



ISSN 2456-3110

Vol 3 · Issue 3

May-June 2018

Journal of
**Ayurveda and Integrated
Medical Sciences**

www.jaims.in

JAIMS



Charaka
Publications

Indexed

A Clinical Study of *Jalaukavacharana* in Varicose Eczema (*Vicharchika*)

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ABSTRACT

In adolescents varicose eczema is a common skin condition encountered by general practitioners and dermatologists in day today clinical practices. Varicose eczema is the condition usually present secondary to varicosity of superficial veins. For this condition there is no successful surgery as well as medical remedy available for the complete cure. However in Ayurveda, *Jalaukavacharana* (Leech therapy) as a parasurgical method is useful in this condition. Leech is used for the bloodletting at that particular site. With this background a study has been conducted to compare the effect of *Jalaukavacharana* without and with internal medications, Two groups were done as Group-A and Group-B, each with 15 patients. *Jalaukavacharana* was done at eczema in Group-A for four time with an interval of seven days that is, on day 1, day 7, day 14 and day 21 with internal medication. In Group B only internal medication is given. The pre and post therapeutic subjective and objective criteria were recorded. All data were analyzed clinically as well as statistically. In both Group-A and Group-B. *Jalaukavacharana* has shown good result in reducing the symptoms of varicose eczema (*Vicharchika*).

Key words: *Jalaukavacharana*, Leech Therapy, *Vicharchika*, Varicose Eczema.

INTRODUCTION

Stasis dermatitis also known as Congestion eczema, Gravitational dermatitis, Gravitational eczema, Stasis eczema and Varicose eczema.^[1] It is reported that it affect 20% of those aged above 70 years, around 10% of people with varicose veins will develop skin changes.^[2] Due to poor blood flow in the lower limbs, stasis dermatitis / varicose eczema often develops. It may occur in one or both legs. Rarely stasis dermatitis

can develop in other areas also.^[3] Venous valves push blood up the legs, these valves can weaken and stop working properly. Some blood can leak out and pool in the legs. This is known as “venous (vee-nis) insufficiency.”^[4] In the parlance of conventional medicine, *Vicharchika* (varicose eczema) incorporates signs and symptoms like *Kandu* (itching), *Ruja* (pain), *Daha* (burning sensation), *Rukshatha* (dryness), *Shyava* (blackish discolouration), *Bahusravi* (discharge) are present which resemble the description like in varicose eczema.^[5] For various therapeutic purposes, the European medicinal leech species, *Hirudo medicinalis* also known as the healing leech was preferred by the majority of physicians compared to the American species, *Hirudodecora*, which can suck less blood due to a smaller and superficial incision on its prey skin.^[6-8] In addition, many other species were also considered as medical tools, such as *Hirudinaria manillensis*,^[9]

Leech therapy (*Jalaukavacharana*) mainly used for the treatment of *Rakataja* and *Tvakroga* (blood related

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Submission Date : 01/05/2018 Accepted Date: 24/05/2018

Access this article online

Quick Response Code



Website: www.jaims.in

DOI: 10.21760/jaims.v3i3.12872

disorder and skin disorder) in children, old person and the patient contraindicated for surgery.^[10] The Ayurvedic texts consider primary cause of skin disease is *Raktadushti* (vitiation of blood) and patient get relief after letting out the vitiated blood. *Rakthamokshana* is one among *Shodhana* mentioned in *Kusta*,^[11] Acharya *Susrutha* said that one who undergoes *Rakthamokshana* frequently as a routine will never suffer from *Granthi* (cyst), *Shopha* (swellings), *Twakdosha* (skin disorders) and *Dushta Shonitajannya Roga* (diseases caused by vitiated blood).^[12]

OBJECTIVES OF THE STUDY

To study the efficacy of *Jalaukavacharana* in the management of varicose eczema (*Vicharchika*).

MATERIALS AND METHODS

Source of data

Patients diagnosed as varicose eczema (*Vicharchika*) were selected from O.P.D & I.P.D of SDM Ayurvedic Hospital, Kuthpady, Udupi.

