

## Evaluation of Leech application in the management of Vicharchika (Eczematous Dermatitis)

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### ABSTRACT

**Vicharchika:** One of the Kshudra kushtha can be correlated with eczema in modern parlance runs a chronic course & considered difficult to be cured and even if it is cured, relapses are common. Ayurvedic classics consider Rakta dushti as one of the prime causes of skin diseases; on the other hand, patients may get relief after letting out the vitiated blood. Hence taking into consideration the long lasting duration of disease and recurrence it was considered that shodhana therapy – Jalaukavacharana prior to shamana therapy & Rasayana therapy may provide better relief. So the present study has been conducted with the aims & objective to evaluate the role of Jalaukavacharana as treatment modality of Vicharchika (eczematous dermatitis). To fulfill this objective, Jalaukavacharana was carried out before administrating the Shamana therapy and compared with Shamana therapy alone (Group A) whereas in Group B Jalaukavacharana was done prior to administration of Rasayana and applying Lepa for the purpose of sthana shuddhi solving both the purposes Lekhana & Lepana and compared with Lepa & Rasayana therapy given without blood letting by leeches. The results were found better in the patients treated with Jalaukavacharana followed by Shamana / Rasayana therapy. The recurrence was checked where Rasayana therapy was administered after blood letting by leeches (42.86%). Jalaukavacharana served the purpose of shodhan by expelling out vitiated blood.

**Key words:** Jalaukavacharana; Vicharchika; Eczema; Rasayana; Shodhana.

### INTRODUCTION

There is a popular adage that “Skin patients are never cured nor die and hardly constitute an emergency.” Skin diseases make person much more handicap in society because nobody wants to touch them and they are forbidden by everyone due to beauty and personality loss, which leads them to be under stress. The patients of skin disease are unemployed in any job in which they are in the public

eye or involved in food preparation. The patients always experience physical, emotional & socio-economic embarrassment in the society.

In Ayurveda all skin diseases are covered under the broad heading of Kushtha. Vicharchika – one of the kshudra kushtha, chiefly characterized by itching, eruption, discolouration and oozing, runs a chronic course & generally considered difficult to cure and even if it is cured, relapses are common. In Ayurveda, all types of kushtha are considered as Tridoshaja and Vicharchika with dominance of Kapha dosha. In addition dry type of Vicharchika is also described indicating involvement of Vata. Further all types of kushtha have been included in Rakta pradoshaja diseases and said to be the Shodhan sadhya vyadhi. Almost all scholars of Ayurveda consider Vicharchika as eczema in modern parlance. Eczema is a form of der-

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matitis, or inflammation of the upper layers of the skin. The term eczema is broadly applied to a range of persistent or recurring skin rashes characterized by redness, skin edema, itching and dryness, with possible crusting, flaking, blistering, cracking, oozing or bleeding. Areas of temporary skin discoloration sometimes characterize healed lesions, though scarring is rare. Long-standing eczema is often dry and is characterized by thickened, scaling skin with hyper pigmentation and visible criss-cross markings (lichenification).

Eczema is a major problem in skin disease. It constitutes approximately 30% of all the dermatosis and 2-3 % of all medical problems. Surveys have shown that eczema prevalence is increasing. Despite of great advance in dermatology and the advent of powerful antibiotics and anti fungal as well as steroids, eczema continues to defy the best effort of dermatologists. Remission and exacerbations are common. We try to get rid off by saying that patient has in born weakness of skin and has to live with this weakness. In Ayurveda, it is said that diseases where doshic gati is tiryak, runs a chronic course. Vicharchika is also one of such conditions where doshic gati is tiryak.

**Panchakarma Chikitsa** – a popular speciality of Ayurveda is known not only for uprooting the disease but provides immunity against disease also. Thus it has both therapeutic as well as prophylactic values. It is specially recommended in classics for Bahu dosha Vyadhi like kushtha including Vicharchika. Ayurvedic classics consider Rakta dushti as one of the prime causes of skin diseases; on the other hand, patients may get relief after letting out the vitiated blood. Sushruta provides practical guidelines for blood letting and claims it as most effective therapy in half of all ailments. Among various methods for blood letting, Jalaukavacharana karma by leech is considered as the ideal method to expel out the vitiated blood safely, quickly and effectively. Hence taking into consideration the long lasting duration of disease and recurrence it was considered that shodhana therapy – Jalaukavacharana prior to shamana

therapy may provide better relief. Besides, the addition of Rasayana therapy along with the treatment may also provide further relief by increasing the strength and vitality. So the present study has been conducted with the aims & objective to evaluate the role of Jalaukavacharana as treatment modality of Vicharchika (eczematous dermatitis).

