



Clinical Research

Role of *Raktamokshana* by *Jalaukavacharana* and *Siravedhana* in the management of *Vicharchika* (Eczema)

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Abstract

Eczema is most common skin disease which has social impact. The clinical picture of Eczema resembles with *Vicharchika*—a skin problem mentioned in Ayurvedic literature with *Kapha* and *Pitta* morbidly/pathology. In classical text of Ayurveda, Acharyas emphasize the *Shodhana* therapy as the line of treatment at various places. Among these various *Shodhana* therapy, *Raktamokshan* is indicated specially because *Rakta* is mainly involved as *Dushya* in *Samprapti Ghataka*. In the present comparative study, *Raktamokshana* with two different methods were selected to find out which method is more appropriate for *Raktamokshana* in *Vicharchika*. In A group, *Jalaukavacharana Karma* with *Jalauka* (*Hirudinea medicinalis*) and in B group, *Siravedhana Karma* with Syringe as method of *Raktamokshana* was selected. Better result was found in A group. So, it is better to manage *Vicharchika* using *Jalaukavacharana* as method of *Raktamokshana* in place of *Siravedhana*.

Key words: Eczema, *Jalaukavacharana*, *Raktamokshana*, *Siravedhana*, *Vicharchika*

Introduction

Any disease that involves skin hampers many functions and gives the person a hideous look. As skin diseases are perceptible to others, they are more painful for the patient and troublesome for the physician. Several skin diseases affect the person's psychological status and disturb the social life, thus patient have some kind of inferiority complex; eczema is one among them. In Ayurveda, skin diseases are explained under the common terminology "*Kushtha*" which implies exposed diseases. Eczema is a skin disorder characterized by itching erythema, scaling, edema, vesiculation, and oozing. The involvement of *Vata* results in dry or blackish lesion of eczema. However, itching in those affected areas is due to *Kapha*.^[1] Modern medical science treats eczema with corticosteroids. But the therapy gives side effects like liver and kidney failure, bone marrow depletion, etc. The texts of Ayurveda consider *Rakta Dusti* as one of the prime causes of skin diseases;^[2] on the other hand, patients may get relief after letting out the vitiated *Rakta*. Acharya Sushruta propounds practical guidelines for bloodletting and claims it as most effective therapy in half of the body ailments.^[3] Among various methods

for bloodletting^[4] such as *Jalaukavacharana Karma*, *Prachhanna Karma*,^[5] and *Siravedhana Karma*.^[4] *Jalaukaavacharna Karma*^[6] (Leech therapy) is considered as the ideal method to expel out the vitiated blood safely, quickly, and effectively. *Siravedhana Karma* (Vein puncture) is routinely practiced in the past and so much importance is given to it in classics. So, *Jalaukavacharana* and *Siravedhana Karma* were considered to evaluate their comparative efficacy in cases of *Vicharchika* (Eczema).

Aims and Objectives

To assess comparative clinical effect of *Jalaukavacharana* and *Siravedhana Karma* in the management of "*Vicharchika*."

Materials and Methods

Patients attending the O.P.D. and I.P.D. of Panchakarma Department of I.P.G.T. and R.A., Gujarat Ayurved University Jamnagar, having classical signs and symptoms of *Vicharchika* (Eczema) were selected irrespective of religion, sex, occupation, etc. The study was approved by Institutional Ethics Committee.. A special Proforma including all the etiological factors of *Kushtha* with *Dushti Lakshana* of *Dosha*, *Dushya*, *Srotas*, etc., was prepared for proper assessment.

Inclusion criteria

Patients having signs and symptoms of *Vicharchika* (Eczema) described in classical Ayurvedic texts as well as in Modern Medical literature; patients above 16 years and below 70 years of age; and chronicity not more than 5 years were included.

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Exclusion criteria

The patients less than 16 years and above 70 years of age were excluded. Patients suffering from diseases like anemia, hemorrhagic disorders, diabetes mellitus, cancer, tuberculosis, hemiplegia, convulsions, and other severe complicated systemic disorders were excluded. Wounded, timid, thin patients, pregnancy, and chronicity more than 5 years were also excluded.