Method of collection of data

A minimum of 30 patients suffering from varicose eczema (*Vicharchika*) in an age group of 16 - 80 years of either sex were selected and were subjected to clinical trial.

Design of study

It was an open label clinical study with Pre-test and Post test design; where in 30 patients with varicose eczema (*Vicharchika*) were selected of either sex. History, clinical data, subjective and objective criteria were recorded on a specially prepared case proforma. Two groups were done as Group - A and Group - B, of each 15 patients. Group - A was subjected to *Jalaukavacharana* with internal medication and in Group - B only internal medication was given.

Intervention

Group - A

Jalaukavacharana was done at the site of varicose eczema four times with an interval of seven days i.e.,

on day 1, day 7, day 14 and day 21 with internal medication.

The pre and post therapeutic subjective and objective criteria were recorded on,

Day 1 (immediately before and after first *Avacharana*)

Day 7 (immediately after second *Avacharana*)

Day 14 (on third *Avacharana*)

Day 21 (on fourth *Avacharana*)

Follow up: on 7 days after last *Avacharana*.

Group - B

Only with internal medication

1. *Kaishoraguggulu* 1tds
2. *Arogyavardini rasa* 1tds
3. *Manjistadikashaya* 4 tsp bd

Duration of treatment

21 days in both groups

Follow up period

7 days after last *Jalaukavacharana* and observations will be recorded on day 1, day 7, day 14 and day 21.

Inclusion criteria

- Patients aged between 16-80 yrs.
- Patients of either sex
- Patients fit for *Rakthamokshana*
- Diagnosed case of varicose eczema (*Vicharchika*) presenting with specific characteristic symptoms of *Vicharchika* are *Kandu* (itching), *Ruja* (pain), *Daha* (burning sensation), *Rukshata* (dryness), *Shyava* (blackish discolouration), *Bahusravi* (discharge).

Exclusion criteria

- Patients *Ayogya* (unfit) for *Rakthamokshana*.
- Pregnancy, lactation.
- Severe anaemia
- Systemic diseases like DM, HIV, Tuberculosis, HbsAg.

Assessment criteria

The patients were assessed on the basis of subjective and objective parameters before and after treatment.

Subjective parameters

- Pain
- Itching
- Burning sensation

Objective parameters

- Discharge
- Skin discolouration
- Oedema

Observations and Results**Table 1: Effect of treatment in Group A.**

Group A	1 st day	7 th day	14 th day	21 th day	28 th day
Pain (p value)	1	0.083	0.012	0	0.001
Itching (p value)	0.317	0.317	0.002	0.001	0.001
Burning Sensation (p value)	0.317	0.008	0	0	0.001
Discharge (p value)	1	1	0.83	0.008	0.02
Edema (p value)	1	1	0.157	0.046	0.001
Skin Discolouration (p value)	1	0.046	0.001	0.002	0.001

Table 2: Effect of treatment in Group B.

Group B	1 st day	7 th day	14 day	21 th day	28 th day
Pain (p value)	1	1	0.01	0.001	0.002
Itching (p value)	1	1	0.317	0.034	0

Burning Sensation (p value)	1	0.564	0.03	0.001	0
Discharge (p value)	1	1	0.317	0.025	0.08
Edema (p value)	1	1	0.157	0.46	0
Skin Discolouration (p value)	1	0.317	0.317	0.046	0

Effect of treatment within the group by wilcoxon signed rank test as shown in table 1 & 2. effect on pain in group A on 1st, 7th, 14th, 21st and on 28th day shows p = 1.00, p = 0.083, p = 0.012, p = 0.000, p = 0.001 respectively and in group B effect on pain on 1st, 7th, 14th, 21th and on 28th day shows p = 1.00, p = 1.00, p = 0.1, p = 0.001, p = 0.002 respectively.

Effect on itching in group A on 1st, 7th, 14th, 21st and on 28th day shows p = 0.317, p = 0.317, p = 0.002, p = 0.001, p = 0.001 respectively and in group B effect on itching on 1st, 7th, 14th, 21th and on 28th day shows p = 1.00, p = 1.00, p = 0.317, p = 0.034, p = 0.000 respectively.

