: Standard error of the mean, HS: Highly significant

The statistical analysis revealed that all the parameters have shown statistically highly significant results after treatment in group B.

**Table 6: Comparison of effect of treatment on Vicharchika Lakshana in Group A and B**

Parameter	Group	Dif in means	Unpaired ,t, test				remarks
			S.D	S.E.M	't'	'p'	
Kandu	A	1.100	0.447	0.1000	0.525	0.606	NS
	B	1.200	0.696	0.156			
Pidaka	A	0.800	0.410	0.0198	0.418	0.681	NS
	B	0.900	0.852	0.191			
Shyava	A	0.550	0.510	0.114	4.765	< 0.001	HS
	B	1.250	0.440	0.0993			
Srava	A	0.900	0.788	0.173	1.097	0.287	NS
	B	1.150	0.671	0.150			

SD: Standard deviation, SEM: Standard error of the mean, HS: Highly significant, NS: Not significant

The comparison of effect of treatment on symptoms like Kandu, Pidaka and Srava showed that there is statistically insignificant difference between the group A and group B. The significance was observed in the parameter of Shyava at the level of < 0.001. The percentage relief between the group shows that group B therapy is more effective than group A.

**Overall assessment**

**Table 7: Overall assessment in Group A and Group B**

Response in Percentage	Group A		Group B	
	No	Percentage	No	Percentage
Poor improvement	1	5	1	5
Average improvement	10	50	4	20
Moderate improvement	7	35	9	45
Good improvement	2	10	5	25
Excellent improvement	0	0	1	5

The study reveals that in group A 10% had good improvement, 35% had moderate improvement, 50% had average improvement and 5% showed poor improvement.

In group B 5% of patient showed excellent improvement, 25% patient had good improvement, 45% patient had moderate improvement, 20% had average improvement and 5% showed poor improvement.

## DISCUSSION

Acharya Charaka and Acharya Vagbhata have explained Kandu, Pidaka, Shyava and Srava as the characteristic feature of Vicharchika<sup>7</sup>. Acharya Sushruta has explained, Ruksha, Kandu, Raji and Ruja as the symptoms of Vicharchika<sup>8</sup>.

The prevalence of Vicharchika was higher in male 24 patients (60%) compared with female subjects i.e. 16 patients (40%). The prevalence of Vicharchika was different among age group with higher rates among age group of 32-46 years compared with young participants.

Maximum numbers of patients (83.33%) belong to Hindu religion. This is due to predominance of Hindu population in and around Davangere. 67.5% people were taking vegetarian diet. The incidence may be due to predominance of certain religion, consuming only vegetarian food, in and around Davangere, from where the present sample had been taken.

The 35 patients (87.5%) were having history of 1-5 years. Only 1 patient had history of 22 years. Eczemas is a chronic disease. So, variation of chronicity will be there.

Approximately 67.5% of patients with eczema reported lesion on the legs. Because of gravity there will be pooling of blood in the lower limb, this blood is discoloured which gives space for the infection. Among Lakshanas 100% of patients had Kandu, 75% patient had Pidaka and 100% patients had Shyava and Srava.

### Probable mode of action of Khadhirashtaka Kwatha

The drugs used in Khadhirashtaka kwatha are having mainly Tikta and Kashaya rasa which helpful against Pradhana Dosha Kapha in Vicharchika. The Laghu Ruksha Guna of Dravya also helps to pacify Kapha Dosha. Tikta Rasa of the Dravya does the Rakta Shodhana. Deepana Pachana effect of Dravya acts on Jataragni does the Pachana of Jataragni Janya Ama. Tikta Rasa and Laghu Guna of Dravya clear the minute Srotas and thereby remove Sanga in channels.

The drugs of Khadhirashtaka Kwatha are Raktadushtihara, Amapachak, Kushthaghna, Kandughna and Kapha Pittahara in nature, so it is considered to be very much effective in the treatment of Vicharchika.

### Probable mode of action of Navakarshika Kwatha

Vicharchika is a Kapha Pradhana Tridoshaja Vyadhi. In this formulation 33% drugs having Tridoshahara and 88 % drugs are having Kaphahara action. And there by it helps to pacify the vitiated doshas. Tikta rasa and Kashaya rasa are helpful against Pradhana Dosha Kapha.

Most of the drugs of Navakarshika Kwatha are having Laghu and Ruksha Guna therefore Kleda nashaka is done effectively by the Kwatha. The Ushna Veerya helps in Agni Deepana, Ama Pachana and Srotoshodhana so as to detoxify potentially dangerous

substances. Guduchi and Triphala pacify the Pitta dosha in Rakta Dushti and it also acts as Rasayana. All the drugs in this formulation are Kushtaghna, Kandughna property. Especially the drugs Manjishtha, Amrita, Daruharidra acts as Rakta Shodhaka and Varnya and thereby it helps in reducing the Shyavata and improves the quality of blood. Anulomaka property of Katuki and Triphala helps to expels vitiated doshas in Vicharchika.

## CONCLUSION

The purpose of this present study was to evaluate and to compare the efficacy of Khadhirashtaka Kwatha and Navakarshika Kwatha in the management of Vicharchika. Based on the conceptual analysis and observation made in the clinical study, the following conclusions were drawn after logical interpretation of the results obtained in the clinical study.

It is well observed that Navakarshika Kwatha provide better relief in the amelioration of signs and symptoms of the disease Vicharchika when compared to Khadhirashtaka Kwatha group.

Inter group comparison of statistical data proved to be statistically insignificant. The Result indicates the therapeutic effect on Shyava achieved to great extent in Group B i.e. Navakarshika Kwatha.

No complications were observed in patients of both the groups during the treatment. So, it can be concluded that Navakarshika Kwatha was found as a good economic and effective Shamana Aushadhi than Khadhirashtaka Kwatha in the management of Vicharchika.

### Recommendations for the further studies

- Multi centric trial can be conducted for the same study.
- The mode of action Kashaya can be understood with more scientific methods.
- Same Shamana Aushadhis for longer duration would give a very good result in this disease.

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**Cite this article as:**

Priya Pradeep and Pradeep Kumar K. A comparative clinical study to evaluate the efficacy of Khadhirashtaka Kwatha and Navakarshaka Kwatha in the management of Vicharchika (Eczema). *Int. J. Res. Ayurveda Pharm.* 2020;11(4):82-86  
<http://dx.doi.org/10.7897/2277-4343.110494>

Source of support: Nil, Conflict of interest: None Declared

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