## MATERIAL & METHODS

Thirty four patients of Vicharchika diagnosed on the basis of clinical presentation of described in Ayurvedic and modern texts were selected from OPD & IPD of Kayachikitsa and Panchakarma, IPGT & RA Hospital, Gujrat Ayurved University, Jamnagar, irrespective of their age, sex, cast and creed and they were randomly divided in to two main groups. Other resembling diseases were excluded clinically. Patients of Diabetes Mellitus & status eczematous were also excluded. Thus, uncomplicated patients of Vicharchika without any secondary infection were included. These patients were subjected for further detailed clinical examination and investigations. A specific proforma was prepared incorporating all signs and symptoms of disease which were assigned score depending upon their severity to assess the effect of therapy objectively before and after the treatment.

### Grouping

**Group A:** This group was further divided in two sub groups.

**A1:** In this group a treatment package consisting of :

- a. Kushthaghna Kwatha [Khadira (Acacia catechu), Haritaki (Terminalia chebula), Amalaki (Emblia officinalis), Saptaparna (Alstonia scholaris), Aragvadha (Cassia fistula), Vidanga (Emblia ribes), Nimbapatra (Azadirecta indica), Shirisha (Albizia lebeck), Haridra (Curcuma longa) all in equal part] 40 gm. twice a day;

- b. Kushthaghna Rasayana [Bhringaraja (eclipta alba), Guduchi (Tinospora cordifolia) both in equal proportion] 10 gm. thrice a day;
- c. Kushthaghna lepa [Nirgundi patra (Vitex negundo), Shirisha twak (Albizia lebeck) both in equal proportion] 30 gm. once a day was given. Duration of treatment: 45 days.

**A2:** Jalaukavacharana followed by Shamana: Patients were applied leeches for the purpose of Raktamokshana (blood letting). After Raktamokshana, they were subjected to administration of Shamana therapy as per group A1. The leeches were applied 5 times on each patient at the interval of every 4 days depending upon severity of the disease.

Duration of treatment: 45 days

**Group B:** The patients under this group were further divided in two sub groups.

**B1:** Jalaukavacharana & Rasayana group (JR): Raktamokshana was carried by Jalauka, one sitting per week for 45 days (6 sittings) and simultaneously Bhringaraja Rasayana (dry panchanga of Eclipta alba; 500 mg tablet) 3 gm. twice a day with water was administered internally.

Duration of treatment: 45 days

**B2:** Lepa & Rasayana group (LR): The ointment prepared with Haritaki bhasma and sarshapa taila was applied externally on the lesion for 45 days in amount of quantity sufficient and simultaneously Bhringaraja Rasayana (500 mg tablet) 3 gm. twice a day with water was administered internally.

Duration of treatment: 45 days

### Criteria for Assessment

The improvement in the patients was assessed mainly on the basis of relief in signs and symptoms but changes in pathological reports were also taken into consideration to evaluate the effect of therapy.

### Total effect of therapy

The obtained results were measured according to the grades given below as: Complete remission 100% relief; Marked Improvement 75% & above but <100%, Moderate Improvement 50 % to <75 % relief, Mild Improvement 25 % to < 50 % relief, Unchanged < 25 % or No relief.