Effect on burning sensation in group A on 1st, 7th, 14th, 21st and on 28th day shows p = 0.317, p = 0.008, p = 0.000, p = 0.000, p = 0.001 respectively and in group B effect on burning sensation on 1st, 7th, 14th, 21st and on 28th day shows p = 1.00, p = 0.564, p = 0.03, p = 0.001, p = 0.000 respectively.

Effect on discharge in group A on 1st, 7th, 14th, 21st and on 28th day shows p = 1.00, p = 1.00, p = 0.83, p = 0.008, p = 0.02 respectively and in group B effect on discharge on 1st, 7th, 14th, 21st and on 28th day shows p = 1.00, p = 1.00, p = 0.317, p = 0.025, p = 0.008 respectively.

Effect on edema in group A on 1st, 7th, 14th, 21st and on 28th day shows p = 1.00, p = 1.00, p = 0.157, p = 0.046, p = 0.02 respectively and in group B effect on edema on 1st, 7th, 14th, 21st and on 28th day shows p = 1.00, p = 1.00, p = 0.157, p = 0.046, p = 0.000 respectively.

Effect on skin discolouration in group A on 1st, 7th, 14th, 21st and on 28th day shows p = 1.00, p = 0.046, p = 0.001, p = 0.002, p = 0.001 respectively and in group B effect on skin discolouration on 1st, 7th, 14th, 21st and on 28th day shows p = 1.00, p = 0.317, p = 0.317, p = 0.046, p = 0.000 respectively.

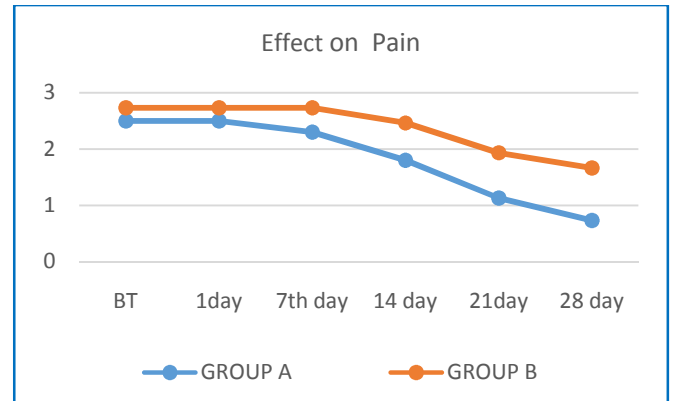
Table 3: Effect of treatment between the groups

Group A & B	1 st day	7 th day	14 day	21 th day	28 th day
Pain (p value)	1	0.073	0.012	0.317	0.001
Itching (p value)	0.317	0.317	0.082	0.023	0.012
Burning Sensation (p value)	1	0.036	0.016	0.006	0.016
Discharge (p value)	1	1	0.291	0.464	0.277
Edema (p value)	1	1	1	0.059	0.632
Skin Discolouration (p value)	1	0.148	0.002	0.006	0.001

Effect of treatment between the group by wilcoxon signed rank test as shown in table 3. Effect on pain on 1st, 7th, 14th, 21st and on 28th day shows p = 1.00, p = 0.073, p = 0.012, p = 0.317, p = 0.001 respectively, and effect on itching on 1st, 7th, 14th, 21st and on 28th day shows p = 0.317, p = 0.317, p = 0.082, p = 0.023, p = 0.012 respectively, and effect on burning sensation on 1st, 7th, 14th, 21st and on 28th day shows p = 1.00, p = 0.036, p = 0.016, p = 0.006, p = 0.016 respectively.