Criteria of assessment

Total effect of therapy was assessed considering following criteria:

Cured: 100% relief in the signs and symptoms with plain skin surface. Significant changes in color of the affected skin lesion toward normal was considered as cured. Marked improvement 76 to 99% relief in the signs and symptoms were recorded as complete remission with marked improvement in pigmentation and thickening of the skin. Moderate improvement: 51 to 75% relief in signs and symptoms were considered as moderately improved with moderate improvement in pigmentation and thickening of the skin. Mild improvement: Patients showing improvement in between 26 and 50% in signs and symptoms with slight improvement of pigmentation and thickening of the skin was taken as mild improvement. Unchanged: Below 25% relief in signs and symptoms was considered as unchanged.

All the patients were examined weekly during the treatment. Assessment was done on the basis of relief in the signs and symptoms of the disease *Vicharchika*. For this purpose, cardinal signs and symptoms were given scores according to their severity before and after the treatment.

Pathological investigation

Routine hematological investigations like hemoglobin, total count, differential count, erythrocyte sedimentation rate (ESR), bleeding time (BT), clotting time (CT), and urine examination were done to rule out any other disease pathology as well as to evaluate safety and efficacy of the trial therapy.

Grouping and sampling

Total 29 patients of *Vicharchika* (eczema) were registered for the present study. They were randomly divided into the following two groups:

Jalaukavacharana (A) group

Jalaukavacharana Karma: In this group, four sittings of *Jalaukavacharana Karma* were carried out in consecutive four weeks. Number of *Jalauka* applied was decided on the basis of the size of lesion (example, 1 cm = 1 leech). Out of total 29 patients 14 were registered in the group, only 1 patient discontinued course of treatment.

Siravedhana (B) group

Siravedhana Karma

In this group, two sittings of *Siravedhana Karma* were carried out on every 15 days. *Siravedhana Karma* was performed by venesection at the median cubital vein. In the present study, amount of blood removed from one sitting was decided by measuring of one *Anjali*. Patient was told to take water in his *Anjali*, that water was taken in measuring glass and amount was measured. The blood to the equal quantity of the water measured by patient's *Anjali* was removed by venesection (Average, 63.75 ml). 15 patients were registered in this group, out of them 13 completed course of treatment.

Procedure

1) *Jalaukavacharana*: *Jalaukavacharan karma* was done after local *abhyanga* and *swedan* on the effected part of the body. There were four sitting of *Jalaukavacharana* in one month with gap of seven days. *Jalauka*, three water bowl, cotton, bandage and paper tap were used for this process.

2) *Siravedhana Karma*: *Siravedhana Karma* was done after local *Abhyanga* and *Swedana* on the whole body. There were two sitting of *Siravedhana Karma* in one month with gap of 15 days. Needle no 16, IV set, measuring glass (200ml), bandage and gloves were used in the process.

Pathya-Apathya

Pathya-Apathya was advised to the patient as per classics.

Observations

Maximum numbers of patients, (24.14%), were of the age group 21 to 30 years, 41.38 % were housewives and 86.21% were habituated to vegetarian diet. Maximum numbers of patients, (62.07%), were having regular bowel habit, and 100% were having *Madhura* and *Amla Rasa* dominancy in their diet. The 82.76% were having dietary pattern of *Visamashana* and 68.96% were addicted to Tea. Maximum, (51.72%), patients were having *Pitta-Kapha Prakriti*. Maximum numbers of patients, (100%), were taking *Viruddha Ahara* (milk + *Khichadi*, *New Annasevana*, and excess intake of salt). *Chinta* (Stress) was reported in maximum, (40.70%), of patients. The 17.24% of patients were having contact irritant with rubber.

In the present study, *Kandu* was observed in maximum (96.55%) number of patients. Signs and symptoms like *Vaivarnya* (discoloration), *Raji* (lichenification), *Raktima* (redness), and *Rukshata* (dryness) were observed in 93.10%, 72.41%, 68.96%, and 58.62% of patients, respectively. *Pidika* (boil) and *Daha* (burning) were observed in 65.52% of the patients. Symptoms like *Srava* (discharge) (37.93%), *Shotha* (inflammation) (24.14%), and *Ruja* (pain) (17.24%) were observed in some of the patients. The 93.10% of patients were having gradual onset, while 72.41% of the patients were having chronic course of the disease. The 68.96% of the patients were having *Sushka* (dry) type of Eczema.

In winter season, aggravation was observed in 24.14% of the patients. The 51.72% of the patients were having lesion size 5 to 10 cm. On maximum, 46.67%, patients, average 11 to 15 number of *Jalauka* were applied during full course of treatment. During four sittings in 15 patients' treatment, maximum 47.50% *Jalauka* sucked the blood for average 30 to 35 minutes. Average sucking time for *Jalauka* was found to be 20 minutes.