## OBSERVATION & RESULTS

### Group A

**Table 1.** Effect of therapy on Cardinal symptoms

Clinical Features	(A <sub>1</sub> ) Jalaukavacharana followed by Shamana (n=10)					(A <sub>2</sub> ) Shamana (n=10)				
	Mean ± S.E.		% Relief	t	P	Mean ± S.E.		% Relief	t	P
	B.T.	A.T.				B.T.	A.T.			
Kandu	3.4 ± 0.15	0.1±0.15	97	22	<0.001	3.4±0.31	0.5±0.31	85.29	9.35	<0.001
Pidika	2.78 ± 0.28	0.1±0.28	96	9.53	<0.001	2.6±0.07	0.8±0.17	68.75	26.14	<0.001
Srava	2 ± 0.43	0±0.43	100	4.65	<0.01	2±0.18	0.17±0.18	61.53	7.11	<0.001
Vedana	1.71± 0.29	0.14±0.29	91.67	5.41	<0.01	2±0.18	0.71±0.18	64.29	7.11	<0.001
Daha	1.77± 0.22	0±0.22	100	8.04	<0.001	1.83±0.2	0.33±0.2	81.81	7.5	<0.001
Rukshata	2.87 ±0.29	0.73±0.29	86.95	7.31	<0.001	2.5±0.3	0.33±0.3	86.67	7.2	<0.001
Shotha	1.6 ± 0.24	0±0.24	100	6.67	<0.01	1.67±0.16	0.5±0.16	70	7.25	<0.001
Vrana	1.67 ± 0.3	0±0.3	100	5.21	<0.01	1.85±0.19	0.28±0.19	84.62	8.26	<0.01
Vaivarnya	3.6 ± 0.22	0.2±0.22	94.44	15.45	<0.001	1.85±0.19	0.28±0.19	81.81	8.26	<0.001

**Table 2.** Effect of therapy on Hematological Parameters

Investigation	(A <sub>1</sub> ) Jalaukavacharana followed by Shamana (n=10)					(A <sub>2</sub> ) Shamana (n=10)				
	Mean ±S.E.		%	t	P	Mean± S.E.		%	t	p
	B.T.	A.T.				B.T.	A.T.			
Hb gm%	12.1± 0.81	15.9±0.81	3.15	4.96	<0.05	13.4± 0.14	13.5± 0.14	3.49	2.30	<0.05
Neutrophil %	63.3± 3.15	54.3±3.15	14.64	2.95	<0.05	62± 1.63	61.3 ±1.63	1.12	3.49	<0.01
Eiosinophil %	4.7± 0.7	3.1±0.7	37.4	2.28	<0.05	6± 0.75	3.9 ± 0.75	35	3.33	<0.01
Lymphocytes%	30.1± 3.25	28±3.25	25.24	2.33	<0.05	32.2± 1.1	27.9 ± 1.1	13.08	4.54	<0.01
ESR (mm) (wintrobe)	16.6± 1.79	11±1.79	30.37	3.12	<0.05	11.2± 1.65	8.8± 1.65	33.92	2.30	<0.05

**Table 3.** Total effect of therapy

Improvement	(A <sub>1</sub> ) Jalaukavacharana followed by Shamana (n=10)		(A <sub>2</sub> ) Shamana (n=10)	
	No. of patients	%	No. of patients	%
Complete remission	9	90	10	10
Markedly improved	1	10	90	90
Partially improved	0	0	0	0
Unchanged	0	0	0	0

**Group B****Table 4.** Effect of therapy on Cardinal symptoms

Clinical Features	(B <sub>1</sub> ) Jalaukavacharana & Rasayana (JR) (n=7)					(B <sub>2</sub> ) Lepa & Rasayana (LR) (n=7)				
	Mean Score		%	t	p	Mean Score		%	t	p
	B.T.	A.T.				B.T.	A.T.			
Kandu	3.29±0.29	0.57±0.29	82.67	9.50	<0.001	3.14±0.43	0.71±0.43	77.39	5.67	<0.001
Pidika	3.20±0.35	0.8±0.35	2	75	<0.001	1.33±0.34	0.50±0.34	62.41	4.39	<0.001
Rukshata	2±0.14	1.14±0.14	43	6	<0.001	2.29±0.3	0.71±0.3	67	5.28	<0.001
Vaivarnya	2.57±1.11	1.29±1.11	1.21	49.81	<0.01	2.29±3.24	1.29±3.24	44.67	3.24	<0.01
Raji	2±0.29	1.5±0.29	25	1.73	<0.10	2.67	0.61	74.91	-	-
Shotha	1.2±0.4	1±0.4	16.69	1.5	<0.10	1	0	100	-	-
Srava	2.5±0.5	0±0.5	100	5	<0.001	1.50	0.50	66.67	-	-
Daha	1.5±	0±	100	-	-	1	0	100	-	-