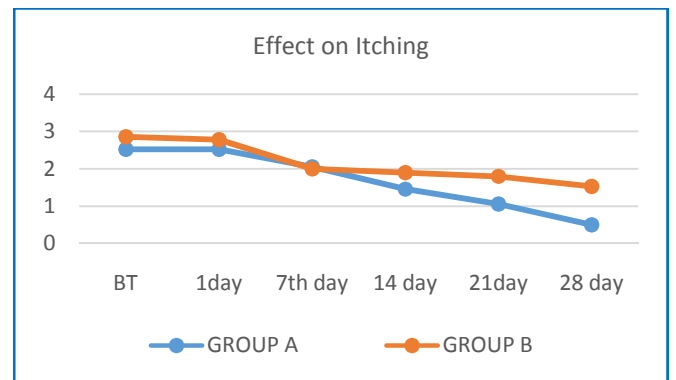
Effect on discharge on 1st, 7th, 14th, 21st and on 28th day shows p = 1.00, p = 1.00, p = 1.00, p = 0.059, p = 0.632 respectively. Effect on edema on 1st, 7th, 14th, 21st and on 28th day shows p = 1.00, p = 1.00, p = 1.00, p = 0.059, p = 0.632 respectively. Effect on skin discolouration on 1st, 7th, 14th, 21st and on 28th day shows p = 1.00, p = 0.148, p = 0.002, p = 0.006, p = 0.001 respectively.

Figure 1: Showing effect on pain in Group-A & Group-B.



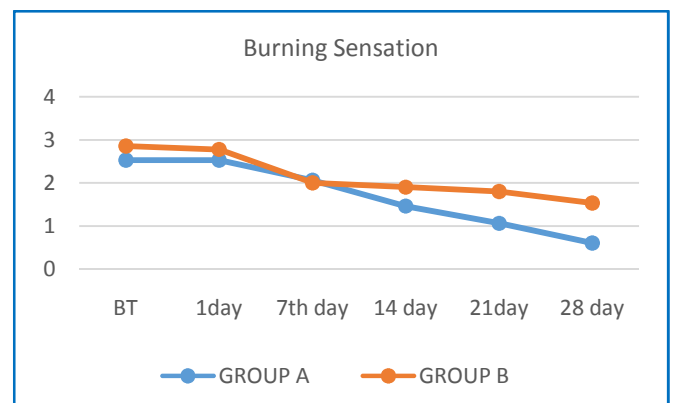
Clinically there is significant reduction in pain in group A as compare to group B on 7th, 14th, 21st and 28th day of treatment.

Figure 2: Showing effect on itching in Group-A & Group-B.



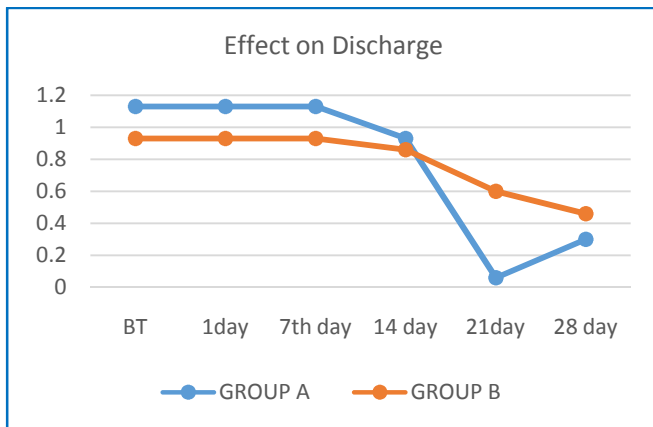
Clinically there is no significant reduction in itching in group A and group B on 1st and 7th day of treatment, but on 21st and 28th day group A shows significant reduction in itching.

Figure 3: Showing effect in burning sensation on Group-A & Group-B.



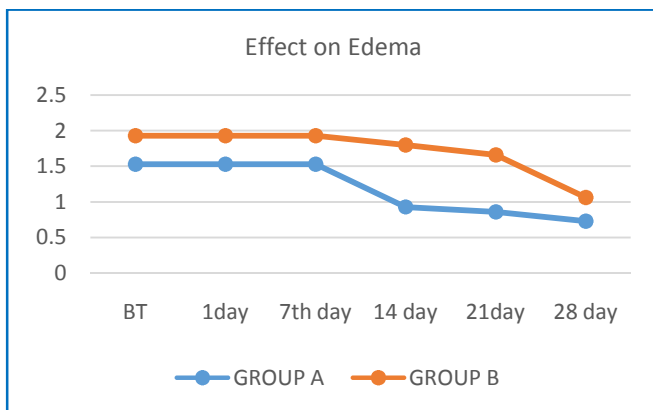
Clinically there is no significant reduction in burning sensation in group A and group B on 1st and 7th day of treatment, but on 14th, 21st and 28th day group A showed significant reduction in burning sensation.