Of two sittings in 14 patients' treatment, in maximum (71.42%), patients, 3-minute bleeding time was noted during *Siravedhana*. Average bleeding time for *Siravedhana* was 3.5 minutes. During two sittings in 14 patients' treatment, in maximum, (64.28%), patients, 51 to 60 ml of bloodletting was done during each sitting of *Siravedhana*. Average quantity of bloodletting for *Siravedhana* was 63.75 ml.

Results

Effect of therapy on laboratory parameter is depicted at Table 1. All the changes were statistically insignificant. Only

Jalaukavacharana group showed highly significant increase in CT [Table 1].

Leech saliva contains anticoagulant substance like hirudin, calin, and destabilase, which increase bleeding time and clotting time during course of therap.^[7]

Effect of therapy on chief complaint after *Jalaukavacharana Karma*: Percentage-wise improvement was observed in signs and symptoms like *Kandu* (23.26%), *Pidika* (66.67%), *Raktima* (53.23%), and *Daha* (80%) which was statistically highly significant ($P<0.001$). Statistically significant ($P<0.01$) improvement was observed in signs and symptoms like *Srava* (77.78%), *Vaivarnya* (27.27%), and *Rukshata* (21.74%). Signs and symptoms like *Raji* ($P<0.05$), *Shotha* ($P<0.05$), and *Ruja* ($P<0.10$) were improved percentage wise (28.57%, 80%, and 33.33%, respectively), but it was statistically insignificant [Table 2].

Effect of therapy on chief complaint after *Siravedhana Karma*: Signs and symptoms like *Daha* and *Pidika* were improved by 67% and 60%, respectively, which were statistically highly significant ($P<0.001$) and significant ($P<0.01$), respectively. In the signs and symptoms like *Kandu* ($P<0.05$), *Srava* ($P<0.05$), *Vaivarnya* ($P<0.10$), *Raktima* ($P<0.05$), *Shotha* ($P<0.10$), and *Ruja* ($P<0.10$), percentage-wise improvement was observed as 14.29%, 85.71%, 17.39%, 37.50%, 22%, and 25%, respectively, which was statistically insignificant. No other change was observed in symptoms like *Rukshata* and *Raji* [Table 3].

Total effect of therapy

No patient was completely cured, whereas 21.43% and 50% of patients got marked improvement and mild improvement, respectively. Remaining 28.57% patients were having little change in their symptomatology.

While 8.33% patients got marked improvement and 25%

improvement in the disease, whereas 66.67% patients reported with mild to no change in their symptomatology. None of the patient had complete cure in Group B [Table 4].

Discussion

Majority of the patients belonged to age group of 21 to 30 years (24.14%). This age of individuals are prone to psychological stress and other exposure, (occupational, environmental, and unwholesome food were more) which are etiological factors for eczema. Maximum number of patients, (41.38%), were housewives, followed by 37.93% patients who were businessmen. This reflects that housewives are more exposed to household appliances, related to dust, and detergents, etc., which are common causative factors for *Vicharchika*. Servicemen like teachers and engineers who are having job with continuous standing may be prone to stasis to eczema.

The 27.59% of patients were having *Chinta*. Emotional conflicts are among main etiological factor for skin manifestation. Eczema may become more aggressive in this state.^[8] *Viruddha Ahara* (incompatible diet), (milk + Khichadi, fast food, curd, non-vegetarian diet) and sleep during day time which leads to vitiation of *Kapha* and *Rakta*. These vitiated *Doshas* reach to *Dushya* like *Twaka*, etc., and results into *Sthana Sanshraya Avastha* and then produces symptoms of *Vicharchika*.

Most of the time, at the biting and during entire *Jalaukavacharana* process, patients did not experience any discomfort, but in rare case, patients felt like pricking pain, itch on the affected lesion, and numbness of lower limb due to long-lasting sitting in one posture. Two patients of 14 reported itching all over body after the completion of leech application. Maximum patients reported feeling of little hardness of skin at the site of *Jalauka* bite, which subsided after 20 to 25 days without any mark left at that site.

Siravedhana Karma was performed by venesection. In the present study, amount of blood removed from one sitting was decided by measuring of one *Anjali Pramana*. Average quantity of bloodletting for *Siravedhana* was 63.75 ml.