**Table 5.** Effect of therapy on Hematological Parameters

Investigation	(B <sub>1</sub> ) Jalaukavacharana & Rasayana (JR) (n=7)					(B <sub>2</sub> ) Lepa & Rasayana (LR) (n=7)				
	Mean Score		%	t	P	Mean Score		%	t	p
	B.T.	A.T.	Relief			B.T.	A.T.	Relief		
Hb (gm%)	13.51± 0.23	13.13±0.23	2.89↓	4.47	<0.05	13.11± 0.49	12.32± 0.49	6.02↓	2.26	<0.05
Total WBC count (/cumm)	8900± 340.67	9371±340.67	5.29↑	2.73	<0.05	7400± 634.66	6143± 634.66	16.98↓	1.96	<0.10
Neutrophil (%)	61.57± 1.74	62.57±1.74	1.62↑	3.20	<0.01	55.29± 2.57	53.43± 2.57	3.36↓	2.50	<0.05
Eosinophil (%)	3.43± 0.67	3.86± 0.67	1.25↑	2.77	<0.05	3.29± 0.61	3.14± 0.61	4.56↓	2.12	<0.05
Lymphocytes (%)	33.71± 1.71	32.43±1.71	3.80↓	2.75	<0.05	40.43± 2.4	42.29± 2.4	4.60↑	2.55	<0.05
ESR (mm) (wintrobe)	25.47± 2.67	24.57±2.67	3.39↓	3.11	<0.01	14± 1.78	11.71± 1.78	16.36↓	2.56	<0.05
Total RBC count (million/ cumm)	4.50± 0.23	4.39± 0.23	2.44↓	2.64	<0.05	4.98± 0.2	4.75± 0.2	4.62↓	1.36	<0.10
Platelet count (/cumm)	285± 4.53	287± 4.53	0.76↑	3.82	<0.01	220.5± 9.46	221± 9.46	0.19↑	2.38	<0.05
HCT (%)	39.72± 0.86	38.60±0.86	2.82↓	3.47	<0.01	39.94± 1.62	37.91± 1.62	5.08↓	1.42	<0.10
RBS (mg/dl)	92.46± 0.97	86.57±0.97	6.37↓	9.98	<0.001	89.19± 2.89	92.79± 2.89	4.04↑	2.85	<0.05

**Table 6.** Total effect of therapy

Improvement	(B <sub>1</sub> ) Jalaukavacharana & Rasayana (JR) (n=7)		(B <sub>2</sub> ) Lepa & Rasayana (LR) (n=7)	
	No. of patients	%	No. of patients	%
Complete remission	0	0	1	14.29
Markedly improved	3	42.86	1	14.29
Moderately improved	3	42.86	3	42.86
Mildly improved	1	14.29	1	14.29
Unchanged	0	0	1	14.29

**Table 7.** Follow up study

Follow up	(B <sub>1</sub> ) Jalaukavacharana & Rasayana (JR) (n=7)		(B <sub>2</sub> ) Lepa & Rasayana (LR) (n=7)	
	No. of patients	%	No. of patients	%
No-recurrence	3	42.86	1	14.29
Recurrence	4	57.16	6	85.71

## DISCUSSION

Pranita et al (1995) observed that the Jalaukavacharana followed by Shamana Chikitsa provided complete remission to 90 % patients and moderate improvement to 10 % of the patients whereas Shamana chikitsa alone provided complete remission to 10 % and moderate improvement to 90 % of the patients. Atul Satasiya et al (2004) observed that the patients treated with Jalaukavacharana & Rasayana had marked and moderate improvement in 42.86 % each and mild improvement in 14.29 % patients whereas the patients treated with Lepa and Rasayana showed complete remission, marked improvement, mild improvement in 14.29% patients each respectively, moderate improvement in 42.86 % and 14.29 % of the patients remained unchanged. Further, Jalaukavacharana & Rasayana therapy checked the recurrence of the disease in 42.86% of patients of Vicharchika. It confirms that Jalaukavacharana has prime role in treatment modality of Vicharchika.