Figure 4: Showing effect in discharge on Group-A & Group-B.



Clinically there is no significant reduction in discharge in group A and group B up to 14th day of treatment, but on 21st day group A shows significant reduction in discharge.

Figure 5: Showing effect in edema on Group-A & Group-B.



Clinically there is no significant reduction in edema in group A and group B upto 1st, 7th day of treatment, but on 14th, 21st day group A shows significant reduction in edema.

DISCUSSION

Pre and post test scores of assessment criteria are tabulated and statistically analysed by wilcoxon signed rank test within group and mann whitney test between the group. And there is marked

improvement in pain, itching, burning sensation and skin discoloration on the day of 1st, 7th, 14th, 21st day of treatment with p values as shown in table no 1, 2 & 3. Out of 30 subjects taken for clinical study, between the age group of 20 - 30 years (7%), 30 - 40 years (13%), 40 - 50 years (30%), 50 -60 years (10%), 60 - 70 years (17%), 70 - 80 years (23%) and 73% male patients and 23% were female patients. Out of 30 patients 86.66% were Hindu and 6.66% muslim, 6.66% Christian. 10 patients (33%) were belonging to upper middle class, 13 patients (43.33%) were middle class, 6 patients (20%) were lower middle class. 22 patients (73%) had mixed diet and 8 patients (27%) were vegetarian. In this series 23.33% were Businessmen, 23.33% were Housewives, 10% were labour, 6.66% were serviceman and remaining 23.33% patients were farmer. Out of 30 patients, 19 patients (66.%) had *Vatapittaja Prakriti*, 10 patients (33%) had *Kaphaja Parkriti* and 1 patient (3%) had *Pittakapha Prakriti*.

Jaloukavacharana reduces congestion in the region where it applied and thus helps in reducing the *Raga* and *Shopha*. By reducing the swelling it will relieve the pressure in the local site and reduces pain (*Vedana*). *Jaloukavacharana* removes the collection in the tissue plane and thus reduces the venous hypertension and thus improves the microcirculation. This also helps to reduce discoloration in the surrounding area. As the abnormal collection is removed from the site, it minimize the oozing (*Srava*) from the ulcer and eczema, helps in keeping it in healthy moist stage. This will prevent the tendency towards suppuration. Pitta is the prime cause for the production of *Daha*. Due to qualities of *Jalouka* it will help in removing the *Pitta Dooshitha Raktha* and helps in reducing *Daha*. Considering the overall response of the patients to the *Jaloukavacharana*, it showed significant positive effect on local anti-inflammatory effect in varicose eczema.

CONCLUSION

Overall study showed that *Jaloukavacharana* was clinically and statistically effective in reduction of *Ruja* (pain), with high significant value. There was minimum improvement in discharge in both the group

in a course of treatment. In group A there is good improvement in *Daha* (burning sensation), statistically and clinically. There is mild reduction in itching in some patients seen in group A, It indicates that *Jaloukaavacharana* is to be carried out periodically. Both group shows significant improvement In edema on 28th day of treatment in both groups. In skin discolouration group A showed highly significant improvement statistically and clinically. Both the treatment modalities taken for the study were having local action, and having minimal effect on *Dosha Dooshya Sammurchana*, there may be the need of other *Shodhana* therapy with *Shamana* medications. Studies with larger sample size are required to properly assess the efficacy of *Jaloukavacharna*.

Before treatment



During treatment



After treatment



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How to cite this article: Dr. Vinayak A. Mali, Dr. Rakesh R. N., Dr. K. R. Ramachandra. A Clinical Study of Jalaukavacharana in Varicose Eczema (Vicharchika). J Ayurveda Integr Med Sci 2018;3:27-33.
<http://dx.doi.org/10.21760/jaims.v3i3.12872>

Source of Support: Nil, **Conflict of Interest:** None declared.