Effect of therapy after *Jalaukavacharana Karma* on chief complaints

Kandu (itching) was relieved in 23.26% in a group and 14.29%

Table 1: Effect of therapy on laboratory parameters

Parameters	Group A	Group B
TLC	2.42%↓ ($P>0.05$)	4.59%↑ ($P>0.05$)
Hb%	1.81%↓ ($P>0.05$)	0.40%↑ ($P>0.05$)
RBC	1.73%↓ ($P>0.05$)	1.74%↓ ($P>0.05$)
ESR	7.37%↓ ($P>0.05$)	8.50%↓ ($P>0.05$)
B.T.	2.54%↑ ($P>0.05$)	0.72%↓ ($P>0.05$)
C.T.	6.27%↑ ($P<0.001$)	1.44%↑ ($P>0.05$)

↑ - Increase, ↓ - Decrease

Table 2: Effect of therapy after *Jalaukavacharana Karma* on chief symptoms (Group A)

Symptoms	B.T.	A.T.	Difference	%	SD	SE	t	N	P
<i>Kandu</i>	3.07	2.36	0.71	23.26	0.61	0.16	4.37	14	<0.001
<i>Pidika</i>	1.8	0.6	1.2	66.67	0.79	0.25	4.81	10	<0.001
<i>Srava</i>	1.29	0.29	1	77.78	0.57	0.22	4.58	7	<0.01
<i>Vaivarnya</i>	1.57	1.14	0.43	27.27	0.51	0.13	3.12	14	<0.01
<i>Raktima</i>	1.36	0.63	0.72	53.23	0.47	0.14	5.16	11	<0.001
<i>Daha</i>	1.67	0.33	1.33	80	0.5	0.16	8	9	<0.001
<i>Rukshata</i>	1.92	1.5	0.42	21.74	0.51	0.15	2.8	12	<0.01
<i>Raji</i>	1.62	1.15	0.46	28.57	0.66	0.18	2.52	13	<0.05
<i>Sotha</i>	1.67	0.33	1.33	80	0.58	0.33	4	3	<0.05
<i>Ruja</i>	1.5	1	0.5	33.33	0.71	0.5	1	2	>0.05

Table 3: Effect of therapy after Siravedhana Karma on chief symptoms (Group B)

Symptoms	B.T	A.T	Difference	%	SD	SE	t	N	P
Kandu	2.92	2.5	0.42	14.29	0.67	0.19	2.16	12	P<0.05
Pidika	1.43	0.57	0.86	60.00	0.69	0.26	3.29	7	P<0.01
Srava	1.4	0.2	1.2	85.71	1.09%	0.49	2.44	5	P<0.05
Vaivarnya	1.92	1.58	0.33	17.39	0.65	0.19	1.77	12	P>0.05
Raktima	1.78	1.11	0.67	37.50	0.71	0.23	2.83	9	P<0.05
Daha	1.5	0.5	1	67	0.53	0.19	5.29	8	P<0.001
Rukshata	1.67	1.67	0	0.00	1.06	0.35	0	9	P>0.05
Raji	1.67	1.67	0	0.00	1.06	0.35	0	9	P>0.05
Sotha	2.25	1.75	0.5	22	1	0.5	1	4	P>0.05
Ruja	1.33	1	0.33	25.00	0.57	0.33	1	3	P>0.05

Table 4: Overall effect of therapy in both groups

	Jalaukavacharana	%	Siravedhana	%
Cured	0	0	0	0
Marked Improvement	0	0	0	0
Moderate Improvement	3	21.42	1	8.33
Mild Improvement	7	50	3	25
Unchanged	4	28.57	8	66.66

in B group. *Kandu* is caused by vitiated *Kapha*,^[9] *Pitta*,^[10] and *Vata*.^[11] So, here, *Tridosha* vitiation is responsible for it. Relief in *Kandu* may be due to expelling out of vitiated morbid *Dosha* (toxins) from local region. Leech salivary secretions also provide early healing effect by secondary hemorrhage which might have reduced itch impulse.^[12]

On *Pidika* (Carbuncle), 66.67% relief was observed in A group, while 60% in B group. Leeches are antiphlogistic, used for the local obstruction of the blood. Due to this reason, *Pidika* might have subsided. Congested blood is also removed from the local area by leech; so, better relief in *Pidika* might have been provided by *Jalaukavacharana*. *Srava* (discharge) was relieved in 77.78% in A group, while 85.71% in B group. *Ushna* and *Tikshna Guna* of vitiated *Pitta* are responsible for *Srava*. *Siravedhana* corrects the vitiation of *Pitta* better in comparison with *Jalaukavacharana*, hence reduces the *Srava* on the local lesions level.