Raktamokshana, not only purifies the channels, but also let the other parts becomes free from diseases and action is so fast than other remedies. Sushruta recommended Jalaukavacharana better for the superficial blood (Avagadha grathita Rakta). Vitiated Rakta may be washed-out by application of Leeches after slight scraping on the lesion of Kushtha. Thus, it is well proved that Jalauka gives better effect in Raktaja Roga or Kushtha on the basis of classical references. Clinically also the results are in favor of Jalaukavacharana. Jalauka expels out vitiated blood, very sharply from selected part of the body. So, Leech therapy (Jalaukavacharana) takes a pride of place in the list of Panchakarma like Shodhana Chikitsa from the sunrise of medical history. Saliva of Jalauka; containing properties of anti-coagulant, analgesic, anesthesia etc are much helpful in removing congested blood from local lesion quickly and from general circulation also. Dead cells with superficial layer are also removed from the skin due to rubbing and blood letting process. Moreover, regeneration of new vessels with pure blood circulation

at the site of lesion, may clean up the real skin layer and so derangement of lesion like, Pidika, Kharata, Rukshata may reduce. Leeches applied on skin suck the blood at superficial level, might be from capillaries or extra-cellular so it may be more impure than other body channels, Jalauka can easily suck impure blood due to superficial distribution of veins.

By experiment, it was measured that PO<sub>2</sub> of leech expelled blood was comparatively less than the arterial blood of human. Leech application has counter irritant effect on the lesion, which creates new cellular division which takes place removing dead cell layer, and result in reduction of local swelling and lichenification. Leech sucks blood from restricted area and when leeches applied in only pathogenic area so it can be said that leech expelled blood from where the pathological state is more so ultimately blood of that area comparatively more vitiated than other area. Hence, it can be said that leeches give best effect in Vicharchika by expelling the morbid, vitiated doshas and dhatus. But the effect of therapy is not only by expelling the vitiated blood but leech also emits some enzymes in the wound. So Jalaukavacharana may also have provided normalization and improvement of capillary as well as collateral blood circulation, anti-inflammatory effect, analgesic and anesthetic effect through saliva. It may provide immuno-stimulation and immuno-modulating effect and early wound healing effect. This action may be due to effect of saliva of Leech which contains enzymes like Hirudin which works as anticoagulant & diuretics, antibiotic action, Calin which prevents blood coagulation, Eglin, Hyaluronidase acts as antithrombin, antitrypsin and antichymotrypsin etc.

In group A, patients treated with only Shamana therapy showed significant relief in all sign and symptoms as Kushthaghna kwath was formulated by selecting 9 drugs from kushthaghna mahakashaya and Kanduhara mahakashaya which possess the qualities of twak doshahara, kanduhara and varnyakara. The ingredients of Kushthaghna Rasayana - Guduchi & Bhringaraja have properties of Rasayana, Kushthahara, Kanduhara and tvachya. More-

over, Bhringaraja and Guduchi have anti-inflammatory effect. Rasayana is unique concept of Ayurveda, promotes defense mechanism of the body and helps in prevention of disease as well as their earlier cure. In Kushthaghna Lepa, Shirisha is having anti allergic property. Eczema is specific type of an antigen specific immune response and results due to an antigen antibody reaction. It is resultant of delayed type hypersensitivity mediated by memory T lymphocytes in the skin and the clinical lesions may be acute (wet & edematous) or chronic (dry, thickened & scaly), depending on the persistence of the insult. Therefore in this condition, anti allergic drugs seems to play an important role in its management.

In group B, Lepa & Rasayana has shown significant improvement in almost all signs and symptoms. Vicharchika is manifested in twak (skin) and Ayurveda equally emphasizes on treating sthana. Moreover, Acharya Charaka has told that first Lekhana should be applied on Mandala, Kathina and deep seated kushtha before applying Lepa. Ash of Haritaki and Sarshapa taila in ointment form solve both purposes i.e., Lekhana and Lepana. Further, Bhringaraja due to its well proven Rasayana, kushthaghna and Rakta shuddhikara properties might have helped in providing significant relief.

In the context of the treatment of Apasmara, Charaka has mentioned that in all chronic diseases, Rasayana drugs should be prescribed. But to get maximum benefit of Rasayana therapy it is essential to perform shodhana prior to administration of Rasayana which is proved with the present clinical data. The relief was better where shamana therapy or Rasayana therapy was given after Jalaukavacharana. Further, where Rasayana therapy was given after Jalaukavacharana, it has checked the recurrence in 42.86 % of the patients.

## CONCLUSION

All therapies selected for the present study have provided significant relief in all signs and symptoms. However, comparison showed that Jalauka-

vacharana has an edge over other therapies. Further, the recurrence was also checked better (42.86%) in the patients where Rasayana therapy was preceded by Shodhana by leech application.

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