Vaivarnya (discoloration) was relieved in 27.274% in A group, whereas 17.39% in B group. *Jalauka* removes impure blood and allows oxygenated blood to enter the wound area, which might have provided better color to skin. *Raktima* (redness) was relieved up to 53.23% in A group and 37.50% in B group. Leech saliva contains anti-inflammatory substances, eglins and bdellins, which may relieve redness of lesion.

On the *Daha* (burning), 80% relief was observed in A group and 67% in B group. Leech saliva contains histamine-like substances and acetylcholine which is vasodilator and remove local inflammation mediators, thus relieve burning sensation of lesion. The 28.57% relief was observed in *Raji* (lichenification) in A group, while 0% relief in B group due to better removal of impure and congested blood by effect of hirudin, calin, destabilase, and Factor Xa inhibitor.

Shotha (Edema) was relieved up to 80% in A group and only 22% in B group, due to reduction of local pressure by substance like eglins and bdellins present in leech saliva. The 33.33% relief was observed in *Ruja* (pain) in A group, while 25% relief in B group. Leech saliva contains anesthetic substance which helps in pain relieve. Hb decreased by 1.81% in A group, while 0.40 increases were observed in B group. Leech therapy is always associated with a certain degree of blood loss, which is clinically irrelevant in most cases. CT was increase in both groups, 6.27% and 1.44%, respectively. Only *Jalaukavacharana* group shows highly significant increase in CT. Leech saliva contains anticoagulant substance like hirudin, calin, and destabilase, which increase bleeding time and clotting time during course of therapy.

Conclusion

Jalaukavacharana Karma provides statistically high significance ($P<0.001$) in the symptoms of *Vicharchika* like *Kandu*, *Pidika*, *Raktima*, and *Daha*. Leech saliva is reported to have many therapeutic contents like hirudin, bdellins, Hyaluronidase, etc.; among them, eglins and bdellins have anti-inflammatory and antifungal property which gives relief in symptoms of Eczema. *Siravedhana Karma* provides better relief in the symptoms of *Vicharchika* like *Pidika* and *Daha* which were statistically highly significant ($P<0.001$) and significant ($P<0.01$), respectively. However, all other signs and symptoms were improved, but were statistically insignificant. *Pidika* and *Daha* are *Pittaja Vyadhi* with involvement of *Rakta Dosha*. Due to removal of *Rakta* which is *Asraya Sthana* of *Pitta*, these symptoms were relieved by *Siravedhana*. *Siravedhana* done with internal *Snehapana* and *Abhyanga* for three days may give better result. It is a *Sarvanga Shodhana* procedure and *Poorvakarma* is required before *Siravedhana Karma*. In present study, "*Jalaukavacharana Karma*" proved to be more effective in the management of *Vicharchika*, whereas results provided by *Siravedhana* was not much encouraging. *Jalaukavacharana* is safest and scientific method among *Raktamokshana*.

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हिन्दी सारांश

विचर्चिका में जलौकावचरण एवं सिरावेधन द्वारा रक्तमोक्षण कर्म का तुलनात्मक अध्ययन

हिरेन एन. रावल, ए. बी. ठाकर

आयुर्वेद शास्त्र में वर्णित विचर्चिका व्याधि के साथ एक्जिमा की समानता पायी जाती है, जो उन के लक्षणों पर आधारित है। प्रस्तुत शोधकार्य में इस व्याधि के संदर्भ में एक वर्ग में जलौकावचरण एवं अन्य वर्ग में सिरावेधन करवा कर रक्तमोक्षणकर्म का तुलनात्मक अध्ययन किया गया है। जलौकावचरण वाले वर्ग में विचर्चिका के लक्षणों यथा-कण्डु, पिड़का, रक्तिमा एवं दाह में सांख्यिकीय दृष्टि से सार्थक लाभ देखने को मिला। जबकि सिरावेधन वर्ग में पिड़का और दाह में अधिक लाभ पाया गया। इस अध्ययन से निष्कर्ष निकलता है कि परिस्थिति के अनुसार विचर्चिका व्याधि में जलौकावचरण द्वारा रक्तमोक्षण कर्म अधिक लाभदायी रहता है।